ROUND 9
INDIA COUNTRY PROPOSAL
INTENSIFIED MALARIA CONTROL PROJECT—II

To

GLOBAL FUND TO FIGHT AIDS, TUBERCULOSIS, AND MALARIA

June 2009

INTENSIFIED MALARIA CONTROL PROJECT—II (IMCP—II)

PREAMBLE

The GFATM Round 9 project proposes goal, objectives and targets for scaling up effective preventive and curative interventions in those areas of the country, where the intensity of transmission is the highest and the health care delivery system constraints are the most severe. The project aims for universal coverage catalyzing decline in malaria related mortality and morbidity and contributing to achievement of national goals and MDGs; based on the experiences gained and lessons learnt during the implementation of the Intensified Malaria Control Project (IMCP) project supported by the GFATM Round 4 grant since 2005 (2005-2010) as well as the national program with domestic resources.

The Round 4 GFATM project--IMCP is being implemented in 10 high malaria endemic states, covering a population of 100 million in 106 districts. These states are: 7 North-Eastern (NE) states namely, Arunachal Pradesh, Assam, Meghalaya, Mizoram, Nagaland, Manipur, Tripura & 3 others: Jharkhand (7 districts), Orissa (16 districts) and West Bengal (6 districts). The goal of the project is to reduce malaria morbidity and mortality in 100 million population in 10 states by 30% over the project period 2005-10. The project objectives include: provision of rapid diagnostic tests in remote, inaccessible areas and prompt treatment with appropriate anti malaria drugs including ACT for chloroquine resistant areas, with the help of NGOs/ community based organizations; special interventions for people living below the poverty line as free insecticide treated bed nets including LLIN, and appropriate IEC strategy; and provision of insecticide treatment of community owned bed nets through village level camps.

Round 4 GFATM project impact:

The Round 4 GFATM project is expected to achieve the targets and indicators defined in the performance framework at the end of project period. In the Round 4 project areas, the impact indicators--Annual Parasite Incidence, Slide Positivity Rate and Slide falciparum Rate have registered overall reducing trends. From the baseline year 2002 to 2008, the percentage reduction in API is 34.7%, in SPR is 40.2%, and in SfR is 29.3%. The target (4.76) set for SfR in 2010 has already been achieved in 2008. Although there is a reduction in malaria related mortality from baseline year 2002 to 2008 as well, to the tune of 18.6%, the numbers of deaths has registered an increase due to an epidemic in 2006. It may also be underscored that the ABER (a process indicator) has improved from 7.76 in 2002 to 8.47 in 2008, suggesting improvements in surveillance for malaria. [Under the national program, at least 10% of population is to be screened annually for malaria parasites corresponding to an ABER of 10].

Overall, the decline in malaria indices in the Round 4 GFATM project areas is more as compared to those in the country as a whole. The API has shown a decline of 34% in the Round 4 areas as compared to that of 23% in the country. The SPR has declined by 40% in the Round 4 areas as against 20% in the country. Likewise, the SfR has declined by 19% in the country whereas it has registered a decline of 29% in the Round 4 areas. The 18% decline in deaths is seen in the project areas as against a modest 3.9% in the country.

Thus, there is evidence that combination of preventive and curative interventions and other additional inputs initiated/augmented with the Round 4 GFATM grant have influenced the trend of the disease in the past few years, in the Round 4 project areas. The Round 4 GFATM project has facilitated necessary policy changes regarding prevention and early diagnosis and prompt treatment with effective tools: Long Lasting Insecticidal Nets (LLIN) [already 3.8 million are being procured for distribution in 2009-10]/Rapid Diagnostic Tests (RDT)/Artemisinin based Combination Treatment for Pf cases (ACT).
Proposal is complementarity with the World Bank supported malaria control project (2008--2013), related to policy, strategy development, research for evidence generation, strengthening of systems and processes, including information systems, training and BCC.

STATEMENT OF PURPOSE

The purpose of this project is to complement and strengthen the efforts of the national malaria control program towards scaling up for universal coverage with effective preventive and curative interventions in those areas of the country. The proposed investments are expected to sustain the gains, and address the

gaps and bottlenecks experienced during the implementation of the Round 4 GFATM project. The IMCP—II, will leverage the GOI's efforts to improve malaria prevention and treatment for about 42.53 million people (2008 population) in 86 high endemic districts in seven northeastern (NE) states in India.

It may be noted that the expected epidemiological impact at the end of Round 9 project appears to be moderate, when seen in relation to the scale-up of interventions. The reasons for this are: (1) the project is expected to lead to improvements in the reporting of both malaria cases and deaths, and there are no alternative, more reliable means of measuring malaria trends in India than the use of surveillance data. However, triangulation between data sources will of course be used to refine the assessments; (2) The introduction of LLINs is not only a matter of scaling up, but also of re-orienting vector control to focused and quality IRS operations, although sustained and correct use of LLIN by the project beneficiaries may vary. In addition, other factors like increasing drug and insecticide resistance, population migration; peculiar agricultural practices (shifting cultivation); prolonged rainy season and warm/humid physical environment conducive for vector proliferation; etc may influence the disease burden adversely, despite the best control efforts. Furthermore, large parts of the NE states are forested, remote and inaccessible with weak public health care system and predominantly inhabited by tribal population. Many NE states also share long international borders with neighbouring countries that are highly endemic for malaria. These factors too, together with problems of unrest in some parts of these states, render this region highly vulnerable. In this scenario, a conservative assumption on impact is projected.

PROJECT GOAL

To reduce malaria related mortality and morbidity in project areas by at least 30% by 2015 as compared to 2008.

PROJECT OBJECTIVES AND SERVICE DELIVERY AREAS (SDAs)

- To achieve near universal coverage by 2015 by effective preventive intervention (LLIN) for population living in high risk project areas from 42% (2009-10).
  - Service delivery area (SDA): ITN (LLIN)

- To achieve at least 80% coverage by parasitological diagnosis; and prompt, effective treatment of malaria through public and private health care delivery systems in project areas by 2015.
  - Service delivery area (SDA): Diagnosis (RDT)
  - Service delivery area (SDA): Prompt, effective treatment (ACT, Injectable artemisinin derivatives)

- To achieve at least 80% coverage of villages in project areas by appropriate BCC activities by 2015 to improve knowledge, awareness and responsive behavior with regard to effective preventive and curative malaria control interventions.
  - Service delivery area (SDA): Community outreach/IPC
  - Service delivery area (SDA): Mass media

- To strengthen program planning and management, monitoring and evaluation, and coordination and partnership development to improve service delivery in project areas.
  - Service delivery area (SDA): HSS: Human resources (technical and management assistance, planning and administration assistance, M&E assistance teams)
  - Service delivery area (SDA): HSS: Information systems (M&E)
  - Service delivery area (SDA): Coordination and partnership development (public-private/NGO/FBO, etc)

- To strengthen health systems through training, capacity building to improve service delivery in project areas.
  - Service delivery area (SDA): HSS: Human resources (training/capacity building)

PROJECT STRATEGIES

- Prevention:
  - Distribution of LLIN amongst high risk population with API ≥ 2 (per 1000 population) in project areas to achieve near universal coverage. LLIN to be distributed @ 2 LLIN per household, assuming a household consists of 5 persons.

- Continuation of re-impregnation of conventional nets with synthetic pyrethroids in areas registering API ≥ 2 till the time they are completely covered by LLIN.
- Continuation of IRS in areas with API ≥ 2 already under IRS coverage, as per program policy, till the time epidemiological and ecological evidence give adequate reasons for withdrawal of IRS.
- Increased involvement of community based structures, networks, including sustained and correct use of LLIN

- Early diagnosis and complete treatment:
  - Increased use of *Pf* RDT (expected to change to multivalent RDTs from 2011) for parasitological diagnosis especially in the remote areas without easy access to microscopy centres, i.e., where microscopy results are not available within 24 hours of reporting fever to a health care provider
  - Use of ACT for treatment of Pf cases
  - Increased involvement of community based structures & networks; private sector health care providers
- Behaviour Change Communication:
  - Evidence based BCC
  - Community outreach, IPC based consistent messaging through community based structures/networks to bring about behaviour change both in adoption of preventive interventions as well as in seeking early diagnosis and appropriate treatment
  - Intensified BCC activities prior to and during high transmission season
  - Limited use of mass media, mainly radio (in areas with reasonable reach) to reinforce messages delivered through community outreach, IPC
- M&E:
  - Increased focus on performance based program planning
  - Strengthening of program planning and management structures and operations at national, regional, state and district levels
  - Establishment of sentinel surveillance for severe malaria cases and deaths to complement existing disease surveillance; establishment of lot quality assurance sampling in addition to periodic large scale population and household surveys, to gauge outcomes
  - Reporting from private sector and other non-health sectors
  - Joint planning and review
  - Periodic evaluation to provide direction for future planning
  - Evidence generation through operational research
- Coordination and partnership development:
  - Increased advocacy for developing coordination and partnership with other departments/programs within MOH&FW, non-health public sector organizations, corporate sector, NGOs/FBOs, international agencies
- Capacity Building:
  - Provision of systematic induction and refresher training to all levels of program/project staff, medical and paramedical personnel, health workers and village volunteers/activists in public health services with malaria related responsibilities
  - Provision of training to private sector health care providers; and medical, paramedical personnel with partner organizations
  - Assessing effectiveness of capacity through periodic reviews

PROJECT INPUT, OUTPUT, OUTCOME, AND IMPACT

The project outputs, outcomes and impact will be captured through the following indicators. Further details are presented in the Attachment A (Annexure 1).

Inputs:

- Funding (in USD): 113.68 million (1 USD = 47.50 INR)
- Health products/pharmaceutical products:
  - LLIN: 7.7 million nets;
  - RDT: 21.26 million tests; ACT: 2.6 million courses; Injectable artemisinin derivative: 0.09 million ampoules
- Procurement and supply chain costs
- Performance incentives to ASHA/volunteers for LLIN distribution, RDT/ACT use, BCC activities
- BCC tools, materials costs

- Technical & management assistance, planning & administration assistance, M&E assistance (contract staff/consultants/experts at national, regional, state, district levels; WHO TA) costs
- Training/capacity building costs
- M&E costs

Output indicators:
- Number of LLIN distributed in LLIN eligible areas (API ≥ 2)
- Number of fever cases tested with RDT
- Number of Pf cases treated with ACT (including non govt sector)
- Number of villages where BCC activity--community session for message dissemination, held
- Number of supervisory visits to district periphery in a quarter by District VBDCP (Malaria) Officer (program/project) and report submitted to state program officer/district chief medical officer
- Number of MOU signed with partner/stakeholder organization (NGO/private sector, non health ministries/departments, others)
- Number of ASHAs/volunteers trained

Outcome indicators:
- Percentage of households in high risk areas (with API ≥ 2) with at least two LLIN
- Percentage of household residents who slept under LLIN the previous night
- Percentage of persons reporting fever within last two weeks, who have obtained a test result (RDT/microscopy) no later than the day following onset of fever

Impact indicators:
- API (Annual Parasite Incidence)--malaria positive cases per thousand population
- Number of deaths with malaria confirmation

PROJECT AREAS

The Round 9 IMCP--II project is proposed for 86 districts in the seven NE (northeast) states in entirety. The states are: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura.

PROJECT BENEFICIARIES

The project beneficiaries are 42.53 million population (2008) living in 86 districts in 7 project states that are high endemic for malaria with focus on marginalized groups, tribals, and women and children. As per data from the Ministry of Tribal Affairs, Govt of India, 41 districts of these states have more than 50% tribal population.

Within this total population of 42.53 million, a sub population of 12.96 milion lives in high risk areas with API ≥ 2 per thousand population. This segment will be targeted for universal coverage of LLIN.

PROJECT BUDGET

- Total budget proposed: US$ 113.68 million (1 US$ = 47.5 INR)
- Principal Recipient 1—PR1--NVBDCP : US$ 98.58 million
- Principal Recipient 2—PR2—Caritas India led FBO/NGO/private sector consortium: US$ 15.10 million

ROUND 9 – Malaria

PROPOSAL SUMMARY

3.1 Duration of Proposal	Planned Start Date	To
Month and year: *(up to 5 years)*	July, 2010	June, 2015

3.2 Consolidation of grants	
(a) Does the CCM (or Sub-CCM) wish to consolidate any existing malaria Global Fund grant(s) with the Round 9 malaria proposal?	☐ Yes *(go first to (b) below)* ☒ No *(go to s.3.3. below)*
'Consolidation' *refers to the situation where multiple grants can be combined to form one grant. Under Global Fund policy, this is possible if the same Principal Recipient ('PR') is already managing at least one grant for the same disease. A proposal with more than one nominated PR may seek to consolidate part of the Round 9 proposal.* ➔ *More detailed information on grant consolidation (including analysis of some of the benefits and areas to consider is available at:* http://www.theglobalfund.org/documents/rounds/9/CP_Pol_R9_FAQ_GrantConsolidation_en.pdf	
(b) If yes, which grants are planned to be consolidated with the Round 9 proposal after Board approval? *(List the relevant grant number(s))*	

3.3 Alignment of planning and fiscal cycles

Describe how the start date:
(a) contributes to alignment with the national planning, budgeting and fiscal cycle; and/or
(b) in grant consolidation cases, increases alignment of planning, implementation and reporting efforts.

The annual fiscal year for the country malaria control program is from April of a given/current year to March of the following year. At the national level, the program planning is done for a period of every 5 years and is termed as the 'Five Year Plan'. India is currently implementing its 11th Five-year plan, spanning from 2007 to 2012. The Planning Commission of India is the nodal agency for formulation of Five Year Plans. The plans also include financial outlay (budget estimate) for a specific program, including malaria control program on an annual basis. The five-year plans are annualized for implementation purpose and aligned with the fiscal years.

The annual planning and budgeting for a current fiscal year under the national health programs including malaria control program is done in the fourth quarter of the previous fiscal year (January to March). The plan and budget are prepared at various levels, starting from the district level, which is the basic geo-political unit for planning/budgeting (refer to glossary). The district plans are combined at the state level as state plan. The state plans are discussed and compiled as national plan subsequent to addition of the national level planning/budgeting elements. The reporting frequency of program implementation is quarterly at state/district levels.

The annual budget is approved by the appropriate Government of India (GOI) authorities during the fourth quarter of the previous fiscal year. The allocated budget is disbursed in the first quarter and then in every quarter of a fiscal year. The programmatic/financial planning and fund disbursement is done on a quarterly basis. Therefore, the quarterly performance targets, work plan/budget proposed for the first two years in Round 9 project will align with the national program and fiscal cycles without any difficulty. This will provide for harmonized planning, resource flow, implementation, and oversight.

Besides, the peak malaria transmission in the proposed project areas also spans the 2nd and 3rd quarters of the calendar year (April to June and July to September). Hence, capturing of key indicators during and after the malaria transmission season, and quarterly reporting to the GFATM will also be aligned.

The planned start date of the GFATM Round 9 grant period is July 2010 (the Round 4 grant period ends in June 2010) and hence, will be aligned with the country fiscal year 2010-11 (for 3 quarters). The GFATM grant will contribute to the ongoing national 11th Five Year Plan, which is due to close in 2012. Thus, the first phase of the grant will correspond to the final two years of the national Five Year Plan. This alignment will further contribute to program implementation, system strengthening towards achieving

planned outputs/outcomes/impact. It will also facilitate robust review of this grant at mid-term and will provide for revision/modifications, if any, as the 12th Five Year Plan of the country starts from 2013 to 2017.

Alignment of annual national planning/budgeting/fiscal cycle, ongoing GFATM Round 4 grant and proposed Round 9 grant:

	Oct-Dec 2009	Jan-Mar 2010	Apr-Jun 2010	Jul-Sep & Oct-Dec 2010	2011-2015
National program	Planning and budgeting process; Submission to appropriate authority for approval		Plan/Budget approval; initiation of disbursement for each quarter and program implementation	Disbursement on quarterly basis and program implementation	
GFATM Round 4	GFATM Round 4 project IMCP implementation, quarterly reporting on indicators and closure in June 2010			--	
GFATM Round 9	Proposal consideration and approval	Grant negotiation and signing	Grant implementation planning	Grant implementation	

However, if the planned start date of GFATM is delayed, then the timing will be suitably adjusted to align with the fiscal cycle and provision will be made for introducing interventions during the first year.

Alignment of various sources of funds: Funding and technical assistance for malaria control activities is from internal (government/domestic source) and external sources (GFATM, World Bank, WHO etc.). The policies, country strategic plan, M&E plan are common and all administrative/financial management is coordinated for the total resource envelope to ensure complementarity.

The National Vector Borne Disease Control Program (NVBDCP), Ministry of Health & Family Welfare (MOH&FW), Government of India (GOI), is a PR of the ongoing Round 4 GFATM project Intensified Malaria Control Project (IMCP). The Round 4 GFATM grant will come to a closure in June 2010. The present Round 9 proposal is presented as—Intensified Malaria Control Project—II (IMCP—II); although this is not simple continuation of the Round 4 project as the scope and scale differ somewhat. The present proposal will focus on sustaining the gains made during the Round 4 project, addressing gaps and scaling up the effective malaria control interventions (LLIN, RDT, ACT), especially in remote, inaccessible areas towards universal coverage for impact on the malaria mortality and morbidity. The major emphasis is on increased application of community based structures and networks for service delivery, community mobilization, public private partnership, strengthening systems and operations for service delivery towards achieving maximum coverage of population at high risk in the Phase 1 of the grant period. In addition, intensive M&E are proposed.

Further, the Government of India and the World Bank have recently signed an agreement for the World Bank aided Vector Borne Diseases Control Project that includes malaria control in 93 high endemic districts in 8 states of the country. The World Bank project areas at district level are different from the proposed Round 9 GFATM project areas, although there is complimentarity in several elements at the central and state levels within the context of one national malaria control program. Approaches and actions for strengthening program management and implementation (service delivery) that have been proposed/initiated under the World Bank project will support and complement the Round 9 GFATM project as well (more details are presented in sections 4.5.1, 4.6.2).

3.4 Program-based approach for Malaria

3.4.1. Does planning and funding for the country's response to malaria occur through a program-based approach?	☉ Yes. Answer s.3.4.2
	☐ No. ➔ *Go to s.3.5.*
3.4.2. If yes, does this proposal plan for some or all of the requested funding to be paid into a common-funding mechanism to support that approach?	☐ Yes ➔ ***Complete s.5.5 as an additional section to explain the financial operations of the***

	common funding mechanism.
	☐ No. Do not complete s.5.5

3.5 Summary of Round 9 malaria Proposal

Provide a summary of the Malaria proposal described in detail in section 4.
Prepare after completing s.4.

PROJECT TITLE
Intensified Malaria Control Project—II (IMCP—II)

PREAMBLE
The GFATM Round 9 project proposes goal, objectives and targets for scaling up effective preventive and curative interventions in those areas of the country, where the intensity of transmission is the highest and the health care delivery system constraints are the most severe. The project aims for universal coverage catalyzing decline in malaria related mortality and morbidity and contributing to achievement of national goals and MDGs; based on the experiences gained and lessons learnt during the implementation of the Intensified Malaria Control Project (IMCP) project supported by the GFATM Round 4 grant since 2005 (2005-2010) as well as the national program with domestic resources.

The Round 4 GFATM project--IMCP is being implemented in 10 high malaria endemic states, covering a population of 100 million in 106 districts. These states are: 7 North-Eastern (NE) states namely, Arunachal Pradesh, Assam, Meghalaya, Mizoram, Nagaland, Manipur, Tripura & 3 others: Jharkhand (7 districts), Orissa (16 districts) and West Bengal (6 districts). The goal of the project is to reduce malaria morbidity and mortality in 100 million population in 10 states by 30% over the project period 2005-10. The project objectives include: provision of rapid diagnostic tests in remote, inaccessible areas and prompt treatment with appropriate anti malaria drugs including ACT for chloroquine resistant areas, with the help of NGOs/ community based organizations; special interventions for people living below the poverty line as free insecticide treated bed nets including LLIN, and appropriate IEC strategy; and provision of insecticide treatment of community owned bed nets through village level camps.

Round 4 GFATM project impact:
The Round 4 GFATM project is expected to achieve the targets and indicators defined in the performance framework at the end of project period. In the Round 4 project areas, the impact indicators--Annual Parasite Incidence, Slide Positivity Rate and Slide falciparum Rate have registered overall reducing trends. From the baseline year 2002 to 2008, the percentage reduction in API is 34.7%, in SPR is 40.2%, and in SfR is 29.3%. The target (4.76) set for SfR in 2010 has already been achieved in 2008. Although there is a reduction in malaria related mortality from baseline year 2002 to 2008 as well, to the tune of 18.6%, the numbers of deaths has registered an increase due to an epidemic in 2006. It may also be underscored that the ABER (a process indicator) has improved from 7.76 in 2002 to 8.47 in 2008, suggesting improvements in surveillance for malaria. [Under the national program, at least 10% of population is to be screened annually for malaria parasites corresponding to an ABER of 10].

Overall, the decline in malaria indices in the Round 4 GFATM project areas is more as compared to those in the country as a whole. The API has shown a decline of 34% in the Round 4 areas as compared to that of 23% in the country. The SPR has declined by 40% in the Round 4 areas as against 20% in the country. Likewise, the SfR has declined by 19% in the country whereas it has registered a decline of 29% in the Round 4 areas. The 18% decline in deaths is seen in the project areas as against a modest 3.9% in the country.

Thus, there is evidence that combination of preventive and curative interventions and other additional inputs initiated/augmented with the Round 4 GFATM grant have influenced the trend of the disease in the past few years, in the Round 4 project areas. The Round 4 GFATM project has facilitated necessary policy changes regarding prevention and early diagnosis and prompt treatment with effective tools: Long Lasting Insecticidal Nets (LLIN) [already 3.8 million are being procured for distribution in 2009-10]/Rapid Diagnostic Tests (RDT)/Artemisinin based Combination Treatment for Pf cases (ACT). The Round 4 project grant has also contributed to strengthening of systems and processes, by positioning of dedicated cadre of Malaria Technical Supervisors (MTS), and lab technicians in high endemic districts for oversight, diagnosis in addition to various consultants for technical and management assistance and M&E. These together have created conducive environment for scaling up the effective interventions further impacting on the malaria burden.

However, at the same time, it may be noted that due to operational challenges and the need for additional resources to protect the large at-risk population, the coverage with certain malaria control interventions, example, Insecticide Treated Bed Nets, specifically has yet to be universal.

Currently, with increased resources both from domestic and external (World Bank) sources, India's malaria control efforts are being scaled up based on a strategic action plan for malaria control in India: 2007-2012. This plan delineates course of the national program over the next few years, up to 2012 and is aligned with the ongoing national 11th Five Year Plan. The plan also includes a projection corresponding to the 12th Five Year Plan period, 2013-2017. The proposed Round 9 GFATM Phase I grant (if approved) will contribute to the second term of the ongoing 11th Five Year Plan. This alignment will contribute to further strengthening of malaria control program planning and implementation in India, and also facilitate robust review of this grant at mid-term and provide for revision/modifications, if any, under the next 12th Five Year Plan. The GOI and World Bank have signed an agreement in March 2009 for the National Vector Borne Disease Control and Polio Eradication Support Project designed in collaboration with the GOI and WHO to significantly boost effective prevention, diagnosis, and treatment services for malaria along with another communicable disease--kala azar, and increase polio vaccinations. A main feature of the proposed Round 9 GFATM proposal is complementarity with the World Bank supported malaria control project (2008--2013), related to policy, strategy development, research for evidence generation, strengthening of systems and processes, including information systems, training and BCC.

Despite these developments, however, there are continued insufficiencies in: resources (financial, HR, technical) to plan and implement effective malaria control interventions (LLIN, RDT, ACT) for large at risk population; surveillance/M&E; procurement and supply chain management (PSCM); training; involvement of and ownership by civil society, private sector and communities; treatment seeking and treatment dispensing behaviour; advocacy with various agencies including non health sector departments; operational research; etc. that are hampering the achievement of further reduction in malaria disease burden. Since the Round 4 GFATM grant period ends in 2010, it is important that these gaps are addressed, efforts are made to sustain the gains made and scale up; thereby contributing to achievement of national and international goals related to malaria and overall social development, including the Millennium Development Goals (MDGs). Hence, the additional inputs through the Round 9 GFATM proposal are expected to significantly benefit malaria control in India.

STATEMENT OF PURPOSE

The purpose of this project is to complement and strengthen the efforts of the national malaria control program towards scaling up for universal coverage with effective preventive and curative interventions in those areas of the country, where the intensity of transmission is the highest and the health care delivery system constraints are the most severe. Need based strategic planning, focused on increased application of the mostly untapped community based structures and networks for community mobilization, especially in remote and inaccessible areas; enhanced capacity building and institutional strengthening; increased supervision and monitoring; better coordination and partnership building; will be the cornerstones of the Round 9 GFATM project--Intensified Malaria Control Project—II (IMCP—II). The proposed investments are expected to sustain the gains, and address the gaps and bottlenecks experienced during the implementation of the Round 4 GFATM project. The IMCP—II, will leverage the GOI's efforts to improve malaria prevention and treatment for about 42.53 million people (2008 population) in 86 high endemic districts in seven northeastern (NE) states in India.

It may be noted that the expected epidemiological impact at the end of Round 9 project appears to be moderate, when seen in relation to the scale-up of interventions. The reasons for this are: (1) the project is expected to lead to improvements in the reporting of both malaria cases and deaths, and there are no alternative, more reliable means of measuring malaria trends in India than the use of surveillance data. However, triangulation between data sources will of course be used to refine the assessments; (2) The introduction of LLINs is not only a matter of scaling up, but also of re-orienting vector control to focused and quality IRS operations, although sustained and correct use of LLIN by the project beneficiaries may vary. In addition, other factors like increasing drug and insecticide resistance, population migration; peculiar agricultural practices (shifting cultivation); prolonged rainy season and warm/humid physical environment conducive for vector proliferation; etc may influence the disease burden adversely, despite the best control efforts. Furthermore, large parts of the NE states are forested, remote and inaccessible with weak public health care system and predominantly inhabited by tribal population. Many NE states also share long international borders with neighbouring countries that are highly endemic for malaria.

These factors too, together with problems of unrest in some parts of these states, render this region highly vulnerable. In this scenario, a conservative assumption on impact is projected.

PROJECT GOAL

To reduce malaria related mortality and morbidity in project areas by at least 30% by 2015 as compared to 2008.

PROJECT OBJECTIVES AND SERVICE DELIVERY AREAS (SDAs)

- To achieve near universal coverage by 2015 by effective preventive intervention (LLIN) for population living in high risk project areas from 42% (2009-10).
  - Service delivery area (SDA): ITN (LLIN)

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  - Service delivery area (SDA): Community outreach/IPC
  - Service delivery area (SDA): Mass media

- To strengthen program planning and management, monitoring and evaluation, and coordination and partnership development to improve service delivery in project areas.
  - Service delivery area (SDA): HSS: Human resources (technical and management assistance, planning and administration assistance, M&E assistance teams)
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  - Evidence based BCC
  - Community outreach, IPC based consistent messaging through community based structures/networks to bring about behaviour change both in adoption of preventive interventions as well as in seeking early diagnosis and appropriate treatment

- Intensified BCC activities prior to and during high transmission season
- Limited use of mass media, mainly radio (in areas with reasonable reach) to reinforce messages delivered through community outreach, IPC

- M&E:
  - Increased focus on performance based program planning
  - Strengthening of program planning and management structures and operations at national, regional, state and district levels
  - Establishment of sentinel surveillance for severe malaria cases and deaths to complement existing disease surveillance; establishment of lot quality assurance sampling in addition to periodic large scale population and household surveys, to gauge outcomes
  - Reporting from private sector and other non-health sectors
  - Joint planning and review
  - Periodic evaluation to provide direction for future planning
  - Evidence generation through operational research
- Coordination and partnership development:
  - Increased advocacy for developing coordination and partnership with other departments/programs within MOH&FW, non-health public sector organizations, corporate sector, NGOs/FBOs, international agencies
- Capacity Building:
  - Provision of systematic induction and refresher training to all levels of program/project staff, medical and paramedical personnel, health workers and village volunteers/activists in public health services with malaria related responsibilities
  - Provision of training to private sector health care providers; and medical, paramedical personnel with partner organizations
  - Assessing effectiveness of capacity through periodic reviews

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  - RDT: 21.26 million tests; ACT: 2.6 million courses; Injectable artemisinin derivative: 0.09 million ampoules
- Procurement and supply chain costs
- Performance incentives to ASHA/volunteers for LLIN distribution, RDT/ACT use, BCC activities
- BCC tools, materials costs
- Technical & management assistance, planning & administration assistance, M&E assistance (contract staff/consultants/experts at national, regional, state, district levels; WHO TA) costs
- Training/capacity building costs
- M&E costs

Output indicators:

- Number of LLIN distributed in LLIN eligible areas (API ≥ 2)
- Number of fever cases tested with RDT
- Number of Pf cases treated with ACT (including non govt sector)
- Number of villages where BCC activity--community session for message dissemination, held
- Number of supervisory visits to district periphery in a quarter by District VBDCP (Malaria) Officer (program/project) and report submitted to state program officer/district chief medical officer
- Number of MOU signed with partner/stakeholder organization (NGO/private sector, non health ministries/departments, others)
- Number of ASHAs/volunteers trained

Outcome indicators:

- Percentage of households in high risk areas (with API ≥ 2) with at least two LLIN
- Percentage of household residents who slept under LLIN the previous night

- Percentage of persons reporting fever within last two weeks, who have obtained a test result (RDT/microscopy) no later than the day following onset of fever

Impact indicators:

- API (Annual Parasite Incidence)--malaria positive cases per thousand population
- Number of deaths with malaria confirmation

PROJECT AREAS

The Round 9 IMCP--II project is proposed for 86 districts in the seven NE (northeast) states in entirety. The states are: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura.

PROJECT BENEFICIARIES

The project beneficiaries are 42.53 million population (2008) living in 86 districts in 7 project states that are high endemic for malaria with focus on marginalized groups, tribals, and women and children. As per data from the Ministry of Tribal Affairs, Govt of India, 41 districts of these states have more than 50% tribal population.

Within this total population of 42.53 million, a sub population of 12.96 milion lives in high risk areas with API ≥ 2 per thousand population. This segment will be targeted for universal coverage of LLIN.

PROJECT BUDGET

- Total budget proposed: US$ 113.68 million (1 US$ = 47.5 INR)
- Principal Recipient 1—PR1--NVBDCP : US$ 98.58 million
- Principal Recipient 2—PR2—Caritas India led FBO/NGO/private sector consortium: US$ 15.10 million

DUAL TRACK FINANCING

Under the Round 9 GFATM project, involvement of community structures and civil society organizations to complement the efforts of the national program for malaria control, especially in the remote and inaccessible areas is proposed. A consortium of Civil Society Organizations (NGO, FBO)/private sector led by Caritas India as a PR is proposed to subsume such entities in 49 districts. The consortium will play a key role in service provision particularly in areas with poor access to public sector health care services, in organizing LLIN delivery, development and implementation of locally appropriate BCC, training and capacity building of community health volunteers and private service providers thereby contributing to improvement in acceptance/use of preventive interventions, access to early diagnosis and prompt treatment towards achieving the outcomes, impact proposed.

The summary of the Round 9 project framework is further presented as a matrix below,

Round 9 India Malaria Proposal: Intensified Malaria Control Project--II (IMCP--II) [2010--2015]					
Statement of purpose	To complement and strengthen the efforts of the national malaria control program by scaling up effective preventive and curative interventions in those areas of the country, where the intensity of transmission is the highest and the health care delivery system constraints are the most severe for universal coverage catalyzing decline in malaria related mortality and morbidity and contributing to achievement of national goals and MDGs.				
Goal	To reduce malaria related mortality and morbidity in project areas by at least 30% by 2015 as compared to 2008.				
Objectives	1. To achieve near universal coverage by 2015 by effective preventive intervention (LLIN) for population living in high risk project areas from 42% (2009-10).	2. To achieve at least 80% coverage by parasitological diagnosis; and prompt, effective treatment of malaria through public and private health care delivery	3. To achieve at least 80% coverage of villages in project areas by appropriate BCC activities by 2015 to improve knowledge, awareness and responsive behavior with regard to effective	4. To strengthen program planning and management, monitoring and evaluation, and coordination and partnership development to improve service delivery in project areas.	5. To strengthen health systems through training, capacity building to improve service delivery in project areas.

		systems in project areas by 2015.	preventive and curative malaria control interventions.		
Service Delivery Areas	1.1 ITN (LLIN--Long Lasting Insecticidal Net)	2.1 Diagnosis (RDT) 2.2 Prompt, effective treatment (ACT, injectable artemisinin derivatives)	3.1 BCC: Community outreach/IPC 3.2 BCC: Mass media	4.1 HSS: Human resources (technical and management assistance, planning and administration assistance, M&E assistance teams) 4.2 HSS: Information systems (M&E) 4.3 Coordination and partnership development	5.1 HSS: Human resources (training/capacity building)
Strategies	**Prevention:** • Distribution of LLIN amongst high risk population with API ≥ 2 (per 1000 population) in project areas to achieve near universal coverage. LLIN to be distributed @ 2 LLIN per household, assuming a household consists of 5 persons. • Continuation of re-impregnation of conventional nets with synthetic pyrethroids in areas registering API ≥ 2 till the time they are completely covered by LLIN. • Continuation of IRS in areas with API ≥ 2 already under IRS coverage, as per program policy, till the time epidemiological and ecological evidence give adequate reasons for withdrawal of IRS.	**Early diagnosis and complete treatment:** • Increased use of Pf RDT (expected to change to multivalent RDTs from 2011) for parasitological diagnosis especially in the remote areas without easy access to microscopy centres, i.e., where microscopy results are not available within 24 hours of reporting fever to a health care provider • Use of ACT for treatment of Pf cases • Increased involvement of community based structures & networks; private sector health care providers	**Behaviour Change Communication:** • Evidence based BCC • Community outreach, IPC based consistent messaging through community based structures/networks to bring about behaviour change both in adoption of preventive interventions as well as in seeking early diagnosis and appropriate treatment • Intensified BCC activities prior to and during high transmission season • Limited use of mass media, mainly radio (in areas with reasonable reach) to reinforce messages delivered through community outreach, IPC	**M&E:** • Increased focus on performance based program planning • Strengthening of program planning and management structures and operations at national, regional, state and district levels • Establishment of sentinel surveillance for severe malaria cases and deaths to complement existing disease surveillance; establishment of lot quality assurance sampling in addition to periodic large scale population and household surveys, to gauge outcomes • Reporting from private sector and other non-health sectors • Joint planning and review • Periodic evaluation to provide direction for future planning • Evidence generation through operational research	**Capacity Building:** • Provision of systematic induction and refresher training to all levels of program/project staff, medical and paramedical personnel, health workers and village volunteers/activists in public health services with malaria related responsibilities • Provision of training to private sector health care providers; and medical, paramedical personnel with partner organizations • Assessing effectiveness of capacity through periodic reviews

	• Increased involvement of community based structures, networks, including sustained and correct use of LLIN			**Coordination and partnership development:** • Increased advocacy for developing coordination and partnership with other departments/programs within MOH&FW, non-health public sector organizations, corporate sector, NGOs/FBOs, international agencies	

Inputs	• Funding (in USD): 113.68.million (1 USD = 47.50 INR) • Health products/pharmaceutical products: o LLIN: 7.7 million nets; o RDT: 21.26 million tests; ACT: 2.6 million courses; Injectable artemisinin derivative: 0.09 million ampoules • Procurement and supply chain costs • Performance incentives to ASHA/volunteers for LLIN distribution, RDT/ACT use, BCC activities • BCC tools, materials costs • Technical & management assistance, planning & administration assistance, M&E assistance (contract staff/consultants/experts at national, regional, state, district levels; WHO TA) costs • Training/capacity building costs • M&E costs
Outputs	• Number of LLIN distributed in LLIN eligible areas (API ≥ 2) • Number of fever cases tested with RDT • Number of Pf cases treated with ACT (including non govt sector) • Number of villages where BCC activity--community session for message dissemination, held • Number of supervisory visits to district periphery in a quarter by District VBDCP (Malaria) Officer (program/project) and report submitted to state program officer/district chief medical officer • Number of MOU signed with partner/stakeholder organization (NGO/private sector, non health ministries/departments, others) • Number of ASHAs/volunteers trained
Outcomes	• Percentage of households in high risk areas (with API ≥ 2) with at least two LLIN • Percentage of household residents who slept under LLIN the previous night • Percentage of persons reporting fever within last two weeks, who have obtained a test result (RDT/microscopy) no later than the day following onset of fever
Impact	• API (Annual Parasite Incidence)--malaria positive cases per thousand population • Number of deaths with malaria confirmation
Geographic coverage	86 districts in 7 states in northeastern region of the country. The states are: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura
Project beneficiaries	42.53 million population (2008) in 86 districts in 7 states, with particular focus on the tribals, other marginalized groups; and the vulnerable sections of society--the women and children. [50% of population in 41 districts is tribal].
Implementing entity(ies)	Principal Recipient 1—PR1--NVBDCP (responsible for national malaria control program) Principal Recipient 2—PR2—Caritas India led FBO/NGO/private sector consortium. [SRs--Christian Medical Association of India, Voluntary Health Association of India, Futures Group International India Pvt Ltd] . [The PR2 will complement activities of PR1 at community level in 49 districts in 8 project states that include remote, hard to reach areas. Major activities will include: LLIN distribution; RDT/ACT use; BCC; training of community workers/volunteers and private sector care providers].
Budget	> Total budget proposed: US$ 113.68 million (1 US$ = 47.5 INR) > PR1: US$ 98.58 million > PR2: US$ 15.10 million

Partnerships	> Government and allied institutions: NVBDCP; Regional Offices of Health and Family Welfare, Guwahati, Shillong, Kolkata, Imphal; State Governments: State/district vector borne disease control departments > Research and technical institutions: National Institute for Malaria Research; Indian Council of Medical Research Institutions; various universities and medical collegses, etc > International agencies: World Health Organisation, UNICEF, World Bank, etc. > NGO/FBO/private sector: Caritas India and its sister organizatioons/networks; CMAI and its sister organizatioons/networks; VHAI and its sister organizatioons/networks; Futures Group International India Pvt Ltd; private sector care providers; etc > Local-Self governments, Self-help groups, Village Health and Sanitation Committees
Key guiding principles	> Need based strategic planning > Ensuring equity in service provision > Effective procurement planning and strengthened logistics supply chain > Effective partner complementarity > Better coordination and partnership building with other health departments, non health ministries/departments, private sector, NGOs/FBOs, local governance bodies > Application of the mostly untapped community based networks for scaling up effective interventions and community mobilization for uptake > Institutional strengthening and capacity development for efficient planning and implementation > Supervision and monitoring for sustaining results, addressing gaps

4 PROGRAM DESCRIPTION

ACRONYMS

ABER	Annual Blood Examination Rate
ACD	Active Case Detection
ACT	Artemisinin based Combination Treatment
ANM	Auxiliary Nurse Midwife
API	Annual Parasite Incidence
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
AYUSH	Ayurveda, Unani, Siddha and Homeopathy
BCC	Behaviour Change Communication
BSC	Blood Smear Collection
BSE	Blood Smear Examination
CAG	Comptroller and Auditor General of India
CBO	Community Based Organizations
CHC	Community Health Centre
CIB	Central Insecticide Board
CSO	Civil Society Organization
DDT	Dichloro Diphenyl Trichloroethane
DMO	District Malaria Officer
EFC	Expenditure and Finance Committee
ETF	Early Treatment Failure
FBO	Faith Based Organization
GDP	Gross Domestic Product
GFATM	Global Fund to Fight AIDS,Tuberculosis and malaria
GIS	Geographic Information System
GOI	Government of India
GP	General Practitioner
HH	Household
HR	Human Resources
HSS	Health System Strengthening
ICMR	Indian Council for Medical Research
IDA	International Development Association
IDR	In depth Review
IDSP	Integrated Disease Surveillance Project
IEC	Information Education and Communication
IMCP	Intensified Malaria Control Project
IPC	Inter Personal Communication
IRS	Indoor Residual Spray
ITN	Insecticide Treated Nets
IVM	Integrated Vector Management
JMM	Joint Monitoring Mission
LLIN	Long Lasting Insecticidal Nets
LMIS	Logistics Management Information System
LQAS	Lot Quality Assurance System
LT	Laboratory Technician
LTF	Late Treatment Failure
M&E	Monitoring & Evaluation
MDG	Millennium Development Goals

MIS	Management Information System
MOHFW	Ministry of Health and Family Welfare
MOU	Memorandum of Understanding
MPO	Modified Plan of Operation
MPW	Multi Purpose Health Worker
MTS	Malaria Technical Supervisor
NAMMIS	National Anti Malaria Management Information System
NAMP	National Anti Malaria Program
NE	North East
NGO	Non Government Organization
NIH&FW	National Institute of Health & Family Welfare
NIMR	National Institute for Malaria Research
NMEP	National Malaria Eradication Program
NRHM	National Rural Health Mission
NVBDCP	National Vector Borne Diseases Control Program
OR	Operational Research
PCD	Passive Case Detection
Pf	*Plasmodium falciparum*
PHC	Primary Health Centre
PMU	Project Management Unit
PPP	Public Private Partnership
PR	Principal Recipient
PR1	Principal Recipient 1—National Vector Borne Diseases Control Program
PR2	Principal Recipient 2—Caritas India led FBO/NGO/private sector consortium
Pv	*Plasmodium vivax*
QA	Quality Assurance
RBM	Roll Back Malaria Partnership
RBM-MERG	Roll Back Malaria Monitoring and Evaluation Reference Group
RDT	Rapid Diagnostic Test
RRT	Rapid Response Team
RTI	Right to Information
SAP	Strategic Action Plan for Malaria in India—2007-2012
SDA	Service Delivery Area
SEA	South East Asia
SfR	Slide falciparum rate
SHG	Self Help Group
SIH&FW	State Institute of Health & Family Welfare
SOP	Standard Operating Procedure
SP	Sulphadoxine Pyrimethamine/ Synthetic Pyrethroids
SPR	Slide Positivity Rate
SR	Sub Recipient
TFR	Test falciparum Rate
TOT	Training of Trainers
TPR	Test Positivity Rate
TRP	Technical Review Panel
UMS	Urban Malaria Scheme
UNICEF	United Nations International Children's Emergency Fund (now United Nations Children's Fund)
UNOPS	United Nations Organization for Procurement Support
VBD	Vector Borne Diseases
VH&SC	Village Health & Sanitation Committee
VHAI	Voluntary Health Association of India

VPP	Voluntary Pooled Procurement
WHO	World Health Organization

4.1 National prevention, treatment, care, and support strategies

(a) Briefly summarize:
- the current malaria national prevention, treatment, and support strategies;
- how these strategies respond comprehensively to current epidemiological situation in the country; and
- the improved malaria outcomes expected from implementation of these strategies.

Background:

Malaria was a major scourge in India contributing 75 million cases with about 0.8 million deaths annually, prior to the launching of National Malaria Control Program (NMCP) in 1953. The wide DDT spray coverage in the country under the NMCP resulted in a sharp decline in malaria cases in all areas under spray and as a result the GOI converted NMCP into the National Malaria Eradication Program (NMEP) in 1958. The NMEP was initially a great success with malaria incidence dropping to 0.1 million cases and nil deaths due to malaria as reported in 1965. Further, an Urban Malaria Scheme (UMS) was started in 131 cities and towns in the country in 1971-72 (out of sanctioned 181 cities and towns), with the objective to control malaria by reducing the vector population in the urban areas through recurrent anti-larval measures complemented by detection and treatment of cases through the existing health services. The scheme was covering a population of 101.1 million in 2005.

A resurgence of malaria was noted since then resulting in increase of incidence of malaria to 6.4 million cases in 1976. The resurgence was attributed to various operational, administrative and technical reasons, like emergence of drug resistance in the parasites and insecticide resistance in the vectors.

In 1977, a Modified Plan of Operation (MPO) was launched with the immediate objectives of preventing deaths and reducing morbidity due to malaria. Selective indoor residual spraying (IRS), by stratifying areas based on cases per 1,000 population in a year, i.e. the Annual Parasite Incidence (API)[1] of 2 and above, was recommended in the MPO in addition to early diagnosis and prompt treatment. The national program was also integrated with other health programs at the primary health care delivery system. The MPO successfully brought down annual incidence of malaria from 6.47 million (0.85 million *P. falciparum*) in 1976 to 2.18 million cases (0.65 million *P. falciparum*) by 1984. However, the limited resources in many states to protect the large at risk population allowed spray in areas with API > 5 only and by 1996, another upsurge with 3.03 million cases and 2,803 deaths due to malaria was reported. In 1997, the eradication goal was officially changed to control and the program was changed to National Anti Malaria Program (NAMP).

An Enhanced Malaria Control Project (EMCP) was implemented with the support of the World Bank during 1997 to 2005 with the objectives of creating an enhanced and more effective malaria control program focusing on the tribal areas with high disease burden and supporting the introduction of mix of cost-effective and sustainable strategies. The Project was implemented in 1045 Primary Health Centers (PHCs) in 100 districts of 8 states (Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh Maharashtra, Rajasthan and Orissa) predominantly inhabited by tribal population. In the EMCP areas, the number of cases have declined from 1.17 m in 1997 to 0.76 m in 2005 (44% decline) and deaths from 522 to 301 (42%). The *Pf* cases reduced from 0.71 m to 0.51 m (28%). In 2005, India was successful in getting the GFATM Round 4 grant for supporting malaria control in the states of Assam, Arunachal Pradesh, Meghalaya, Tripura, Nagaland, Mizoram, Manipur, West Bengal, Jharkhand and Orissa. In the Round 4 project areas, the Annual Parasite Incidence (API), Slide Positivity Rate and Slide falciparum Rate are declining. There is 34.7% decline in API, 40.2% in SPR and 29.3% in SfR from the year 2002 (baseline). However, annual deaths due to malaria increased in 2006 due to an epidemic, but have shown a decrease to 389 in 2008 suggesting 18.6% decrease from the year 2002. The review of the history of malaria and its control in India is given in the Strategic Action Plan for Malaria Control in India—2007-2012 (Strategic Action Plan) [Annexure 2].

The current National Vector Borne Disease Control Program (NVBDCP) came into operation in 2003 as an umbrella program to cover prevention and control of malaria and other vector borne diseases, namely,

[1] Annual Parasite Incidence (API): Number of malaria positive cases per thousand population

Kala-azar, Lymphatic filariasis, Dengue, Chikungunya, and Japanese Encephalitis. NVBDCP is presently one of the most comprehensive and multi-faceted public health program in the country. The Directorate of NVBDCP is the nodal agency for program planning, implementation and oversight in coordination with states (provinces).

In 2005, the GOI launched a National Rural Health Mission (NRHM) [refer to glossary], which is a milestone in the country's response to address local health needs. NRHM's special focus is on resource challenged settings and vulnerable groups. The NRHM seeks to provide improved access to effective healthcare to rural population throughout the country with special focus on 18 states, which have weak public health indicators and/or weak infrastructure. These are: **Arunachal Pradesh**, **Assam**, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Jammu & Kashmir, **Manipur**, **Mizoram**, **Meghalaya**, Madhya Pradesh, **Nagaland**, Orissa, Rajasthan, Sikkim, **Tripura**, Uttaranchal and Uttar Pradesh (the states in bold are the proposed project states). The NRHM is an articulation of the commitment of the Government to raise public spending on Health from 0.9% of GDP to 2-3% of GDP. Under the NRHM, it is planned to strengthen the primary health care delivery system through following means.

- Over 0.5 million Accredited Social Health Activists (ASHAs) [see glossary], one for every 1,000 population/large habitation, in the 18 states and in tribal pockets of all states by 2008. [A total of 481,308 ASHAs have been selected].
- All subcentres (about 0.175 million in the country) functional with two Auxiliary Nurse Midwives (ANMs) by 2010.
- All Primary Health Centres (PHCs) (nearly 25,000) with three staff nurses to provide 24 × 7 services by 2010.
- 6,500 Community Health Centres (CHCs) strengthened/established with seven specialists and nine staff nurses in each by 2012.
- 1,800 taluka/sub-divisional hospitals and 600 district hospitals to be strengthened to provide quality health services by 2012. [The number of government hospitals had increased from 4,751 in 2000 to 7,663 in 2006].
- Mobile medical units for each district by 2009.
- Functional hospital development committees in all CHCs, sub-divisional hospitals and district hospitals by 2009.
- Untied grants and annual maintenance grants to every CHC, PHC and SC released regularly and utilized for local health action by 2008.

The NVBDCP became an integral part of the NRHM in rural areas through strengthened infrastructure at the level of primary care, community based systems, community empowerment and flexi-financing for context related use.

The milestones of malaria control activities in India are given in the following table.

Year	Milestone
Prior to 1953	Estimated malaria cases in India – 75 million; Deaths due to malaria – 0.8 million
1953	Launch of National Malaria Control Program (NMCP)
1958	NMCP was changed to National Malaria Eradication Programme
1965	Malaria cases reduced to 0.1 million
Early 1970s	Resurgence of malaria
1976	Malaria cases – 6.46 million
1977	Modified Plan of Operation initiated
1997	World Bank assisted Enhanced Malaria Control Project (EMCP) launched
1999	Renaming of program to National Anti Malaria Program (NAMP)
2002	Renaming of NAMP to National Vector Borne Disease Control Program (NVBDCP)
2005	Global Fund assisted Intensified Malaria Control Project (IMCP) launched in entire 7 north-eastern states and in 16 districts in Orissa
2005	NRHM launched and NVBDCP became an integral part of NRHM
2005	Introduction of RDT in the malaria control program
2006	ACT introduced in areas showing chloroquine resistance in *P falciparum* malaria
2008	ACT extended to high Pf predominant districts

2008	World Bank supported National Vector Borne Disease Control and Kala azar Elimination Support Project initiated. The project focuses on 93 high endemic districts in 8 states for malaria control.
2009	Introduction of LLIN with Round 4 GFATM funding

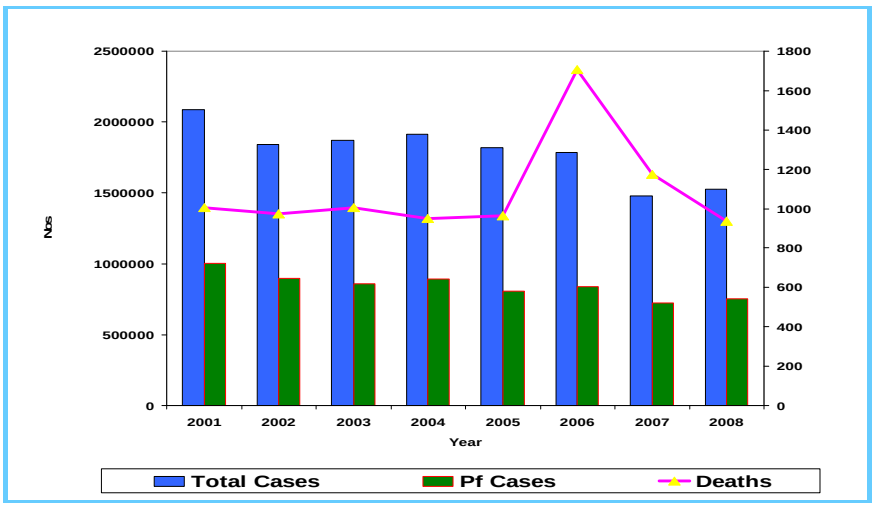
India's epidemiological situation:

Malaria is a major public health challenge in India. Of the 3.3 billion people in the world, who are considered to be at risk of malaria, 800 million (24%) live in India. It is estimated by WHO that about 247 million malaria cases occur annually in the world; of these, 11 million occur in India. It has also been estimated that out of about 881,000 deaths due to malaria in the world per year, about 15,000 occur in India.[2] It has also been estimated that about 74% of all malaria cases in the South East Asia (SEA) region occur in India.[3] The country malaria situation from 1995-2008 is given in Table 1 below.

Year	Population (in '000)	Total Malaria Cases (in million)	API	Pf cases (in million)	Pf %	Pv cases (in million)	Deaths due to malaria
1995	888143	2.93	3.29	1.14	38.84	1.79	1151
1996	872906	3.04	3.48	1.18	38.86	1.86	926
1997	884719	2.66	2.86	1.04	37.87	1.62	879
1998	910884	2.22	2.44	1.03	46.35	1.19	664
1999	948656	2.28	2.41	1.14	49.96	1.14	1048
2000	970275	2.03	2.09	1.05	51.05	0.98	932
2001	985706	2.09	2.06	1.01	48.20	1.08	1005
2002	1013942	1.84	1.80	0.89	48.72	0.95	973
2003	1027157	1.87	1.82	0.85	45.85	1.02	1006
2004	1040939	1.92	1.84	0.89	46.47	1.03	949
2005	1082882	1.82	1.68	0.81	44.32	1.01	963
2006	1084067	1.79	1.65	0.84	46.98	0.95	1708
2007	1089795	1.48	1.35	0.73	49.13	0.75	1173
2008	1111591	1.52	1.40	0.76	49.55	0.76	935

Note: The cases and deaths reflected here are largely the reported figures from public sector only.

The trend of number of malaria positive cases, *Pf* cases and deaths reported annually from 2001-2008 in the country is presented in the figure below.

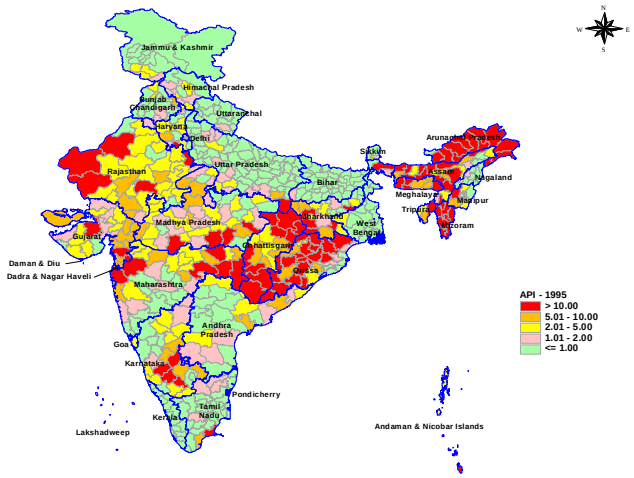


[2] WHO. World Malaria Report 2008. Geneva. 2008

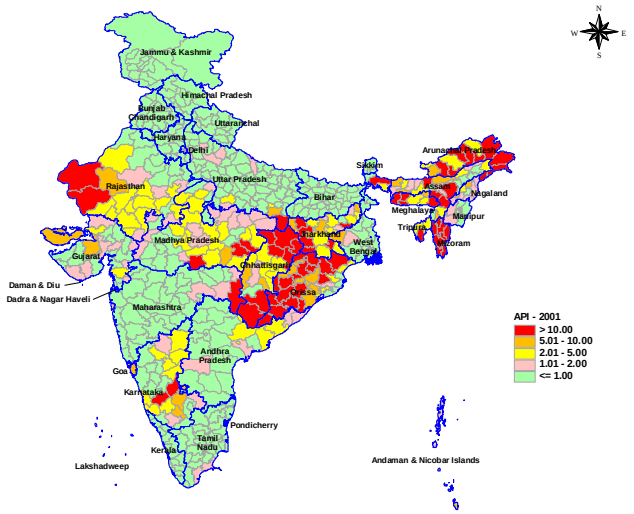
[3] SEARO-WHO. http://searo.who.in/EN/Section10/Section21/Section340_4018.htm

ROUND 9 – Malaria

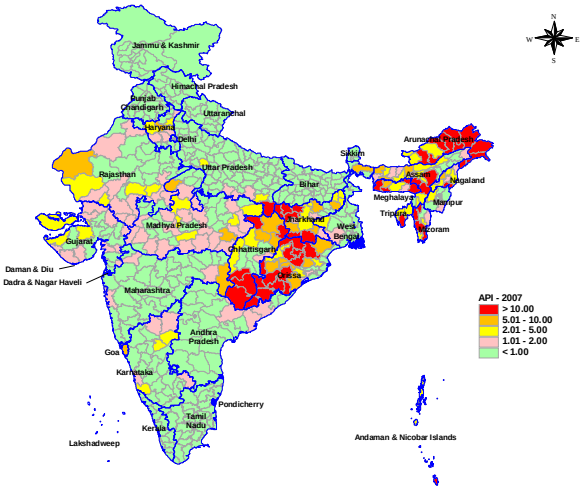
The malaria endemicity according to API (Annual parasite incidence—number of positive cases per thousand population), district-wise from 1995 to 2007 is presented in figures below.



1995



2001



2007

It may be noted that about 80% of malaria cases in India are confined to about 20% of the population residing in the high endemic areas, in the eastern and north eastern parts of the country.

There has been an encouraging trend in malaria related morbidity over the last decade. From around 3

million cases in 1995 and 1996, the incidence has been gradually declining. The case load, though steady around 2 million reported cases annually in the late nineties, has shown a further decline since 2002.[4] The API is also declining over the years. However, when interpreting API, it is important to evaluate the level of surveillance activity indicated by the Annual Blood Examination Rate (ABER). At low levels of surveillance, the Slide Positivity Rate (SPR) is considered to be a better indicator. The SPR has also shown gradual decline from 3.32 in 1995 to 1.56 in 2007. Although there have been a few instances of localized upsurges in malaria cases, those are not as large so as to influence the overall malaria situation.

In India, *P. falciparum* and *P. vivax* are the two main species of parasites responsible for malaria. Importantly, the incidence of *P. falciparum* cases is nearly 50% of the total malaria cases.The reported Pf cases has declined from 1.14 million to 0.73 million cases from 1995 to 2007. However, the Pf% has gradually increased from 39% in 1995 to nearly 50% since 2000, which possibly indicate increasing resistance to chloroquine.

The number of deaths has levelled around 1,000 per year. The increase in number of deaths in 2006 was due to outbreaks in a few states, mainly due to operational and climatic reasons.

The main reasons for the lack of sharp decline in malaria disease trend include the constraints of program implementation in large at risk rural, tribal population with unique socioeconomic characteristics and agriculture practices (including shifting cultivation), extensive forested and forest fringe areas, limited involvement of civil society, inappropriate treatment seeking behaviour and delayed recognition of danger signs and referral to appropriate health facility, infrastructure deficiencies, limited access to newer effective technologies like RDT, ACT, LLIN in addition to increasing drug resistance among parasites, insecticide resistance among vectors, etc. For the country's malaria situation, refer to SAP (Annexure 2).

India's malaria prevention and control strategies:
The national malaria prevention and control strategies have been formulated to provide a coordinated and comprehensive response to the current epidemiological and operational challenges. The strategies are given below.

- Surveillance and case management
  - Case detection (passive and active)
  - Early Diagnosis and Complete Treatment
  - Sentinel surveillance

- Integrated Vector Management (IVM)
  - Indoor Residual Spray (IRS)
  - Insecticide Treated bed Nets (ITNs) / Long Lasting Insecticide treated Nets (LLINs)
  - Antilarval measures including source reduction

- Epidemic preparedness and early response

- Supportive Interventions
  - Capacity building
  - Behaviour Change Communication (BCC)
  - Intersectoral collaboration
  - Monitoring and Evaluation (M & E)
  - Operational research and applied field research

The aim is to achieve universal coverage with effective interventions through these strategies in endemic areas. However, due to resource and operational constraints to reach the large population at risk, the implementation is being done in a phased manner and high burden areas are being targeted initially for universal coverage. The details of the principal strategies are given below.

[4] It may be noted that epidemiological data are collated largely from public sector facilities and only sporadically from the private sector.

ROUND 9 – Malaria

1. Surveillance and case management:

- Passive case detection (PCD) and Active case detection (ACD): The norms for case management emphasize quality care for patients to attract them to a facility early thereby strengthening surveillance through passive case detection. At the village level, a trained community health volunteer called Accredited Social Health Activist (ASHA) is responsible for diagnosis of fever cases and anti-malaria treatment, as and when a fever case presents to them. The ASHAs are being positioned in each village in the country under the NRHM as the first port of call for reproductive and child health related actions and also for getting remedial measures for various illnesses, including malaria. In villages, where no trained community volunteer is available for providing early diagnosis and effective treatment of malaria, ACD and case management is implemented by the Multipurpose Health Worker (MPW) through regular, preferably weekly visits to households (for further information on ASHA and NRHM, refer to the glossary and Strategic Action Plan of the malaria control program 2007--2012).
- Early diagnosis and complete treatment: Early diagnosis and complete treatment shorten the duration of illness; prevent development of severe disease and death. Effective management is also important for limiting transmission. Therefore, fever cases must be diagnosed early and followed immediately by effective treatment. The following four elements are emphasized in public and private sector:
    - recognition of fever/malaria with clinical algorithms
    - diagnosis of malaria by RDT/microscopy
    - prompt, effective and complete/radical treatment depending on parasite species with three day regimen ACT for Pf cases and with 3 day chloroquine and 14 day primaquine for Pv cases
    - pre-referral treatment and management of severe and complicated malaria.

  In the public sector, the diagnosis and treatment services are provided free of cost and the services are increasingly being provided at the doorstep of the community. At the village level, the ASHA / health worker is responsible for diagnosis of fever cases and anti-malaria treatment. PCD by screening fever cases followed by immediate treatment is also provided at all the health facilities including sub centres, primary health centers (PHCs), community health centers (CHCs) and hospitals.
- Sentinel surveillance: With improved access to quality case management at the community level, the incidence of severe malaria and hospital admissions due to malaria are expected to decline, and likewise deaths. To capture the trends accurately, sentinel surveillance is being introduced focusing on the larger health facilities at district level including those in public and private sectors, which receive most malaria patients and are able to implement case based surveillance.

2. Integrated Vector Management (IVM):

The predominant vectors for malaria transmission in the country are: *An. culicifacies, An. minimus, An. fluviatilis* and *An. stephensi, An. dirus (baimai), An. sundaicus (s.l.)*. The predominance of these vectors varies geographically within the country, as do the breeding and feeding habits of the vectors (refer to SAP).

The national program strategy is shifting to IVM as promulgated by the WHO, by including other elements like community participation, multi sectoral involvement, legislation, etc (which constitute the over arching supporting strategies) in addition to vector control measures (anti adult and anti larval)

The anti adult measures include: ITN/LLIN and Indoor Residual Spraying (IRS). Since anti adult measures are resource-intensive with use of insecticides, they are implemented in targeted high risk areas identified by rigorous epidemiological criteria as well as operational feasibility, community acceptance and past local experience. Briefly, the areas with API ≥ 2 per 1000 population are eligible for vector control. The unit for application of IRS/ITNs/LLINs is a village. Through micro-stratification, villages in high risk areas are identified for spraying with DDT / Malathion / Synthetic pyrethroid or for ITN/LLIN distribution. The LLIN is now incorporated in the national program. LLIN distribution and use is a main focus in the proposed GFATM project. The target beneficiaries are people in high risk areas, especially where implementation of IRS encounters operational difficulties and/or poor community acceptance. Although periodic insecticide treatment of community owned bed nets is continued for the time, ITNs will be phased out, as LLINs increasingly replace them in the next few years. The key strategy for rapid scale up of LLIN coverage is: mass distribution to every eligible household @ 2 family size nets per 5 persons in a village utilizing community based structures/networks for intensive BCC and community mobilization campaigns.

The reliance on IRS will also be minimized, if as per program policy, epidemiological and ecological evidence give adequate reasons for withdrawal of IRS. IRS will also continue in areas with minimal acceptance of bed nets, example in western India. Currently, about 80 million people in the country are protected by IRS.

The anti larval measures include: use of larvivorous fish/chemical larvicides/environmental manipulation and modification to destroy mosquito breeding sites including man-made breeding sites in urban and peri-urban areas, freshwater bodies in rural areas and in rice fields. The types of larvicides used ranges from chemical to microbial formulations which have been recommended by WHOPES. In urban areas, emphasis is given to the use of bio-larvicides along with minor environmental engineering measures.

3. Epidemic preparedness and early response:
This includes fever alert surveillance through the Integrated Disease Surveillance Project (IDSP) implemented in the country and early warning through multi-sectoral collaboration. Whenever there is a suspicion of increase in fever cases, rapid fever survey/mass survey is done by collection of blood slides or conducting RDT to find SPR and RDT positivity rate to assess the magnitude of outbreak as well as trend analysis of malaria incidence. This is coupled with collection of information on determinants like climatic conditions, vulnerability, receptivity, vector density etc. to determine any cause-effect relationship. The infrastructure, i.e, Rapid Response Teams (RRTs), logistics and resources for epidemic preparedness and rapid response (including IRS) is in place in most districts.

Expected improvements in outcome:
Experience has shown that the above-referred malaria prevention and control strategies are effective in significantly reducing the burden of malaria. The important outcomes expected from the current malaria control strategies and actions include: increase in timely and appropriate treatment seeking and increased coverage with delivery of quality diagnosis and treatment services; reduced transmission due to increased adoption of LLIN and improved IRS, complemented by system strengthening and capacity building, improved M & E, informed decision making and appropriate behaviour of the care takers and providers etc. impacting positively in reducing malaria morbidity and mortality. The goal is to ensure that malaria related mortality and morbidity is reduced by at least 30% by 2015 in project areas compared to 2008.

Recognizing the scaling up effort and universal coverage goals and objectives, the national program has comprehensive support strategies, namely, training, BCC, PPP, inter-sectoral collaboration, M & E and operational research.

Further details of the principal and supportive strategies, related operational design, specific activities, and expected outputs are presented in the Strategic Action Plan for Malaria Control in India: 2007—2012 at Annexure 2.

The outcome(s) expected from implementation of the above referred strategies are consistent with that mentioned under the Millennium Development Goal (MDG) – "by 2015, Malaria will no longer be a major cause of mortality or a barrier to social and economic development and growth…".

(b) From the list below, attach*** only those documents that are directly relevant** to the focus of this proposal *(or, *identify the specific Annex number from a Round 7 or Round 8 proposal when the document was last submitted, and the Global Fund will obtain this document from our files).*
Also identify the specific page(s) (in these documents) that support the descriptions in s.4.1. above.

Document	Proposal Annex Number	Page References
☐ National Health Sector Development/Strategic Plan	Annexure 14-- National Health Policy (2002)	
☐ National Malaria Control Strategy or Plan	Annexure 2-- Strategic Action Plan for Malaria Control in India:	

	2007—2012 Annual Report 15 - Report of working group – 11th five year plan Annexure 6-- Operational Manual for high endemic districts	
☐ Important sub-sector policies that are relevant to the proposal *(e.g., national or sub-national human resources policy, or norms and standards)*	Annexure 16— NRHM Framework for Implementation (2007-12)	
☐ Most recent self-evaluation reports/technical advisory reviews, including any Epidemiology report directly relevant to the proposal	Annexure 10--In-depth review of NVBDCP (2006) Annexure 11--Joint Monitoring Mission Report (2007)	
☐ National Monitoring and Evaluation Plan (health sector, malaria specific or other)	Annexure 7-- Malaria M & E Plan (2008)	
☐ National policies to achieve gender equality in regard to the provision of malaria prevention, treatment, and care and support services to all people in need of services	Annexure 16— NRHM Framework for Implementation (2007-12)	

4.2 Epidemiological Background

4.2.1. Geographic reach of this proposal

(a) Do the activities target:

☐ Whole country	☒ Specific Region(s) ***If so, insert a map to show where*	☐ Specific population groups ***If so, insert a map to show where these groups are if they are in a specific area of the country*

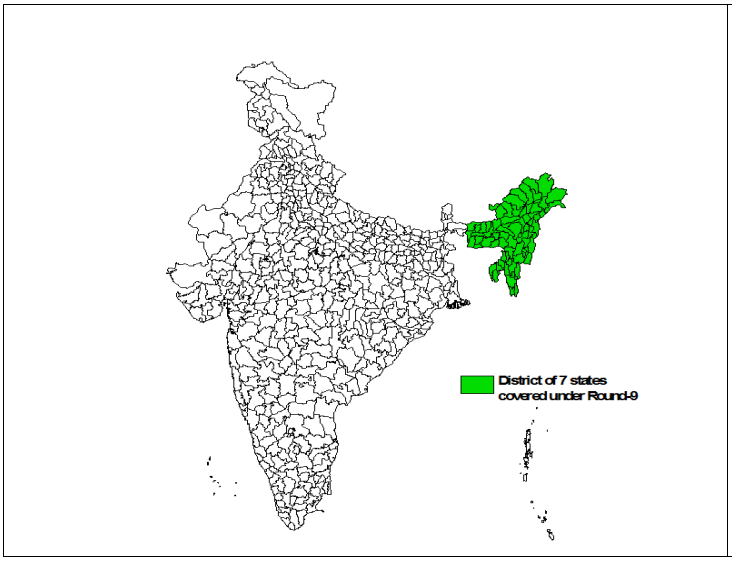
Epidemiological background of the proposed project area:

Geographic Reach

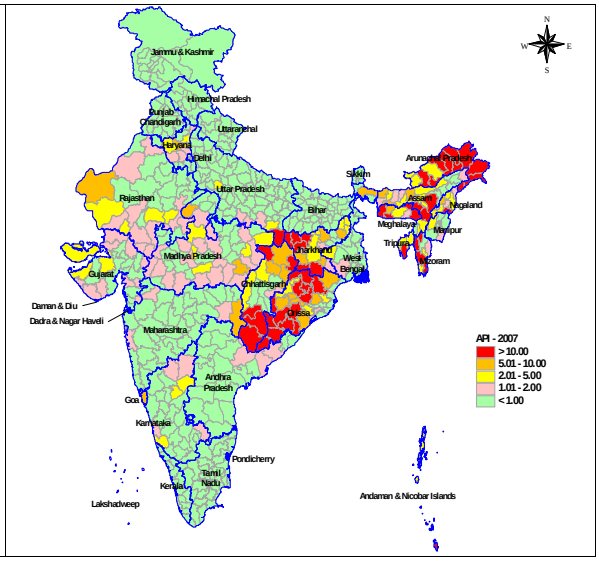
The IMCP--II will cover 42.53 million people at risk in 86 districts in seven northeastern states, namely, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura. [The states of Orissa, West Bengal and Jharkhand, which are presently covered under the Round 4 GFATM project, have not been included in the Round 9 proposal and will be supported through domestic/World Bank funding].

The Round 9 proposed project areas are endemic for malaria. These areas are mostly hilly and forested with difficult terrain and hence, fraught with problems of accessibility and public health system constraints. The proposed GFATM Round 9 project areas (86 districts in 7 states) and malaria incidence are presented in the figures below.

ROUND 9 – Malaria

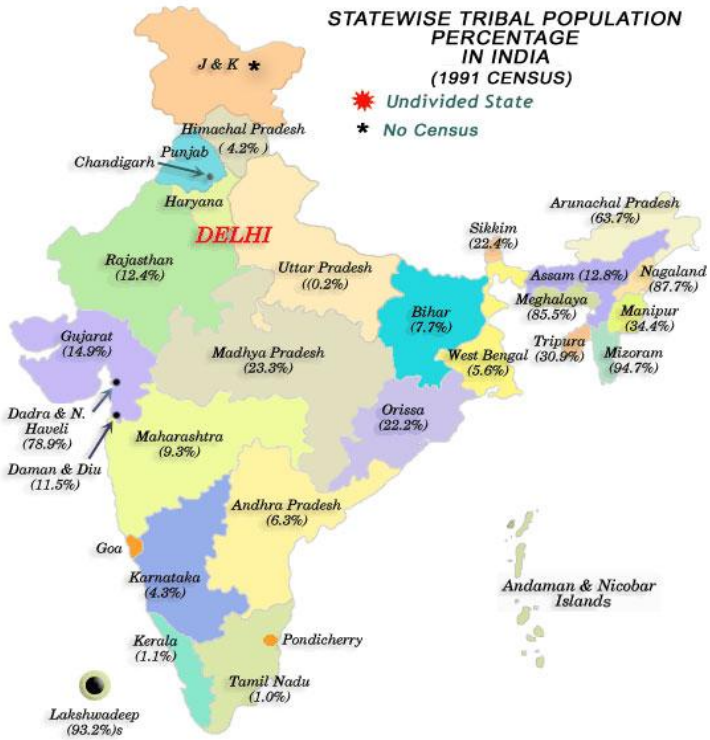


GFATM Round 9 project areas



Malaria incidence--2007

As mentioned already, the project states have sizeable tribal population as can be seen from the figure and the tables below.



Number of districts having Scheduled Tribe population more than 50% in NE states	Number of districts having Scheduled Tribe population between 25% and 50% in NE states
41	9

Source: Ministry of Tribal Affairs, GOI, 1991

The number of project districts, villages, and total project population is presented in the table below.

ROUND 9 – Malaria

State	District	No. of villages (2001)	Total Population (2001)	Total Population (Mar 2009 Projections)	Rural population (2001)	Rural Population (Mar 2009 projections)
Arunachal Pradesh	15	4,065	1,097,968	1,273,643	870,087	1,009,301
Assam	27	26,312	26,655,528	30,920,412	23,216,288	26,930,894
Manipur	12	2,391	2,166,788	2,513,474	1,590,820	1,845,351
Meghalaya	7	6,026	2,318,822	2,689,834	1,864,711	2,163,065
Mizoram	9	817	888,573	1,030,745	447,567	519,178
Nagaland	12	1,317	1,990,036	2,308,442	1,647,249	1,910,809
Tripura	4	870	3,199,203	3,711,075	2,653,453	3,078,005
GFATM Districts (in 7 states)	86	41798	38316918	**44447625**	32290175	37456603
All India	All states and UTs	638,387	1,028,737,436	1,193,335,426	742,490,639	861,289,141

Source: Census of India, 2001, 2009

The 42.53 million figure for 2008 used for planning in this proposal (below) differs from the official demographic projection of 44.44 million figure for 2009 (above), *on account of different database—state health department and census, respectively*. The former figure based on the reports by the respective state vector borne disease control programs is deemed more suitable for planning.

A snapshot of epidemiological situation of malaria—2008 in proposed Round 9 GFATM project areas (86 districts in 7 states) is presented in the tables below.

Year wise data for all 7 states from 2002 to 2008

Year	**POP. (000's)**	**B.S.E.**	**POSITIVE CASES**			***Pf %***	**A.B.E.R.**	**A.P.I.**	**S.P.R.**	***SfR***	**DEATHS**
			Pv	***Pf***	**Total**						
2002	39298	3498313	90711	89630	180341	49.70	8.90	4.59	5.16	2.56	162
2003	39861	3278560	73517	83288	156805	53.12	8.22	3.93	4.78	2.54	169
2004	40695	2973986	54997	81571	136568	59.73	7.31	3.36	4.59	2.74	180
2005	41018	3265068	60649	88473	149122	59.33	7.96	3.64	4.57	2.71	251
2006	41354	4021388	86021	148225	234246	63.28	9.72	5.66	5.83	3.69	901
2007	41891	3641558	66675	125890	192565	65.38	8.69	4.60	5.29	3.46	581
2008	**42528**	3999915	57851	131286	189137	69.41	9.41	4.45	4.73	3.28	322

Note: The cases and deaths reflected here are largely the reported figures from public sector only.

State wise data for year 2008

State	POP. (000's)	B.S.E.	A.B.E.R.	POSITIVE CASES			A.P.I.	S.P.R.	SfR.	Pf %	DEATHS
				Pv	Pf	Total					
Arunachal	1056	250884	23.76	20998	7074	28072	26.58	11.19	2.82	25.20	0
Assam	29654	2637875	8.90	25645	58224	83869	2.83	3.18	2.21	69.42	86
Manipur	2774	134755	4.86	352	356	708	0.26	0.53	0.26	50.28	2
Meghalaya	2306	333704	14.47	3173	35037	38210	16.57	11.45	10.50	91.70	73
Mizoram	980	165541	16.89	1134	6172	7306	7.46	4.41	3.73	84.48	91

Nagaland	1981	135910	6.86	4243	835	5078	2.56	3.74	0.61	16.44	19
Tripura	3777	341246	9.03	2306	23588	25894	6.86	7.59	6.91	91.09	51
GFATM 86 districts total	42528	3999915	9.41	57851	131286	189137	4.45	4.73	3.28	69.41	322

Note: The cases and deaths reflected here are largely the reported figures from public sector only.

The project population is 42.53 million in 86 districts. This constitutes about 3.8% of the country's total population (1111.59 million) and accounts for 12.4% of the total malaria cases in the country (1.52 million), 17.4% of the total *P. falciparum* cases (0.76 million) and 34.4% of total reported malaria deaths (935).

The state wise epidemiological data for the last 10 years are available in the NVBDCP Annual Report 2008-09 (Annexure 3).

(b) **Size of population group(s)**
(If national data is disaggregated differently then type over the categories proposed)

Population Groups	Population Size	Source of Data	Year of Estimate
Total country population (all ages)	1028,737,436	Census of India	2001
Women > 60 years	38,852,994	Census of India	2001
Women 15 – 59 years	282,338,162	Census of India	2001
Women with a pregnancy in last 12 months	27,000,000	Estimated from SRS	2006
Men > 60 years	37,768,327	Census of India	2001
Men 15 - 59 years	303,400,561	Census of India	2001
Girls 7 -14 years	95,303,079	Census of India	2001
Boys 7 – 14 years	104,488,119	Census of India	2001
Girls 0 – 6 years	78,820,411	Census of India	2001
Boys 0 – 6 years	84,999,203	Census of India	2001
No age Specified-Male	1,500,562	Census of India	2001
No Age Specified-female	1,237,910	Census of India	2001
Other **:			[*use "Tab" key to add extra rows if needed]*

4.3. Major constraints and gaps

(*For the questions below, consider government, non-government and community level weaknesses and gaps, and also any key affected populations*[5] *who may have disproportionately low access to malaria prevention, treatment, and care and support services, including women, girls, and sexual minorities.)*

4.3.1. Malaria program

Describe:

- the main weaknesses in the implementation of current malaria strategies;
- how these weaknesses affect achievement of planned national malaria outcomes; and
- existing gaps in the delivery of services to specific at-risk populations.

Even though the national malaria control program has made significant progress in reducing malaria morbidity and mortality since 1976, yet weaknesses in program implementation have hampered the achievement of desired goals and objectives. Key program implementation weaknesses are summarized below.

- **Inadequate funds:** Though the Planning Commission allocates funds for implementation of malaria

[5] Please refer back to the definition in s.2 and found in the Round 9 Guidelines

control measures, there is still a large gap in allocation for scaling up specific interventions like provision of RDTs, ACT and LLINs, and for positioning health care delivery and management staff at district and state levels to achieve universal coverage and impact. The financial gap for the national malaria control program is estimated to be more than 50% and has been addressed in section 5.1.

- **Insufficient human resources and inadequate capacity at primary care level:** Lack of service providers, especially health workers and laboratory technicians, compounded by shortage of Health assistant/supervisors (Male), malaria inspectors and assistant malaria officers is one of the main factors affecting service delivery, particularly in remote areas. There is also a virtual absence of RRTs for epidemic/outbreak response in many districts. Although the national program has a training plan, many personnel within the public health care system require training, especially on newer tools and technologies as well as meaningful engagement of community. Also, most of the private sector care providers are yet to be trained by the program, although almost half of the fever cases are seeking care/treatment from them.
- **Lack of advocacy in prioritization and political commitment at sub-national levels:** The states have the final authority on how finances and technical resources for malaria control will be allocated. Experience has shown that although the political commitment is improving at the national level, higher levels of commitment are required at the state level. The challenge is to profile malaria as a major public health problem vis-à-vis other important and conflicting priorities.
- **Minimal involvement of and ownership by civil society, private sector and communities:** Civil society organizations, local self governments and communities currently have a limited role in malaria control efforts, especially in planning, monitoring and advocacy leading to persistence of a provider-driven malaria program rather than a community-driven program. Thus, utilization of services is varied and community ownership of malaria control efforts is lacking. It is estimated that 50% or more cases of fever/malaria are attended to by the private sector;[6] including qualified as well as the unqualified private health care service providers. Weak engagement of the private sector care providers has led to variations in treatment protocols adopted by them, disparities in quality, lack of accountability in reporting cases and epidemic outbreaks, reluctance to participate in capacity building, lack of public health approach etc. Further, social, cultural and economic characteristics of tribal and other vulnerable communities, often contribute to inappropriate and/or under-utilization of available services. Community resistance to consistent use/acceptance of preventive interventions--insecticide treated mosquito nets, IRS are also major constraints.
- **Insufficient BCC:** Although operational guidelines for BCC exist, the strategy needs firming up. Moreover, most BCC materials are knowledge oriented and not focused on behaviour outcomes. The capacity for implementing BCC also varies between various states. The Interpersonal Communication and community outreach activities are not fully emphasized, despite their proven effectiveness.
- **Increasing drug resistance:** The resistance of *P. falciparum* to chloroquine has been documented in many areas across the country (refer to Annual Report—Annexure 3). About 300 PHCs in 92 districts in India have been declared to have *P. falciparum* resistance to chloroquine. A Joint Monitoring Mission (JMM) in 2007 observed that since 2001, out of 64 drug sensitivity studies using WHO's 28-day protocol conducted, only 5 (8%) have shown treatment failure less than 10%; 17 (27%) studies show failure rates between 10-25% and 42 (66%) studies show failure rates of more than 25%. The proportion of *P. falciparum* has been increasing and since 1998. In view of this, the policy of offering ACT for *P. falciparum* cases has been changed to cover entire districts that are supported by World Bank/GFATM. These areas account for over 90% of all Pf cases reported in the country. Monitoring of therapeutic efficacy for Pf has now been reoriented to focus on artesunate + SP, and the World Bank Is supporting a nationwide project for this purpose with 30 sentinel sites including in the GFATM supported areas.
- **Increasing insecticide resistance:** In some of the high risk areas across the country, vector resistance to insecticides, including DDT and Synthetic Pyrethroids, has been recorded (refer to Annual Report—Annexure 3).
- **Inadequate surveillance:** The Annual Blood smear Examination Rate (ABER) is used to determine the surveillance activities of malaria case detection through passive and active case detection. The yield of case detection through ACD has been rather poor, especially in high endemic remote areas with poor accessibility due to various reasons including shortage/vacant posts of health workers. The data of outpatients, in-patients and severe malaria cases getting treatment in private/NGO sector health facilities and the outcomes are also rarely compiled. Further, the surveillance data is used infrequently at the point of collection and at the district level for treatment decisions and also for

[6] ibid

detecting outbreaks.

- **Inadequate accessibility to and availability of early diagnosis and treatment services:** There is considerable delay in diagnosis and treatment of *Pf* cases in many high endemic areas including those in the proposed GFATM project states due to various reasons including difficult terrain, etc. The delay in diagnosis also contributes to delay in referral and admission of malaria cases. The GFATM Round 4 project has initiated the use of RDT and ACT to ensure early diagnosis and prompt and effective treatment of Pf cases through ASHAs being positioned under the NRHM. Further scaling up of access to early diagnosis and treatment is urgently needed to reduce malaria transmission and prevent deaths.
- **Inappropriate treatment seeking and treatment dispensing behaviour and deficient QA system:** An estimated 50% of fever cases are treated by private practitioners (both qualified as well as unqualified) [JMM, 2007]. The use of laboratory tests to confirm malaria is rare in the private sector. This leads to a situation where many of the fever cases which are not due malaria get treated with antimalarials and similarly, many of the malaria cases receive antibiotics on an empirical basis. The use of RDTs to diagnose malaria is also very limited in both the private and government sectors. The quality assurance system of malaria microscopy and RDTs also requires improvements.[7]
- **Inadequate IVM efforts:** The JMM, 2007 observed that implementation of vector control activities under NVBDCP remained disease specific and are not integrated. The skills and capacity in medical entomology, pesticide management and application methods are inadequate for the needs of a multi-disease program. A clear operational manual including procedures and facilities for safe distribution, storage and disposal of public health pesticides is yet to reach all. The storage facilities for insecticides and waste disposal systems are also inadequate in most states. While quality coverage has remained a challenge, non-cooperation among the community towards IRS further limits its usefulness. .
- **Inadequate planning, monitoring and evaluation at secondary, primary care levels:** The JMM in 2007 observed that the strategic planning with clear objectives, targets, monitoring indicators, their means of verification and required inputs to achieve the targets at the district and PHC levels is weak. The capacity to analyze, interpret and use data for decision making at the district and state level is inadequate. The national program has a centralized M&E system called NAMMIS, which was developed at the national level for implementation by all states and districts. However, this has been functional only in a few states due to inadequate training and resources at the district level. In addition, recording and reporting of newer interventions introduced in the program, namely RDTs, ACT and ITNs/LLINs are yet to start. The reporting of malaria related morbidity and deaths by the hospitals are also irregular and infrequent. Apart from the reporting system, program monitoring and supportive supervision has also been inadequate. There is minimal discussion/exchange on field visit reports and timely feedback.
- **Inadequate Procurement and supply chain management capacity:** The UNOPS as the procurement agency follows the best practices in managing centralized procurement. However, there are still delays in procurement largely on account of multiple approval processes. Besides, the following issues result in deficiencies in preventive and curative interventions, during the transmission season: shortcomings in storage arrangements in absence of standardized technical guidelines; challenges for handling new products with varying storage specifications; inadequacies in distribution system especially in remote, hard to reach areas; manual inventory management that is yet non-responsive to dynamic changes in requirements; absence of linkage of implementation guidelines, manuals and other documents; weak communication among districts, states; inadequate implementation of M&E plan for PSCM.
- **Limited operational research:** The JMM (2007) mentions that even though the NVBDCP carries out operational research periodically, there is no clear framework and adequate resources for conducting operational research, especially at the state and district levels. The opportunity for collaboration between medical colleges/various technical, research institutions and the NVBDCP to conduct operational research is also not fully exploited. However, increasing collaboration with the NIMR (ICMR) is a positive step to address the operational research weaknesses.

The above weaknesses have contributed to the persistence of high malaria burden in many parts of the country including in the proposed GFATM project areas. In addition, certain inevitable environmental, entomological, other constraints that adversely affects optimal program implementation and in turn the disease burden, trend include: large forest areas, frequent floods, physical isolation due to climatic conditions/absence of roads; lifestyle/economic pursuits of large segment of tribal population at risk;

[7] JMM. 2007.

peculiar agricultural practices in much of the high endemic area (shifting cultivation); highly efficient anthropophilic vector mosquitoes; problems of unrest; cross-border migration, etc.

4.3.2. Health System

Describe the main weaknesses of and/or gaps in the health system that affect malaria outcomes.
The description can include discussion of:

- *issues that are common to malaria, tuberculosis and HIV programming and service delivery; and*
- *issues that are relevant to the health system and malaria outcomes (e.g.: delivery of ITNs or IRS, or provision of intermittent preventive treatment to pregnant women (IPTp)), but perhaps not also HIV and tuberculosis programming and service delivery.*

Since independence, India has built up a vast health infrastructure and health personnel at primary, secondary, and tertiary care levels in public, voluntary, and private sectors. While the strengths of India's extensive health care system, as identified in an assessment done by the World Bank,[8] are a well developed administrative system, good technical skills in multiple fields and an extensive network of public health institutions for research, training and diagnostics, which provides free health to people below the poverty line, several weaknesses in the system have also been highlighted. The 11th Five-Year Plan document has also noted weaknesses in the public health care system, particularly in rural areas, in many states and regions, including extreme inequalities and disparities both in terms of access to health care as well as health outcomes that places the burden on the poor, women, scheduled castes, and tribes.[9] For further details on the health system, refer to glossary.

The major weaknesses in the health system and service delivery include:

Inadequate human and financial resources: With a rapidly growing population and resource constraints, the public health system is under stress to ensure that the basic architecture keeps pace with the demand. Inadequate resources also lead to lack of clientele satisfaction and non-availability of essential medicines. Public health expenditures in India need to increase further in order to reduce the burden of out-of-pocket health expenditures. Inflexibility in use of funds and limited scope for innovations are other weaknesses.

One of the biggest challenges that the country's health sector faces is shortage of human resources. Inadequate availability of appropriate and adequately trained human resources such as, doctors, lab technicians, nurses etc. is a major constraint for scaling up interventions calling for multi-tasking / multi-skills at one level and improved pay scales and work environment at another level. The present position, requirement, and shortfall regarding public health care human resources are presented in the table below.

[8] Peters, David H., Abdo S. Yazbeck, Rashmi R. Sharma, G.N.V. Ramana, Lant H. Pritchett and Adam Wagstaff. 2002. *Better Health Systems for India's Poor: Findings, Analysis, and Options*. Washington, DC: The World Bank
[9] Eleventh Five Year Plan.

Shortfall in Health Personnel—All India

For the Existing Infrastructure	Required (R)	Sanctioned (S)	In Position (P)	Vacant (S-P)	Shortfal (R-P)
Multipurpose Workers (Female)/ANM at Sub-Centres and PHCs	167657	162772	149695	13126 (8.06%)	18318 (10.93%)
Health Workers (Male)/MPWs (M) at Sub-Centres	144998	94924	65511	29437 (31.01%)	74721 (51.53%)
Health Assistants (Female)/LHV at PHCs	22669	19874	17107	2781 (13.99%)	5941 (26.21%)
Health Assistants (Male) at PHCs	22669	24207	18223	5984 (24.72%)	7169 (31.62%)
Doctors at PHCs	22669	27927	22273	5801 (20.77%)	1793 (7.91%)
Total Specialists at CHCs	15640	9071	3979	4681 (51.60%)	9413 (60.19%)
Radiographers at CHCs	3910	2400	1782	620 (25.83%)	1330 (34.02%)
Pharmacists at PHCs and CHCs	26579	22816	18419	4445 (19.48%)	4389 (16.51%)
Lab Technician at PHCs and CHCs	26579	15143	12351	2792 (18.44%)	9509 (35.78%)

Note: For calculating the overall percentages of vacancy and shortfall, the States/UTs for which the human resources position is not available, have been excluded. Also, all India shortfall is derived by adding State-wise figures of shortfall ignoring the existing surplus in some of the States.
Source: Bulletin of Rural Health Statistics in India, Special Revised Edition, MOHFW, GoI (2006).

Further, there is also substantial mismatch between system requirements and the availability of required skills and competencies. Shortages are there among important cadres of persons such as health managers, epidemiologists, etc.

Inadequacies in public health infrastructure, and mushrooming private sector care providers: The provision of infrastructure is based on population norms rather than habitations leading to issues of accessibility, acceptability, and utilization. The inadequacies mostly result in a large proportion of population visiting private providers for their health care needs, particularly in rural areas. The private sector care health providers range from voluntary (not-for-profit or for-profit organizations), corporate bodies, trusts, stand-alone specialist services, diagnostic laboratories, to medical shops and a range of highly qualified to unqualified providers, each addressing different population segments.

Inadequate regulatory frameworks and PPP: Absence of appropriate laws to regulate the private sector is one of the reasons for the inability of the health system to optimally utilize the private sector service for achieving public health goals. Many small providers have a poor knowledge base and tend to follow irrational, ineffective, and sometimes even harmful practices for treating ailments. The bulk of qualified medical practitioners and nurses are subject to self-regulation by their respective state medical councils under central legislation. In practice, however, regulation of these professionals is weak and close to non-existent.[10] PPP is also inadequately understood and utilized to meet public health needs.

Sub-optimal integration and coordination of public health programs: As in most countries, India too followed the path of having vertically designed and managed national public health programs to control, eradicate or eliminate diseases like TB, malaria, vaccine preventable diseases etc. Implementation in such vertically driven silos resulted in the fragmentation of the delivery of services making inter-programmatic coordination problematic.

As mentioned in the 11th Five-Year Plan document, the conceptualization and planning of all programs is centralized instead of being decentralized using locally relevant strategies. The only local aspect is the application under a chain of command.

Lack of convergence with non-health public sector programs: Inability of the public health system to effectively mobilize coordinated action in areas of sanitation, hygiene, and nutrition, agriculture, tribal affairs, women and child development, etc has slowed down the achievement of health outcomes as most

[10] Eleventh Five Year Plan

of these areas are inter-dependent.

Limited civil society participation: The public health programs are mostly provider-driven since efforts to actively involve the community have remained episodic and not yet scaled up substantially. This has led to inadequacies in knowledge and awareness as well as apathy towards the public health system

Specific system weaknesses pertaining to malaria outcomes include:

Shortage of health care services personnel and poor motivation: The malaria program is integrated at the primary care level and health care staff at this level is closely involved in generating awareness, mobilizing the community, distributing ITNs/LLINs, providing diagnosis and treatment, arranging referral etc. Therefore, shortage of primary health care personnel affects program implementation severely. It is also relevant to mention that motivation and compensation of field level personnel is a challenge, especially in inaccessible areas, where transportation facilities are often lacking.

4.3.3. Efforts to resolve health system weaknesses and gaps

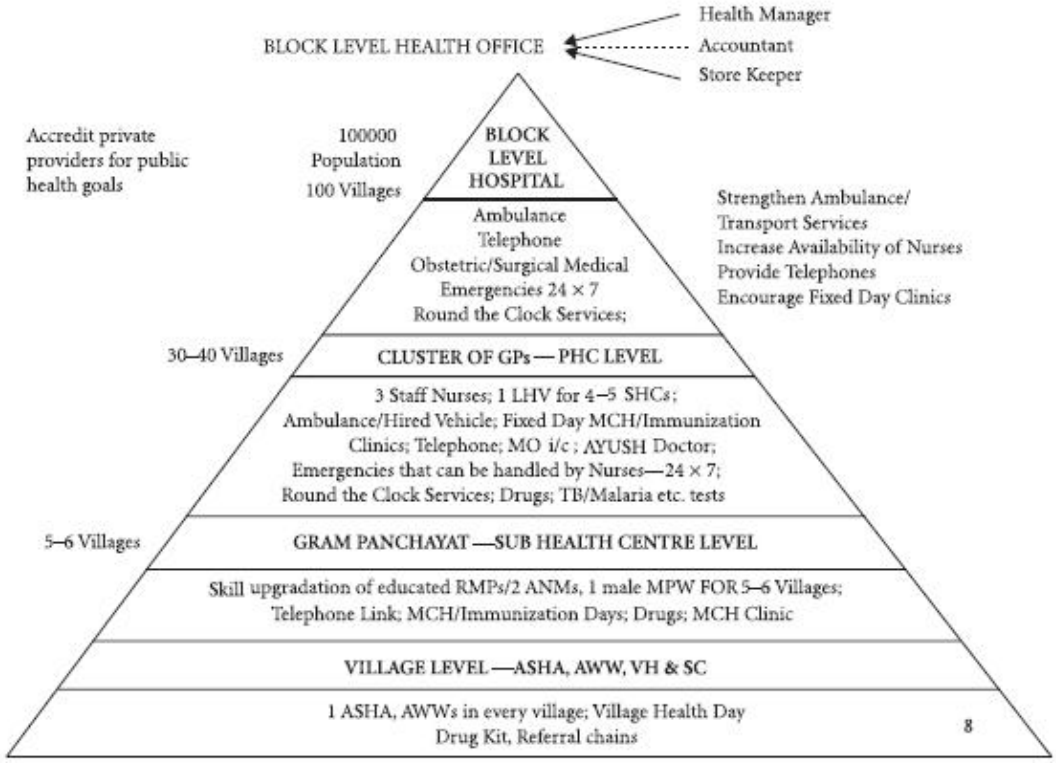
Describe what is being done, and by whom, to respond to health system weaknesses and gaps that affect malaria outcomes.

In India, under the NRHM, several health system strengthening are envisaged and intiated. Some of the mitigating measures and overall achievements in brief, are given below:

Increasing public expenditure on health care from 0.9 percent of the GDP in 2005 to 2 - 3 percent of the GDP: Currently, public resources for health are estimated to be only about 1.2 percent of GDP which is due to the rapid expansion of the denominator. However, in absolute terms, there has been a substantial increase in budgetary outlays both at the federal and state levels which has succeeded in setting right several distortions related to maintenance and other routine expenditure required for the proper functioning of the health facilities.

Flexible funding: The central strategy of functioning has been to provide flexibility in utilization of funds by providing untied funds at every level of the health infrastructure, its use being decided by the hospital boards – a true indicator of empowering people to participate. Substantial improvements in infrastructure and placement of human resources have been achieved, resulting in increased utilization by the poor.

Community owned decentralized health delivery system to address inadequate human resources: The inability of India's health system to provide comprehensive need based health and medical care services to the people at facilities of their choice and having financial risk protection was sought to be addressed by launching the NRHM. The basic objective of this flagship program launched in April 2005 was to make the health service system (both public and private) acceptable, affordable and accountable to the poorest households. Accordingly, the thrust of the NRHM has been to establish a fully functional, community owned decentralized health delivery system conforming to public health standards laid down for all health care facilities. A generic public health delivery system envisioned under NRHM from the village to block level is illustrated in the figure below.



Notes: TB = Tuberculosis, MO = Medical Officer, MCH = Maternal and Child Health.

Notification for hiring of health care services personnel and infrastructure improvement: The central and state governments have recently notified the appointment of various key cadres including laboratory technicians, male health workers, medical officers etc. The recruitment is expected to augment the existing health workforce in the field. Under NRHM, the ASHAs at village level are being trained to undertake the anti-malaria interventions. In addition, commitment has been made for upgradation of health infrastructure, especially in remote areas.

Participation by the Private sector/Civil society organizations (CSOs)– It has been estimated that nearly 50% of cases approach the private sector /civil society facilities for treatment due to poor access and quality of service delivery in the public sector. These cases are largely unreported. The private sector being largely unregulated, it is a challenge to integrate it with the national program. Trainings of private practitioners by Indian Medical Association have been conducted at state level. The Round 9 proposal aims at building on the strong credentials of NRHM and CSO involvement, to involve communities actively in malaria control efforts. The State/District Health Missions already include representatives of NGOs/CBOs/FBOs and the same will be leveraged in proposed project areas.

The Civil society PR, Caritas India consortium, have an extensive network of primary and secondary level health care units across the areas targeted under the proposed GFATM Round 9 project. They are expected to complement the government's efforts in increasing the access and utilization of services. The CSO will facilitate utilization of curative and preventive services at community level by enhancing awareness, service demand and participation. It is also proposed to develop and strengthen the capacities and skills of the private service providers by training them and involving them in the program through the CSO-PR Caritas India and get them to reporting to the public health system through advocacy and incentive of providing drugs and commodities.

Increasing participation and the ownership by the community: Under NRHM, all health facilities have a board consisting of representatives from civil society, women groups, political leaders, etc. with powers to decide budget allocation and utilization. Further, it is the community selected health worker, ASHA, who provides the linkage between the community health needs and the health facility. This worker is selected by the community itself. For each service provided, she is paid by the program, such as for example, motivating a woman to go to the hospital for institutional delivery would entitle her for a certain

amount of fee etc. The formation of Rogi Kalyan Samiti, a body represented by the facility level management personnel, representatives of civil society and local panchayat unions and the utilizing public has led to the community ownership as well as participation in the governance structure.

Improved management capacity: At the state and district level, autonomous health societies have been constituted to manage the health budgets. Professionals such as chartered accountants and public health managers including those with business management degree have been appointed. This has resulted in improving financial management and quicker flow of resources.

Integration of all vertical programs to ensure better coordination: Finally, all facilities are being strengthened in accordance with public health standards laid down in terms of human resources, infrastructure facilities, funding, etc., for providing a package of services. Accordingly, 540,000 community health workers (ASHAs) have been appointed so far. Over 5 million women have been provided financial subsidy for institutional delivery, in public or private hospitals, raising the overall percentage of institutional deliveries in a substantial manner. At the community level 177,925 village health and sanitation committees have been made functional. In the short span of 2 years, more than 2,300 specialists have been contracted and more than 3,000 partnerships with private sector hospitals established.

4.4. Round 9 Priorities

Complete the tables below on a program coverage basis (*and not financial data*) for **three to six areas** identified by the applicant as priority interventions for this proposal. Ensure that the choice of priorities is consistent with the current malaria epidemiology and identified weaknesses and gaps from s.4.2.2 and s.4.3.

Note: All health systems strengthening needs that are most effectively responded to on a malaria disease program basis, and which are important areas of work in this proposal, should also be included here.

Priority No:	**1**	**Historical**		**Current**		**Country targets**			
Indicator name	***LLIN (in million)***	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
A: Country target *(from annual plans where these exist)*			52.40	53.24	54.09	54.96	55.84	56.73	57.64
B: Extent of need already planned to be met under other programs *			0	4.80	6.38	8.64	11.10	15.78	18.52
C: Expected annual gap in achieving plans			52.40	48.44	47.71	46.32	44.74	40.95	39.12
D: Round 9 proposal contribution to total need		*(e.g., can be equal to or less than full gap)*			0.50	1.50	3.20	0.90	1.60

A. (as in priority table) Country targets have been arrived at on the basis of calculations in Table 1 A below.

Table – 1A. Estimates of LLIN requirements of the country (all figures in million)

Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Total population of the country (population projected to increase at the rate of 1.6% annually)	1148	1166	1185	1204	1223	1243	1263
High risk population living in areas above API ≥ 2	131.00	133.10	135.23	137.39	139.59	141.82	144.09
Number of LLIN required in the country	52.40	53.24	54.09	54.96	55.84	56.73	57.64

- Total population to be covered by IRS/LLIN/ITN is 131 million in 2008, i.e., those living in areas with API ≥ 2 (The population is projected to increase at a growth rate of 1.6% annually, as per decadal growth rate).
- The number of LLIN required is @ 2 LLIN per household, assuming a household consists of 5 persons.
- Number of LLIN required to cover the target population has been calculated @ 2 LLIN for 5 persons.
- Population living in endemic areas registering API ≥ 2 is at present covered with IRS and/or conventional nets reimpregnated with synthetic pyrethroids.
- Conventional nets reimpregnated with synthetic pyrethroids will continue in areas registering API ≥ 2 till they are completely covered by LLINs.
- IRS will continue in areas with API ≥ 2 already under IRS coverage, as per program policy, till the time epidemiological and ecological evidence give adequate reasons for withdrawal of IRS.

B. and C. (as in priority table). Extent of need planned to be met is derived from the already committed schedule of procurement from GFATM Round 4 and World Bank projects, as given in Table 1B below. Under the 12th Five Year Plan (2012-2017), 5 million LLINs are provisioned in each of the five years, which includes the last three years of the proposed Round 9 project. Action will be taken to fill the gaps from domestic/external sources.

Table 1B. Committed procurement schedules of LLIN and planned under 12th Five Year Plan (2012-2017) (all figures in million)

Row No.	Source of funding	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
A	GFATM Round 4 Project	3.80	0	0	0	0	0
B	World Bank Project	1.00	1.58	2.26	2.26	1.26	0
C	Total from the above funding (A + B)	***4.80***	***1.58***	***2.26***	2.26	1.26	0
D	Cumulative Total	4.80	6.38	8.64	10.90	12.16	12.16
E	Expiry, year wise	0	0	0	***4.80***	***1.58***	***2.26***
F	Cumulative expiry	0	0	0	4.80	6.38	8.64
G	**Net availability of LLIN (D minus F)**	**4.80**	**6.38**	**8.64**	**6.10**	**5.78**	**3.52**
H	Planned under 12th Five Year Plan period (2012-2017)	0	0	0	5.00	5.00	5.00
I	Cumulative availability of nets under 12th Five Year Plan	0	0	0	5.00	10.00	15.00
J	**Cumulative availability (G + I)**	**4.80**	**6.38**	**8.64**	**11.10**	**15.78**	**18.52**

Note: The effective life of LLIN is factored as 3 years.

- The table 1C presents the LLIN requirement in project areas towards universal coverage.

Table – 1C. LLIN requirements in the project area (all figures in million except row K)

Row	Year	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
A	Total population living in project area	42.53	43.21	43.90	44.60	45.32	46.04	46.78
B	Total population in project area with API ≥ 2 targeted for LLIN distribution	12.96	13.17	13.38	13.59	13.81	14.03	14.26
C	No. of LLIN required for 100% population coverage	5.18	5.27	5.35	5.44	5.52	5.61	5.70
D	LLIN from GFATM Round 4	0	2.21	0	0	0	0	0
E	**LLIN proposed to be procured from GFATM Round 9**	**0**	**0**	**0.50**	**1.50**	**3.20**	**0.90**	**1.60**
F	Total LLIN from Round 4 and Round 9 (D + E)	0	2.21	0.50	1.50	3.20	0.90	1.60
G	Expiry of LLIN	0	0	0	0	2.21	0.50	1.50
H	LLIN available (F-H)	0	2.21	0.50	1.50	0.99	0.40	0.10
I	Cumulative LLIN available in households	0	2.21	2.71	4.21	5.20	5.60	5.70
J	Population covered by LLIN	0	5.53	6.78	10.53	13.00	14.00	14.26
K	**Percentage of high risk population (API ≥ 2) covered with LLIN**	**0**	**41.96**	**50.64**	**77.43**	**94.14**	**99.78**	**99.96**

ROUND 9 – Malaria

- The Round 9 proposal aims for near universal coverage (99.96%) of the population living in high risk areas (API ≥ 2) in the project area by the end of the project period. It is expected that the universal coverage will result in at least 80% utilization of these LLIN
- The population living in high risk (API ≥ 2) areas will be 13.38 million in 2010 and projected to increase at the rate of 1.6% p.a.
- The number of LLIN required is @ 2 LLIN per household, assuming a household consists of 5 persons.
- Number of LLIN required to cover the target population has been calculated @ 2 LLIN for 5 persons.
- Population living in endemic areas registering API ≥ 2 is at present covered with IRS and/or conventional nets re-impregnated with synthetic pyrethroids.
- Conventional nets re-impregnated with synthetic pyrethroids will continue in areas registering API ≥ 2 till the time they are completely covered by LLINs.
- IRS will continue in areas with API ≥ 2 already under IRS coverage, as per program policy, till the time epidemiological and ecological evidence give adequate reasons for withdrawal of IRS.
- For further details on LLIN, refer to section 4.5.1 SDA 1.1.

D.(as in priority table). The Round 9 proposal contribution of LLIN is shown on an annual basis and NOT on cumulative basis.

Priority No:	2	Historical		Current		Country targets			
Indicator name	***RDT (in million)***	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
A: Country target *(from annual plans where these exist)*			43.1	43.7	44.40	45.20	45.90	46.60	47.40
B: Extent of need already planned to be met under other programs			10.3	9.87	40.28	41.02	41.65	42.28	43.01
C: Expected annual gap in achieving plans			32.8	33.8	4.12	4.18	4.25	4.32	4.39
D: Round 9 proposal contribution to total need		*(e.g., can be equal to or less than full gap)*			4.12	4.18	4.25	4.32	4.39

A. (as in priority table). Refer to table 2A for calculations used to arrive at the country target

Table – 2A. Estimates of RDT requirements of the country (all figures in million)

Year	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
Total population of the country (population projected to increase at the rate of 1.6% annually)	1185	1204	1223	1243	1263
Estimated population not having easy access to microscopy facility (assumed to be approximately 30% of the country population)	355.5	361.2	366.9	372.9	378.9
RDT requirements to achieve 10% Annual Blood Examination Rate (ABER) based on fever attendance rates in the population in areas not having easy access to microscopy facility	35.6	36.1	36.7	37.3	37.9
25% reserve (buffer stock) of RDTs	8.9	9.0	9.2	9.3	9.5
Total RDT requirements in the country	**44.4**	**45.2**	**45.9**	**46.6**	**47.4**

- The total population of India was estimated to be 1185 million in 2010 and projected to increase at the rate of 1.6% annually
- The population not having easy access to microscopy facility in the country as a whole is assumed to be around 30%; i.e., microscopy results are not available to this segment of population within 24 hours of reporting fever to a health care provider
- The Annual Blood Examination Rate (ABER) of fever cases in the country is maintained at about 10% of the population size as per national policy to ensure maximum detection of malaria among fever cases, based on the fever incidence in the country.

B. (as in priority table). The World Bank project and GFATM Round 4 project have committed supply of 10.3 million RDT in 2008-09; and 9.87 million in 2009-10. From 2010 onwards, the GOI with domestic and external sources is planning to scale up provision of RDT to 40.28 million in 2010,

41.02 million in 2011, 41.65 million in 2012, 42.28 million in 2013, and 43.01 million in 2014, respectively.

C. (as in priority table). At present, as the entire lot of community health volunteers have not been trained on RDT, there will be gaps till 2011-12. In such areas microscopy in the nearest laboratories will continue as before. The training of community health volunteers in the entire country would be completed by 2011-12 and RDT testing will be available thenceforth for all fever cases suspected to be malaria in areas without easy access to microscopy facility.

D. (as in priority table). The Round 9 requirement of RDT for the proposed project areas has been worked on the basis of calculation given in table 2B.

Table – 2B. Estimates of RDT requirements in the project area (all figures in millions)

Year	2010-11	2011-12	2012-13	2013-14	2014-15
Total population living in project area (population projected to increase at the rate of 1.6% annually)	43.90	44.60	45.32	46.04	46.78
Estimated population not having easy access to microscopy facility (assumed to be approximately 50%)	21.95	22.30	22.66	23.02	23.39
RDT requirements to achieve 15% Annual Blood Examination Rate (ABER) based on fever attendance rates in the above population in areas not having easy access to microscopy facility	3.29	3.35	3.40	3.45	3.51
Number of fever cases to be tested with RDT	3.29	3.35	3.40	3.45	3.51
25% reserve (buffer stock) of RDT	0.83	0.83	0.85	0.87	0.88
Total RDT requirements	**4.12**	**4.18**	**4.25**	**4.32**	**4.39**

- The total population in project area is estimated to be 43.90 millions in 2009-10 and projected to increase at the rate of 1.6% annually.
- The population not having easy access to microscopy facility in the project areas is assumed to be around 50%; i.e., microscopy results are not available to this segment of population within 24 hours of reporting fever to a health care provider.
- Malaria endemicity in the project areas, viz., North-Eastern states, is high and therefore 15% ABER is the norm in all these areas in order to detect maximum number of malaria cases.
- For further details, refer section 4.5.1 SDA 2.1.

ROUND 9 – Malaria

Priority No:	3	Historical		Current		Country targets			
Indicator name	***ACT (in million)***	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
A: Country target *(from annual plans where these exist)*			3.60	3.55	3.53	2.23	2.15	2.08	1.98
B: Extent of need already planned to be met under other programs			0.97	0.97	1.94	1.28	1.23	1.19	1.11
C: Expected annual gap in achieving plans			2.63	2.58	1.59	0.95	0.92	0.89	0.87
D: Round 9 proposal contribution to total need		*(e.g., can be equal to or less than full gap)*			1.59	0.95	0.92	0.89	0.87

A (as in priority table). The country target is arrived at on the basis of calculations in Table 3A.

Table – 3A. Estimates of ACT requirements of the country (figures in million)

Year	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
Total population living in country (increasing at 1.6% annually)	1185	1204	1223	1243	1263
Number of Pf cases in project area as per epidemiological data (cases are assumed to decline by 30% in 5 years)	0.70	0.65	0.60	0.55	0.49
Number of ACT courses required	0.70	0.65	0.60	0.55	0.49
25% buffer stocks	0.18	0.16	0.15	0.14	0.12
Deployment reserve stocks to be maintained for 4 different pediatric age groups and one adult age group at all levels to ensure that there is no stock-out of any ACT in any Pf endemic areas (in all areas and villages which have recorded Pf cases in the past 3 years)	1.94	0.97	0.97	0.97	0.97
Estimated requirements in public sector	2.82	1.78	1.72	1.66	1.58
25% to be issued for treatment of malaria cases in the non-govt facilities which will give regular reports on case management along with buffer stock and reserves	0.71	0.45	0.43	0.42	0.40
Total requirements (for public and private sector)	3.53	2.23	2.15	2.08	1.98

- The number of Pf cases to be treated in the public health system is around 0.7 million cases annually in the country. The incidence is likely to start falling by about 30% by 2014-15.
- The ACT is currently available in blister packs for five age groups comprising four pediatric age groups and one adult group (less than 1 year, 1 – 4 years, 5 – 8 years, 9 – 14 years and ≥ 15 years).
- The ACT requirements include 25% buffer stock and deployment reserves to be maintained at different levels.
- Deployment reserve covering all age groups with ASHA – 10 courses; Subcentres – 18 courses; PHC – 65 courses; and CHC – 110 courses.

- Deployment reserve for the first year have been worked out as below.

130,000 ASHAs @ 10 courses each	-	1,300,000
23,000 Sub centres @ 18 courses each	-	414,000
3300 PHCs @ 65 courses each	-	214,500
137 CHCs @ 110 courses each	-	15,070
Total	**-**	**1,943,570**

- Deployment reserves are essential to prevent stock-outs of ACT, which has a short shelf life of only 2 years (at the end point of distribution, the effective shelf life often comes down to only 1.5 years). In spite of the best supply chain management a certain percentage of wastage may become unavoidable. Deployment reserves for subsequent years are kept at 50% of the first year requirements.

B. (as in priority table). The extent to which the requirements will be met by the existing funding from GFATM Round 4 project, World Bank project and domestic sources to treat all Pf cases with ACT according to the national policy.

D. (as in priority table). The ACT requirements proposed in the round 9 proposal have been worked out in table 3B.

Table – 3B. Estimates of ACT requirements in the project area (figures in million)

Year	2010-11	2011-12	2012-13	2013-14	2014-15
Total population living in project area (increasing at 1.6% annually)	43.90	44.60	45.32	46.04	46.78
Number of Pf cases in project area as per epidemiological data - expected to decline from the third year (2012-13) of the project, to decrease by 30% from present levels by 2014-2015.	0.13	0.12	0.11	0.10	0.09
Number of ACT courses required for cases treated in public sector health facilities	0.13	0.12	0.11	0.10	0.09
25% extra cases treated by non-govt facilities and ACTs required for those cases	0.03	0.03	0.03	0.03	0.02
Total cases to be treated in public and private sector facilities	**0.16**	**0.15**	**0.14**	**0.12**	**0.11**
25% Buffer stock for cases treated in public and private health facilities	0.04	0.04	0.03	0.03	0.03
Deployment reserves stocks to be maintained for 4 different pediatric age groups and one adult age group at all levels to ensure that there is no stock out in public sector and private sector	0.81	0.41	0.41	0.41	0.41
Total requirements (for public and private sector)	**0.85**	**0.44**	**0.44**	**0.44**	**0.43**

- The requirements of the Round 9 GFATM grant is based on the estimated Pf case load of 0.13 million in the GFATM project areas. The case load is expected to decrease by 30% by the end of the project period due to the intensive use of the interventions. .
- The requirement has been taken based on the number of cases to be treated plus reserves to be maintained at all levels without stock-outs.
- Deployment reserves are essential to prevent stock-outs of ACT, which has a short shelf life of only 2 years (at the end point of distribution, the effective shelf life often comes down to only 1.5 years). In spite of the best supply chain management a certain percentage of wastage may become unavoidable.
- Deployment reserves have been calculated as follows for all ASHAs, sub centres, PHCs and CHCs reporting Pf cases:

41,798 ASHAs @ 10 courses each	-	417,980
7,608 subcentres @ 18 courses each	-	136,944
1,082 PHCs @ 65 courses each	-	70,330
209 CHCs @ 110 courses each	-	22,990
Total	**-**	**648,244**
25% of reserves to be kept in pvt sector facilities	–	162,061
Total deployment reserves for public and pvt sector	–	810,305

- Deployment reserves for subsequent years are kept at 50% of the first year requirements.
- Procurement in the Round 9 project is proposed to be done in such a manner, so as to minimize the wastage of ACTs.

➔ *If there are six priority areas, copy the table above once more.*

4.5. Implementation strategy

4.5.1. Round 9 interventions

Explain: (i) who will be undertaking each area of activity (which Principal Recipient, which Sub-Recipient or other implementer); and (ii) the targeted population(s). *Ensure that the explanation follows the order of each objective, program work area (or, "service delivery area (SDA)"), activities and indicator in the 'Performance Framework' (Attachment A). The Global Fund recommends that the work plan and budget follow this same order.*

Where there are planned activities that benefit the health system that can easily be included in the malaria program description (because they predominantly contribute to malaria outcomes), include them in this section only of the Round 9 proposal.

***Note**: If there are other activities that benefit, together, HIV, tuberculosis and malaria outcomes (and health outcomes beyond the three diseases), and these are not easily included in a 'disease program' strategy, they can be included in s.4B **in one disease proposal** in Round 9. The applicant will need to decide which disease to include s.4B (but only once). ➔ Refer to the Round 9 Guidelines (s.4.5.1.) for information on this choice.*

PROJECT TITLE
Intensified Malaria Control Project—II (IMCP—II)

PREAMBLE

The GFATM Round 9 project proposes goal, objectives and targets for scaling up effective preventive and curative interventions in those areas of the country, where the intensity of transmission is the highest and the health care delivery system constraints are the most severe. The project aims for universal coverage catalyzing decline in malaria related mortality and morbidity and contributing to achievement of national goals and MDGs; based on the experiences gained and lessons learnt during the implementation of the Intensified Malaria Control Project (IMCP) project supported by the GFATM Round 4 grant since 2005 (2005-2010) as well as the national program with domestic resources.

The Round 4 GFATM project--IMCP is being implemented in 10 high malaria endemic states, covering a population of 100 million in 106 districts. These states are: 7 North-Eastern (NE) states namely, Arunachal Pradesh, Assam, Meghalaya, Mizoram, Nagaland, Manipur, Tripura & 3 others: Jharkhand (7 districts), Orissa (16 districts) and West Bengal (6 districts). The goal of the project is to reduce malaria morbidity and mortality in 100 million population in 10 states by 30% over the project period 2005-10. The project objectives include: provision of rapid diagnostic tests in remote, inaccessible areas and prompt treatment with appropriate anti malaria drugs including ACT for chloroquine resistant areas, with the help of NGOs/ community based organizations; special interventions for people living below the poverty line as free insecticide treated bed nets including LLIN, and appropriate IEC strategy; and provision of insecticide treatment of community owned bed nets through village level camps.

Round 4 GFATM project outputs/outcomes:

The Round 4 GFATM project is expected to achieve the targets and indicators defined in the performance framework at the end of project period. The progress made in output/outcome/impact indicators over the Round 4 project period from July 2005 to December 2008 is presented in the table below. Somewhat modest performance of indicators—number of Pf cases treated with SP-ACT and number ITN distributed on account of procedural delays in the procurement are being targeted now for improvement.

Coverage indicators	Baseline value (2005)	Target Q 4 (July, 05 to June, 06)	Ach. Q 4 (upto June, 06)	Target Q 14 (July, 05 to Dec. 08)	Ach. Q14 (upto Dec. 08)	% of target achieved
Number of Pf cases treated with SP-ACT	N/A	130,000	27,392	710000	451143	63.5
Number of cases of severe and complicated malaria treated with artemisinine injections/SP-ACT/blister packs*	N/A	25,000	52,379	275000	305187	111
Number of medical officers of	N/A	1,400	1,243	3400	4418	129.9

the state health services and of IMA, NGOs and Private organization trained in treatment of severe and complicated malaria						
Number of contractual Malaria technical supervisors trained in monitoring & evaluation of programme implementation	0			70	101	144.3
Number of Lab. Technicians trained in malaria microscopy	358	1,400	823	2880	3009	104.5
Number of households owning at least 2 Inseticide-treated Nets (ITN)* *includes baseline*	170,246	1,660,000	1,863,300	5800000	10846194	187
Number of ITNs distributed	100,000	3,000,000	596,227	8000000	4256000	53.2
Number of community owned nets treated	1,330,536	3,204,512	1,694,869	9000000	15032631	167
Number of local NGOs/CBOs service deliverers trained at district level.	22	200	1,694	6000	8551	142.5
Number of community volunteers trained in malaria control strategies	2,789	37,500	36,430	130000	165301	127.1
Number of awareness camps organized at village level for treating the bed nets	2,824	15,000	17,303	50000	60486	120.9

*The high values for this indicator are not salutary; these are partly due to somewhat irrational use of artemisinin injections, partly to outbreaks in Assam in 2006.
**Includes baseline.

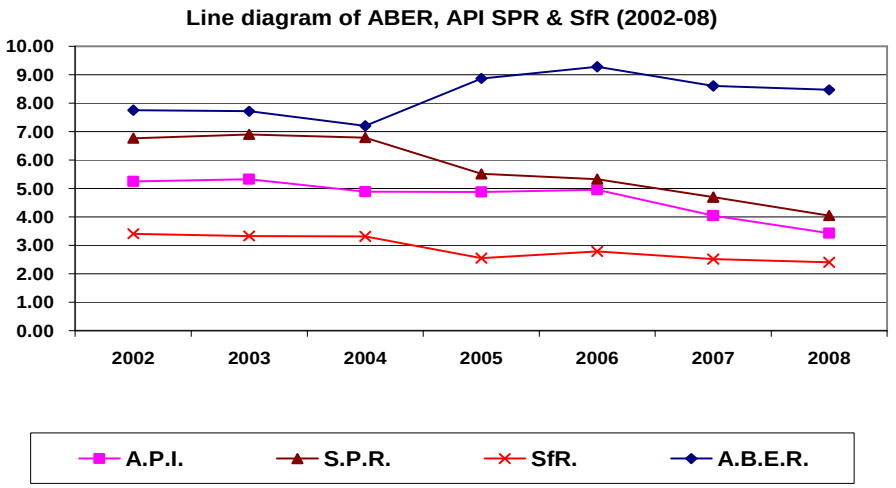
Round 4 GFATM project impact:
In the Round 4 project areas, the impact indicators--Annual Parasite Incidence, Slide Positivity Rate and Slide falciparum Rate have registered overall reducing trends. From the baseline year 2002 to 2008, the percentage reduction in API is 34.7%, in SPR is 40.2%, and in SfR is 29.3%. The target (4.76) set for SfR in 2010 has already been achieved in 2008. Although there is a reduction in malaria related mortality from baseline year 2002 to 2008 as well, to the tune of 18.6%, the numbers of deaths has registered an increase due to an epidemic in 2006. The impact indicators consolidated for project areas are given in the table below. It may also be underscored that the ABER (a process indicator) has improved from 7.76 in 2002 to 8.47 in 2008, suggesting improvements in surveillance for malaria. [Under the national program, at least 10% of population is to be screened annually for malaria parasites corresponding to an ABER of 10].

Indicator	2002	2003	2004	2005	2006	2007	2008*	% decrease/increase from 2002	Target for 2010
Population (In,000s)--Country	1013942	1027157	1040939	1022552	1084067	1087571	1085518		
Population (In,000s)--Project	83838	89619	90807	93533	101887	103925	106004		
Annual Parasite Incidence (API)--Country	1.82	1.82	1.84	1.78	1.65	1.39	1.4	23	
Annual Parasite Incidence (API)--Project	5.25	5.33	4.98	4.88	4.95	4.05	3.43	34.7	3.2

Slide Positivity Rate (SPR)--Country	2.01	1.89	1.97	1.75	1.67	1.59	1.59	20	
Slide Positivity Rate (SPR)--Project	6.77	6.9	6.79	5.51	5.33	4.7	4.05	40.2	4.76
Slide falciparum Rate (SfR)--Country	0.98	0.86	0.92	0.77	0.79	0.78	0.79	19	
Slide falciparum Rate (SfR)--Project	3.41	3.33	3.32	2.55	2.79	2.52	2.41	29.3	2.39
Malaria Mortality--Country	973	1006	949	963	1708	1310	935	3.9	
Malaria Mortality--Project	478	484	395	426	1124 **	691	389	18.6	<232
ABER--Country	9.04	9.65	9.33	10.18	9.83	8.73	8.84	2	
ABER--Project	7.76	7.72	7.2	8.87	9.28	8.61	8.47	14	10

* Provisional
** Due to a local epidemic in Assam.

The above table shows that the reductions are particularly pronounced after 2005 and greater that seen at the national level. Overall, the decline in malaria indices in the Round 4 GFATM project areas is more as compared to those in the country as a whole. The API has shown a decline of 34% in the Round 4 areas as compared to that of 23% in the country. The SPR has declined by 40% in the Round 4 areas as against 20% in the country. Likewise, the SfR has declined by 19% in the country whereas it has registered a decline of 29% in the Round 4 areas. The 18% decline in deaths is seen in the project areas as against a modest 3.9% in the country. The epidemiological indicators for Round 4 project areas are presented in the figure below.



Thus, there is evidence that combination of preventive and curative interventions and other additional inputs initiated/augmented with the Round 4 GFATM grant have influenced the trend of the disease in the past few years, in the Round 4 project areas. The Round 4 GFATM project has facilitated necessary policy changes regarding prevention and early diagnosis and prompt treatment with effective tools: Long Lasting Insecticidal Nets (LLIN) [already 3.8 million are being procured for distribution in 2009-10]/Rapid Diagnostic Tests (RDT)/Artemisinin based Combination Treatment for Pf cases (ACT). The Round 4 project grant has

also contributed to strengthening of systems and processes,by positioning of dedicated cadre of Malaria Technical Supervisors (MTS), lab technicians in high endemic districts for oversight, diagnosis in addition to various consultants for technical and management assistance and M&E. These together have created conducive environment for scaling up the effective interventions further impacting on the malaria burden.

However, at the same time, it may be noted that due to operational challenges and the need for additional resources to protect the large at-risk population, the coverage with certain malaria control interventions, example, Insecticide Treated Bed Nets, specifically has yet to be universal.

Currently, with increased resources both from domestic and external (World Bank) sources, India's malaria control efforts are being scaled up based on a strategic action plan for malaria control in India: 2007-2012. This plan delineates course of the national program over the next few years, up to 2012 and is aligned with the ongoing national 11th Five Year Plan. The plan also includes a projection corresponding to the 12th Five Year Plan period, 2013-2017. The proposed Round 9 GFATM Phase I grant (if approved) will contribute to the second term of the ongoing 11th Five Year Plan. This alignment will contribute to further strengthening of malaria control program planning and implementation in India, and also facilitate robust review of this grant at mid-term and provide for revision/modifications, if any, under the next 12th Five Year Plan. The GOI and World Bank have signed an agreement in March 2009 for the National Vector Borne Disease Control and Polio Eradication Support Project designed in collaboration with the GOI and WHO to significantly boost effective prevention, diagnosis, and treatment services for malaria along with another communicable disease--kala azar, and increase polio vaccinations. A main feature of the proposed Round 9 GFATM proposal is complementarity with the World Bank supported malaria control project (2008--2013), related to policy, strategy development, research for evidence generation, strengthening of systems and processes, including information systems, training and BCC (more details are given later in this section).

However, despite these developments, there are continued insufficiencies in: resources (financial, HR, technical) to plan and implement effective malaria control interventions (LLIN, RDT, ACT) for large at risk population; surveillance/M&E; procurement and supply chain management (PSCM); training; involvement of and ownership by civil society, private sector and communities; treatment seeking and treatment dispensing behaviour; advocacy with various agencies including non health sector departments; operational research; etc. that are hampering the achievement of further reduction in malaria disease burden. Since the Round 4 GFATM grant period ends in 2010, it is important that these gaps are addressed, efforts are made to sustain the gains made and scale up; thereby contributing to achievement of national and international goals related to malaria and overall social development, including the Millennium Development Goals (MDGs). Hence, the additional inputs through the Round 9 GFATM proposal are expected to significantly benefit malaria control in India.

STATEMENT OF PURPOSE

The purpose of this project is to complement and strengthen the efforts of the national malaria control program towards scaling up for universal coverage with effective preventive and curative interventions in those areas of the country, where the intensity of transmission is the highest and the health care delivery system constraints are the most severe. Need based strategic planning, focused on increased application of the mostly untapped community based structures and networks for community mobilization, especially in remote and inaccessible areas; enhanced capacity building and institutional strengthening; increased supervision and monitoring; better coordination and partnership building; will be the cornerstones of the Round 9 GFATM project--Intensified Malaria Control Project—II (IMCP—II). The proposed investments are expected to sustain the gains, and address the gaps and bottlenecks experienced during the implementation of the Round 4 GFATM project. The IMCP—II, will leverage the GOI's efforts to improve malaria prevention and treatment for about 42.53 million people (2008 population) in 86 high endemic districts in seven northeastern (NE) states in India.

It may be noted that the expected epidemiological impact at the end of Round 9 project appears to be moderate, when seen in relation to the scale-up of interventions. The reasons for this are: (1) the project is expected to lead to improvements in the reporting of both malaria cases and deaths, and there are no alternative, more reliable means of measuring malaria trends in India than the use of surveillance data. However, triangulation between data sources will of course be used to refine the assessments; (2) The introduction of LLINs is not only a matter of scaling up, but also of re-orienting vector control to focused and quality IRS operations, although sustained and correct use of LLIN by the project beneficiaries may vary. In addition, other factors like increasing drug and insecticide resistance, population migration; peculiar

agricultural practices (shifting cultivation); prolonged rainy season and warm/humid physical environment conducive for vector proliferation; etc may influence the disease burden adversely, despite the best control efforts. Furthermore, large parts of the NE states are forested, remote and inaccessible with weak public health care system and predominantly inhabited by tribal population. Many NE states also share long international borders with neighbouring countries that are highly endemic for malaria. These factors too, together with problems of unrest in some parts of these states, render this region highly vulnerable. In this scenario, a conservative assumption on impact is projected.

PROJECT GOAL

To reduce malaria related mortality and morbidity in project areas by at least 30% by 2015 as compared to 2008.

PROJECT OBJECTIVES AND SERVICE DELIVERY AREAS (SDAs)

- To achieve near universal coverage by 2015 by effective preventive intervention (LLIN) for population living in high risk project areas from 42% (2009-10).
  - Service delivery area (SDA): ITN (LLIN)

- To achieve at least 80% coverage by parasitological diagnosis; and prompt, effective treatment of malaria through public and private health care delivery systems in project areas by 2015.
  - Service delivery area (SDA): Diagnosis (RDT)
  - Service delivery area (SDA): Prompt, effective treatment (ACT, Injectable artemisinin derivatives)

- To achieve at least 80% coverage of villages in project areas by appropriate BCC activities by 2015 to improve knowledge, awareness and responsive behavior with regard to effective preventive and curative malaria control interventions.
  - Service delivery area (SDA): Community outreach/IPC
  - Service delivery area (SDA): Mass media

- To strengthen program planning and management, monitoring and evaluation, and coordination and partnership development to improve service delivery in project areas.
  - Service delivery area (SDA): HSS: Human resources (technical and management assistance, planning and administration assistance, M&E assistance teams)
  - Service delivery area (SDA): HSS: Information systems (M&E)
  - Service delivery area (SDA): Coordination and partnership development (public-private/NGO/FBO, etc)

- To strengthen health systems through training, capacity building to improve service delivery in project areas.
  - Service delivery area (SDA): HSS: Human resources (training/capacity building)

PROJECT STRATEGIES

- Prevention:
  - Distribution of LLIN amongst high risk population with API ≥ 2 (per 1000 population) in project areas to achieve near universal coverage. LLIN to be distributed @ 2 LLIN per household, assuming a household consists of 5 persons.
  - Continuation of re-impregnation of conventional nets with synthetic pyrethroids in areas registering API ≥ 2 till the time they are completely covered by LLIN.
  - Continuation of IRS in areas with API ≥ 2 already under IRS coverage, as per program policy, till the time epidemiological and ecological evidence give adequate reasons for withdrawal of IRS.
  - Increased involvement of community based structures, networks, including sustained and correct use of LLIN
- Early diagnosis and complete treatment:
  - Increased use of *Pf* RDT (expected to change to multivalent RDTs from 2011) for parasitological diagnosis especially in the remote areas without easy access to microscopy centres, i.e., where microscopy results are not available within 24 hours of reporting fever to a health care provider
  - Use of ACT for treatment of Pf cases
  - Increased involvement of community based structures & networks; private sector health care

providers

- Behaviour Change Communication:
  - Evidence based BCC
  - Community outreach, IPC based consistent messaging through community based structures/networks to bring about behaviour change both in adoption of preventive interventions as well as in seeking early diagnosis and appropriate treatment
  - Intensified BCC activities prior to and during high transmission season
  - Limited use of mass media, mainly radio (in areas with reasonable reach) to reinforce messages delivered through community outreach, IPC
- M&E:
  - Increased focus on performance based program planning
  - Strengthening of program planning and management structures and operations at national, regional, state and district levels
  - Establishment of sentinel surveillance for severe malaria cases and deaths to complement existing disease surveillance; establishment of lot quality assurance sampling in addition to periodic large scale population and household surveys, to gauge outcomes
  - Reporting from private sector and other non-health sectors
  - Joint planning and review
  - Periodic evaluation to provide direction for future planning
  - Evidence generation through operational research
- Coordination and partnership development:
  - Increased advocacy for developing coordination and partnership with other departments/programs within MOH&FW, non-health public sector organizations, corporate sector, NGOs/FBOs, international agencies
- Capacity Building:
  - Provision of systematic induction and refresher training to all levels of program/project staff, medical and paramedical personnel, health workers and village volunteers/activists in public health services with malaria related responsibilities
  - Provision of training to private sector health care providers; and medical, paramedical personnel with partner organizations
  - Assessing effectiveness of capacity through periodic reviews

PROJECT INPUT, OUTPUT, OUTCOME, AND IMPACT

The project outputs, outcomes and impact will be captured through the following indicators. Further details are presented in the Attachment A (Annexure 1).

Inputs:

- Funding (in USD): 113.68 million (1 USD = 47.50 INR)
- Health products/pharmaceutical products:
  - LLIN: 7.7 million nets;
  - RDT: 21.26 million tests; ACT: 2.6 million courses; Injectable artemisinin derivative: 0.09 million ampoules
- Procurement and supply chain costs
- Performance incentives to ASHA/volunteers for LLIN distribution, RDT/ACT use, BCC activities
- BCC tools, materials costs
- Technical & management assistance, planning & administration assistance, M&E assistance (contract staff/consultants/experts at national, regional, state, district levels; WHO TA) costs
- Training/capacity building costs
- M&E costs

Output indicators:

- Number of LLIN distributed in LLIN eligible areas (API ≥ 2)
- Number of fever cases tested with RDT
- Number of Pf cases treated with ACT (including non govt sector)
- Number of villages where BCC activity--community session for message dissemination, held
- Number of supervisory visits to district periphery in a quarter by District VBDCP (Malaria) Officer (program/project) and report submitted to state program officer/district chief medical officer

- Number of MOU signed with partner/stakeholder organization (NGO/private sector, non health ministries/departments, others)
- Number of ASHAs/volunteers trained

Outcome indicators:
- Percentage of households in high risk areas (with API ≥ 2) with at least two LLIN
- Percentage of household residents who slept under LLIN the previous night
- Percentage of persons reporting fever within last two weeks, who have obtained a test result (RDT/microscopy) no later than the day following onset of fever

Impact indicators:
- API (Annual Parasite Incidence)--malaria positive cases per thousand population
- Number of deaths with malaria confirmation

PROJECT AREAS
The Round 9 IMCP--II project is proposed for 86 districts in the seven NE (northeast) states in entirety. The states are: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura.

Rationale for selection of the project areas: The project areas are mostly hilly and forested with difficult terrain and with sizeable tribal population. Population density is low and distances to the health facilities long. Many posts of health personnel of all categories are vacant, and the health services are often resource challenged. Most of the NE states also share long border with the neighbouring countries. The population in project areas stands at 42.53 in 2008. The project population is 42.53 million in 86 districts. This constitutes about 3.8% of the country's total population (1111.59 million) and accounts for 12.4% of the total malaria cases in the country (1.52 million), 17.4% of the total *P. falciparum* cases (0.76 million) and 34.4% of total reported malaria deaths (935).

Over the last 4 years, since the start of IMCP--I, in 2005, which coincided with the launch of National Rural Health Mission (NRHM), there has been a considerable increase in the health work-force, as well as positioning of community workers—ASHA at village level. However, in many proposed project areas, especially those affected by unrest, the high level of recruitment has only to limited extent been accompanied by development of training and supervision programmes attuned to local health problems and constraints.

The seven states in the NE region do not report very high malaria incidence; however, this is partially a result of weaknesses of the public health care services in case detection, especially areas with problem of accessibility. In addition, there is great concern that resistant parasite strains, as well as counterfeit antimalarial medicines could spread to NE India across international borders. The highly effective and exophilic vectors, example, *An. baimai*, limits the effect of IRS, which is still the main vector control method. Finally, control implementation is constrained by population movements and problems of unrest. In many areas in the NE region, NGOs, faith-based organizations (FBOs), community based organizations (CBOs) and private sector are engaged in health care service delivery and the community is accessing such services,. This is the reason for NGO/FBO/CBO/private sectors are figuring so prominently in this proposal.

It may be noted that the Round 9 GFATM project will consolidate malaria control in the NE region. Other states that are presently receiving the Round 4 GFATM grant, namely Orissa, West Bengal and Jharkhand, will be supported through domestic and/or World Bank funding.

PROJECT BENEFICIARIES
The project beneficiaries are 42.53 million population (2008) living in 86 districts in 7 project states that are high endemic for malaria with focus on marginalized groups, tribals, and women and children. As per data from the Ministry of Tribal Affairs, Govt of India, 41 districts of these states have more than 50% tribal population.

Within this total population of 42.53 million, a sub population of 12.96 milion lives in high risk areas with API ≥ 2 per thousand population. This segment will be targeted for universal coverage of LLIN.

PARTNER COMPLEMENTARITY
The sources of financing for malaria control in India are the Government of India, state governments,

GFATM and World Bank. The NVBDCP and the state governments are responsible for planning/implementation. It is increasingly recognized by the government that civil society and private sector care providers are important partners. The state and district malaria control programs are encouraged to involve civil society, private providers, academia. In IMCP--II, a non-government consortium (comprising FBO, NGO and private sector) is involved as partner for malaria control at the community level in the NE region; especially in areas, where public health services are inadequate.

The GOI and World Bank have signed an agreement in March 2009 for a new National Vector Borne Disease Control and Polio Eradication Support Project, which will cover highly endemic districts not supported by the GFATM Round 4 project. This will focus on effective prevention, diagnosis, and treatment services for malaria along with another communicable diseases--kala azar. Of the total US$ 520.75 million IDA credit, US$ 171 million is earmarked for the malaria component. This project will cover high malaria endemic districts that are not being covered by the GFATM Round 4 and proposed Round 9 project. The financial support from proposed GFATM Round 9 project and World Bank project as well as domestic funding together will target almost all the high burden districts in the country. The first phase (first two years) of the World Bank project covers 50 districts, to which 43 more districts will be added during the second phase (last three years of the project). The World Bank supported project areas are different from the proposed Round 9 GFATM project areas and/or districts (as in Orissa state). However, many of the systems strengthening actions initiated with World Bank assistance at central level and Orissa state, will be aligned and facilitate the prompt take-off of several activities proposed under IMCP—II. The World Bank is also supporting strengthening of NAMMIS, supply chain management, insecticide resistance studies, drug therapeutic efficacy monitoring, pharmacovigilance and RDT quality assurance countrywide. To a limited extent, World Bank support will also include operational and applied field research, for example on utility and thermostability of RDTs sensitive to *P.vivax*.

With support from the World Bank project and technical assistance provided by WHO with financing from GFATM Round 4, an operational manual for malaria control; one malaria M&E framework (for country) with instruments and procedures; training materials and curricula for state and district level consultants, medical officers, MPW, MTS (a dedicated cadre positioned at district level for supervision and monitoring) and ASHA have been prepared to support the roll out and scale up of malaria service delivery.

With the World Bank and DFID consultant support, LQAS for regular monitoring of key indicators is now being piloted in Orissa. By 2010--11, this will be included in new and refresher training courses for all MTS and NVBDCP program officials and consultants, so that by 2011, it will be fully operational in all World Bank and GFATM supported districts.

Finally, World Bank is supporting the recruitment of an agency to prepare a strategic framework for BCC for malaria control in high burden districts including those in Eastern and NE India. This will include generic tools, which can be adapted at state and district levels in the whole country. In addition, mass media buying is planned on nation wide basis. Hence, those will not be repeated in proposed IMCP—II areas. The non-government consortium included in IMCP--II will take a particularly active role in BCC, in addition to supporting service delivery at community level in selected areas. World Bank financing cannot at the moment be used for supporting local NGOs in India. Local adaptation/translation of BCC materials and innovative approaches developed by this consortium under IMCP--II will therefore be used in World Bank supported districts, particularly in Orissa. In addition, the non-government consortium has extensive experience in training of private sector care providers, and ASHA/volunteers. Under IMCP—II, it is proposed that the consortium members will adapt and translate nationally approved materials, modules to customize the courses, tools and approaches for training/reorientation of ASHAs/volunteers and private sector care providers.

Furhermore, it may be mentioned that NIMR and its field units, ICMR institutions, etc are already participating in evaluations, field research, development of guidelines, protocols, etc. Under IMCP—II, these will be involved in a greater way.

PROPOSED PROJECT ACTIVITIES BY OBJECTIVE AND SERVICE DELIVERY AREA (SDA); OUTPUTS AND OUTCOMES

The project activities by objective and service delivery area (SDA) are detailed below. The timelines, and budget estimates for these activities are presented in the work plan (Annexure 4) and the budget table

(Annexure 5). Please note that the corresponding proposed activity and the reference number within brackets mentioned here are same as in the work plan as well as the budget table.

In the Round 9 GFATM project, PR1—the national malaria control program is to be the lead in all activities at all levels. A proposed activity will be implemented by the NVBDCP—the national malaria control program (henceforth mentioned as PR1—Principal Receipient 1). The national program will be supported by PR2--the FBO/NGO/private sector consortium led by Caritas India (henceforth mentioned as PR2—Principal Receipient 2) to complement PR1 activities related to malaria control service delivery at community level in selected high risk areas (49 districts in NE region) that are mostly remote, inaccessible and have inadequate public health care system. It may also be noted that activities presented in this section for PR2 subsumes activities to be carried out/coordinated by the SRs.

Further, even though the entire gamut of activities under each specific SDA is presented; certain activities like joint planning between PRs, will be clubbed for all health products and their implementation. Also, the activities related to the cross-cutting elements like BCC, capacity building/training, M&E, HR, etc have been mentioned in detail under the respective SDAs.

Under each SDA, expected outputs/outcomes are presented. In addition, output/outcome indicators as in the performance framework are also presented. Performance on these indicators will be reported to the GFATM. However, once the Round 9 grant is considered positively, other output, process indicators will be developed in consultation with the stakeholders for regular performance monitoring internally.

Objective 1. To achieve near universal coverage by 2015 by effective preventive intervention (LLIN) for population living in high risk project areas from 42% (2009-10).

Policy and strategy

The project focuses on scaling up of anti-adult vector measures to reduce mosquito longevity and density, particularly LLIN. Of the 12.96 million population at high risk in project districts, registering API ≥ 2 is at present covered with IRS, mainly with DDT and/or conventional nets reimpregnated with synthetic pyrethroids. However, in reality, the effect of IRS is often diminished by factors such as refusal of spray by the population, re-plastering of sprayed surfaces, entomological factors, etc. Further, some of the tribal population groups in the northeast live in temporary shelters that have almost no sprayable surfaces. Also, the population is exposed during activities in forests (during collection/gathering of forest products), agricultural fields (during night stays). In the NE region, ownership of plain bed nets by the population is relatively more common than other parts of the country. Under the Round 4 project as well, insecticide treated bed nets (ITNs) have been distributed to some parts of the NE region, although the target beneficiaries were the population below poverty line. Such scenario gives reason for optimism that introduction and scale up of LLIN towards universal coverage as planned under the Round 9 project will lead to effective use of LLIN, when supported by effective BCC.

The strategy is therefore to scale up the use of LLIN in the population eligible for vector control living in high risk areas. The high risk areas are defined as those having API more than 2 and/or other risk factors such as reported deaths, Pf% > 30%, population movement or living close to forests. An area, which is under effective vector control may experience a reduction of API below the threshold level, but is only removed from the high risk status after three years and only if it is deemed that there will not be any resurgence. This micro-stratification is the responsibility of the district level Vector Borne Disease (VBD) [Malaria] program officer, who is trained in micro-stratification and with guidance by state, centre. They are guided to stratify village by village; however, data broken down by village are not at present available at every district and until that is achieved by better use of National Anti Malaria MIS, data stratified at sub-centre level will be utilized. For stratification, the project proposes strengthening of malaria surveillance and information systems with web based reporting, GIS. Stakeholder consultation for prioritization and identification of villages is proposed under IMCP—II. These will ensure more efficient use of resources.

The strategy is to scale up LLIN to cover firstly those high risk areas, where IRS is not implemented at all because of such operational constraints as non-traversable roads in the rainy season or refusal by the population. Once this has been achieved, LLIN will be introduced in other villages currently under IRS in a phased manner. This will be a gradual and carefully monitored process.

It may be noted that IRS (through domestic funding) will continue to have a role in those high risk areas,

where the population collaborates and cooperates well, and also for preventing and containing malaria outbreaks/epidemics, focal high risk areas and areas showing upsurge, as per program policy, till the time epidemiological and ecological evidence give adequate reasons for withdrawal of IRS.

So far, mainly conventional ITN have been implemented in project areas with domestic funding and GFATM Round 4 grant. They have often been targeted at people living below poverty line, and more as a personal protection measure than as a vector control tool aiming for full coverage. There is some overlap between ITN deployment and IRS. The policy towards achieving universal coverage now is to eliminate any economic criterion and issue LLIN to all households in the targeted villages; no cost-recovery in distribution. It is also the national policy that pregnant women and children in high risk areas should be covered by ITN (LLIN, if possible) as priority. However, under this project, LLIN will be used for total population coverage at village level, as it is assumed that this will provide the most effective protection to everybody including pregnant women and children.

Before 2008, only one approved importer of LLIN was approved in India and this hampered public procurement, so the program settled for plain bed nets and re-treatment with insecticides. With support of GFATM Round 4 grant, LLIN has been introduced and in the past 2 years three firms have undergone national registration with the Central Insecticides Board (CIB) for supply of LLIN, and procurement under Round 4 IMCP has started in 2009. It may be noted that in selected areas, insecticide treatment of community owned bed nets (supplied through the program with Round 4 GFATM grant and/or domestic funding and/or purchased by the community) will be taken up periodically (before high transmission season) through domestic funding, till the time universal coverage by LLIN is achieved. Efforts will be made to involve the community in decision making on impregnation/re-impregnation of their bed nets.

In the project areas, which are largely rural and dominated by forest vectors, larval control is often difficult to implement and is not always effective. Larval control is site- and species-specific and can be implemented by local services, mainly by the use of larvivorous fish. As capacity is yet to be optimal in most districts, and as solid tools for monitoring and evaluating these measures are still to be developed, they are not included in this proposal. However, anti-larval measures, particularly use of larvivorous fish are encouraged, where appropriate and supported by domestic funding.

Training on all malaria vector control methods has been included in the curriculum of program, project personnel at state/district levels. During the project period innovative operational research on such vector control tools as insecticide treated clothes, repellents, hammock nets, etc. will also be considered.

For further details on LLIN policy, strategy and operations, please refer to the NVBDCP operational manual (Annexure 6) and Strategic Action Plan (Annexure 2).

SDA 1.1: ITN: LLIN

Target population: Households in LLIN eligible (high risk) villages (API ≥ 2)

Activity 1.1.1: Planning, identification and prioritization of villages for LLIN, review of distribution and logistics supply management for LLIN distribution (Reference no. 1.1.1): Under this project, LLIN of double size (family size) will be distributed @ 2 LLIN per household free of cost in high endemic areas. It is assumed that an average household has 5 members and thus, one LLIN will give coverage, on average, for 2.5 persons. Thus, for a given village, the number of LLIN is calculated as the total population divided by 2.5 for universal coverage, unlike the Round 4 GFATM project, where the strategy is to distribute the ITN to below poverty line population in high risk areas.

The district VBD (malaria) officers will fill in a spreadsheet, with data of population and selected vector control intervention, microstratified by sub-centre and if possible, village. This planning will also be presented on GIS mapping or hand-drawn map. Already GIS mapping is available for some districts though collaboration with the NIMR. To the extent possible the district malaria officer will include civil society partners in this exercise. The spreadsheet based instrument for micro-stratification has been piloted satisfactorily in two districts in Orissa supported by World Bank financing. It includes calculation of requirements for RDTs and ACTs as well, and information about storage of these supplies. While the stratification is by village, the planning of LLIN distribution will of course also be based on practical considerations so that generally clusters of nearby villages at high risk will be targeted for LLIN in a given

year and the entire targeted villages will be completely covered.

Stakeholder consultation at regional level in the NE region is planned to identify and prioritize villages for LLIN distribution, to assess capacity including infrastructure, to consolidate the distribution plans at district/sub-district level with timeframes, to work out supply chain management and to constitute oversight committees at state and district levels. Discussion on capacity assessment available with the civil society for LLIN distribution will also be included. The participants will include PR1 & states, PR2, proposed sub-recipients (see section 4.9), other stakeholders--NGOs/FBOs/private sector. The operational manual (Annexure 6), distribution plan will be disseminated to all stakeholders.

Subsequent to these consultations, final lists of sub-centres and villages and households therein will be prepared by DMOs and shared with block (sub-district) medical officers, MTSs and state program/project team, PR2 consortium. Block Medical Officers with MTSs will guide health worker and ASHAs and other volunteers in preparing household lists for the villages, which will benefit from LLIN distribution.

This regional consultation related to LLIN distribution will include planning, identification and prioritization of villages/health centres for RDT, ACT; their distribution; logistics supply management; etc as well.

This exercise will initially be done for the five year project plan. It will be repeated annually to update the planning, as priorities may change. Initially it may be a specific exercise to get the project started as soon as practically possible. Subsequently, this planning cycle will be integrated with the routine malaria control planning cycle, which is undertaken nationwide every year to plan the distribution of such supplies as IRS insecticides, chloroquine and primaquine.

Activity 1.1.2: Procurement (centralized) of LLIN (Reference no. 1.1.2): The strategy is to rapidly scale up LLIN coverage through mass distribution campaign towards universal coverage in the high risk villages with API ≥ 2. The objective of the universal coverage is to ensure that 100% households in targeted high risk villages have 2 LLIN and at least 80% of the population in the targeted villages sleeps regularly under LLIN. In combination with the LLIN distribution, the program focuses on promoting utilization of LLIN through extensive BCC activities to achieve utilization rates of at least 80%. The requirements of LLIN over the project period is as follows:

Row	Year	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
A	Total population living in project area	42.53	43.21	43.90	44.60	45.32	46.04	46.78
B	Total population in project area with API ≥ 2 targeted for LLIN distribution	12.96	13.17	13.38	13.59	13.81	14.03	14.26
C	No. of LLIN required for 100% population coverage	5.18	5.27	5.35	5.44	5.52	5.61	5.70
D	LLIN from GFATM Round 4	0	2.21	0	0	0	0	0
E	**LLIN proposed to be procured from GFATM Round 9**	**0**	**0**	**0.50**	**1.50**	**3.20**	**0.90**	**1.60**
F	Total LLIN from Round 4 and Round 9 (D + E)	0	2.21	0.50	1.50	3.20	0.90	1.60
G	Expiry of LLIN	0	0	0	0	2.21	0.50	1.50
H	LLIN available (F-H)	0	2.21	0.50	1.50	0.99	0.40	0.10
I	Cumulative LLIN available in households	0	2.21	2.71	4.21	5.20	5.60	5.70
J	Population covered by LLIN	0	5.53	6.78	10.53	13.00	14.00	14.26
K	**Percentage of high risk population (API ≥ 2) covered with LLIN**	**0**	**41.96**	**50.64**	**77.43**	**94.14**	**99.78**	**99.96**

- The Round 9 proposal aims for near universal coverage (99.96%) of the population living in high risk areas (API ≥ 2) in the project area by the end of the project period. It is expected that the universal coverage will result in at least 80% utilization of these LLIN
- The population living in high risk (API ≥ 2) areas will be 13.38 million in 2010 and projected to increase at the rate of 1.6% p.a.
- The number of LLIN required is @ 2 LLIN per household, assuming a household consists of 5 persons.
- Number of LLIN required to cover the target population has been calculated @ 2 LLIN for 5 persons.
- Population living in endemic areas registering API ≥ 2 is at present covered with IRS and/or conventional nets re-impregnated with synthetic pyrethroids.
- Conventional nets re-impregnated with synthetic pyrethroids will continue in areas registering API ≥ 2 till the time they are completely covered by LLINs.
- IRS will continue in areas with API ≥ 2 already under IRS coverage, as per program policy, till the time epidemiological and ecological evidence give adequate reasons for withdrawal of IRS.
- In each year of the project, the target population for that year will be covered completely with LLIN
- While the quantity of LLIN estimated corresponds to nearly 100% of population in areas with API ≥ 2, the effective coverage (usage) is expected to be between 80% and 100%, on account of variations in use and number variations for smaller and larger households (refer to NVBDCP operational manual—Annexure 6).
- It may be noted that in the NE region, the status of women are relatively high, since they are economically active and often are the main earning member in the household. Therefore, discrimination related to LLIN use is expected to be minimal.

It is estimated that approximately 7.7 million LLIN will be procured and delivered across 7 states over the 5 year project period. The LLIN procurement planning, cycle will be harmonized with the overall procurement planning and processes of the national program for health products. [The current procurement cycle is as follows: April to June: Order preparation, tendering; July to December: Tender opening, evaluations, order placing, etc; January to March: Supply). The procurement will normally, as in the past, be undertaken by a procurement agency (UNOPS is the current procurement agency). However other mechanisms, like the Voluntary Pooled Procurement (VPP) through GFATM will be considered, once it is launched and guidelines are known.

The LLIN offered by the bidders shall be recommended as such by WHOPES (full or interim recommendation) and shall be registered with Central Insecticide Board (CIB) of India as on the date of bid opening. Efforts will be made to ensure timely delivery of the required quantity of LLIN by the selected bidder in each year of the Round 9 project.

The present LLIN being procured is polyester nets. The Round 9 procurement will be based on the recommendations of the national malaria control technical advisory committee.

Pre-shipment quality check will be the responsibility of the procurement agency for the national program and their costs will be met from the domestic resources. Currently, NVBDCP is in the process of hiring an agency under the World Bank support for post-shipment quality check of various products procured. The same agency will be involved in post-shipment quality check of LLIN to be distributed under the Round 9 proposal.

Further, research institutions like, National Institute of Malaria Research (NIMR), Regional Medical Research Centres (RMRC), etc will be commissioned using the domestic or World Bank resources for checking LLIN efficacy after a certain period of use through bioassays and insecticide susceptibility testing. In addition, the national malaria control program will consult with the technical/research institutions and experts, WHO, the donor agencies, the manufacturers regarding safe disposal of LLIN after expiry.

Activity 1.1.3: Supply and storage of LLIN at various levels (Reference no. 1.1.3a, 1.1.3b, 1.1.3c, 1.1.3d, 1.1.3e, 1.1.3f, 1.1.3g, 1.1.3h): LLIN will be directly supplied to states and where to districts, from where they will be distributed to the districts and then to villages. The states and districts will be provided the operational manual on storage and transportation (Annexure 6).

At the state and district level, any existing storage with satisfactory conditions (examples, GMSD store, state store, etc), will be leveraged. However, if such facility is not available, especially to accommodate the

health products, then storage space will be rented on yearly basis by the state/district, as per national guidance.

This storage space will also cater to storage of various health products RDT, ACT, injectable Artemisinin derivatives, etc. as needed for the program/project.

At the village level, the LLIN will not be allowed to be stored beyond 1-2 days. The quantity of LLIN allocated for a village can be kept at an appropriate place, like health sub-centre, school, etc. All activities including surveying, pre-distribution BCC will take place before the LLIN reaches an eligible village. At all levels, it will be ensured that the LLIN consignment is secure. The national, state, district VBD program officials will ensure smooth delivery of LLIN to the distribution points (refer to NVBDCP operational manual). To the extent possible, LLIN will be distributed before the start of the high transmission season.

A micro-plan for transportation of LLIN to distribution points will be prepared based on the recommendations outlined during the above-referred consultations as well as local experience. In villages with problems of accessibility (absence of roads, etc.), the LLIN will be transported to the nearest point by vehicle and from there taken to the village as head load (which is the usual means of transporting goods). Inventory will be done by health worker/ASHA/volunteer.

For cost-effectiveness, it is proposed to arrange/hire transportation for health and non-health products to a district and then sub-district levels four times a year, since their procurement cycles may vary. *A round trip may include various health products--RDT, ACT, injectable Artemisinin derivatives, etc. as needed.* This will also ensure absence of stock outs of diagnostics and drugs. A logistics management agency is planned to be contracted under the World Bank project. The TOR includes establishment of logistics management information system (LMIS). The same systems will be used/adopted in GFATM Round 9 project as well, for further streamlining logistics management including transportation, if their performance is satisfactory. Any additional costs will be met through the domestic sources.

Thus, the activities will be:
1.1.3a Supply of LLIN to state (principal consignee) including handling
1.1.3b Renting of storage space of LLIN at state level (by PR1)
1.1.3c Renting of storage space of LLIN at district level (by PR1)
1.1.3d Logistics including transportation of LLIN from state to district (by PR1)
1.1.3e Logistics including transportation of LLIN from district to distribution points—village (inaccessible) in PR1 areas (by PR1)
1.1.3f Logistics including transportation of LLIN from district to distribution points--village in PR1 areas (by PR1)
1.1.3g Logistics including transportation of LLIN from district to distribution points--village (inaccessible) in PR2 areas (by PR2)
1.1.3h Logistics including transportation of LLIN from district to distribution points—village in PR2 areas (by PR2)

Activity 1.1.4: BCC for community mobilization (Reference no. 1.1.4): BCC will be part and parcel of LLIN distribution activity and will be conducted pre-, during, post-distribution. It is expected that intensive BCC campaign will increase LLIN use. The approach will mainly be door to door inter-personal communication (IPC) by health worker, ASHA, volunteer who will be directly involved in distribution. IPC will be supported by appropriate tools, like flip charts, etc. Prior to distribution, a community meeting and/or an infotainment activity will be called and then the village will be informed about the LLIN distribution date. During distribution, the health worker, ASHA, volunteer will give talk on benefits of LLIN, its correct and continuous use and maintenance, possibly including a demonstration for indoor as well as outdoor use. Supportive information tools, like leaflets, etc with illustrations will be distributed to all. Local 'influencers' like teachers, religious leaders, village head man, SHG members, etc will also be involved.

Details of BCC activities and main implementing entity are given under objective 3 and SDAs 3.1 and 3.2.

Activity 1.1.5: Trainings at various levels for ASHA, volunteers; program/project personnel (Reference no. 1.1.5): Before LLINs are distributed, program/project personnel at various levels, health worker, ASHA/volunteer, will be given training using standardized training materials, etc according to the NVBDCP operational manual (Annexure 6). Trainings will ensure the successful distribution, management

and M&E related to this SDA.

Details of trainings and related activities and main implementing entity are given under objective 5 and SDA 5.1.

Activity 1.1.6: Distribution of LLIN to eligible villages/households (Reference no. 1.1.6a, 1.1.6b): On the LLIN distribution day, the health worker/ASHA/volunteer supported will distribute the LLIN based on the guidelines in operational manual (Annexure 6). The full coverage of village by 2 LLIN per household will provide protection to the vulnerable groups as, pregnant women and children. It may be noted that in the NE region, the status of women are relatively high, since they are economically active and often are the main earning member in the household. Therefore, discrimination related to LLIN use is expected to be minimal.

Following distribution, each household will be registered on a register with household list. Door to door follow-up reaching all households at least six times over one year following delivery will be carried out by ASHA/volunteer, health worker for ensuring regular and correct use of LLIN is planned.

Thus, the activities will be:
1.1.6a LLIN distribution by ASHA/health worker, volunteer in PR1 areas [activities to include community mobilization through BCC (door to door IPC), distribution, recording on registers, preparation/transmission of report, etc.]
1.1.6b LLIN distribution by volunteer, ASHA/health worker in eligible villages in PR2 areas [activities to include community mobilization through BCC (door to door IPC), distribution, recording on registers, preparation/transmission of brief report, etc.]

Activity 1.1.7: M&E of distribution of LLIN (Reference no. 1.1.7): Recording LLIN distribution process including BCC, trainings conducted will be entered in a register. After the receipt of LLIN, one household representative will put signature/thumb imprint on the register. It is also planned to prepare a household card indicating the dates of LLIN distribution and expiry (along with BCC messages), and signed by health worker/ASHA/volunteer, which will be retained by the household for verification purpose by MTS/others. Household registers with and report detailing activities undertaken for LLIN distribution will be checked by appropriate supervisory authority—MTS/others as per M&E plan of NVBDCP (Annexure 7).

Quality assurance from procurement through to delivery, storage, distribution is planned under the World Bank funding. This will be extended to other proposed health products as well.

Details of M&E and main implementing entity are given under objective 4 and SDAs 4.2.

Summary of activities under SDA 1.1 disaggregated by implementing partner(s):

SDA 1.1	Activity	Implementing entity
ITN: LLIN	Activity 1.1.1: Planning with identification and prioritization of villages for LLIN, review of distribution and logistics supply management for LLIN distribution (Reference no. 1.1.1)	PR1
	Activity 1.1.2: Procurement (centralized) of LLIN (Reference no. 1.1.2)	PR1
	Activity 1.1.3: Supply and storage of LLIN to distribution point (Reference no. 1.1.3a, 1.1.3b, 1.1.3c, 1.1.3d, 1.1.3e, 1.1.3f, 1.1.3g, 1.1.3h):	PR1, PR2
	Activity 1.1.4: BCC for community mobilization (Reference no. 1.1.4)	PR1, PR2
	Activity 1.1.5: Training of health care personnel, ASHA, volunteers; program/project managers/officers(Reference no. 1.1.5)	PR1, PR2
	Activity 1.1.6: Distribution of LLIN to eligible villages/households (Reference no. 1.1.6a, 1.1.6b)	PR1, PR2
	Activity 1.1.7: M&E of distribution of LLIN (Reference no. 1.1.7)	PR1, PR2

Targeted Output: (Cumulative) number of households who received LLIN in LLIN eligible areas

Output indicator (as in the performance framework):

Output indicator	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5

Number of LLIN distributed in LLIN eligible areas (API ⩾ 2) (cumulative over program term—baseline not included)	2210000	700,000	3,000,000	5,200,000	6,100,000	7,700,000

Note: For internal M&E purpose, additional output indicators will be developed, as the project starts apart from the indicator mentioned in the GFATM performance framework]

Targeted outcome: Proportion of households with at least two LLIN; Proportion of households residents who slept under LLIN the previous night (as in the performance framework).

Objective 2. To achieve at least 80% coverage by parasitological diagnosis; and prompt, effective treatment of malaria through public and private health care delivery systems in project areas by 2015.

Policy and strategy

The national program for malaria control promulgates anti malaria treatment only on the basis of a positive diagnosis. Under the program, microscopy for malaria is the standard diagnostic tool. Wherever a microscopy result can be made available to the patient within 24 hours; microscopy will be preferred as the only routine method. To that end, laboratory diagnosis by microscopy is being strengthened in existing health facilities at various levels--at least in hospitals and block-level health centres. Improving the quality of microscopy mainly through a new QA system based on newly published WHO guidelines is planned to start in 2010..

However, in villages where the microscopy results are mostly not available within 24 hours, RDTs are being utilized since Round 4 GFATM project for early diagnosis through community based structures--ASHA/volunteer/health worker. In remote and inaccessible rural and tribal areas, RDT is the established method for malaria diagnosis. Presently, at least one of the following conditions must also apply for such villages: 1) Pf % ≥ 30 and TfR ≥ 2%; 2) Consistent reporting of high API and deaths; and 3) problems of inaccessibility (geographical isolation during transmission season on account of limited road and public transportation facility). Most villages in high risk areas within the proposed GFATM project area conform to these criteria. However, expanding the coverage of RDTs beyond these criteria is being actively considered under the national program, particularly in relation to the foreseen possibility of using multivalent tests.

The country program has procured and distributed RDTs and community level workers have been trained to use them to enable timely diagnosis in such areas. It is planned to expand coverage by RDT from 2010 by lowering the TfR criterion from 2% to 1%.

In those PHCs and other health facilities, where microscopy results are normally available within 24 hours, RDTs will be used in PHC and other health facilities, if microscopy is not available and/or in emergencies for treatment of severe and complicated malaria requiring immediate medical attention in the absence of the laboratory technician (LT).

According to the new policy and WHO recommendations, *P.vivax* cases are to be treated with primaquine for 14 days. However, this is only to be administered, when they are confirmed. RDTs for *P. vivax* have not yet been deployed, mainly because they lack adequate temperature stability. On the background of recent improvement in temperature stability of *Pf* RDTs, it is expected that sufficiently sensitive, specific and heat-stable *Pv* RDTs and multiivalent RDTs (which detect and differentiate *P.falciparum* and *P. vivax*) will be available by 2011-12. Under the program, *Pf* RDTs are only expected to be deployed in 2009-10 and 2010-11, and microscopy will still be required in fever cases for diagnosis of *P. vivax* cases during this period (hence, the requirement of blood slides will not decrease in this period). When multivalent RDTs will be deployed, approx. 28 million such RDTs will be required annually in the country (based on 40% of population living in high endemic remote and inaccessible areas, where the microscopy results cannot be made available within 24 hours of the fever case reporting to the health system). Use of multi valent RDT will require well controlled thermal conditions, hence cool chain management capacity will be enhanced through domestic or other external funding source (may be further GFATM funding). A major improvement in management of *P.vivax* is expected, when RDTs sensitive to this parasite will be deployed.

Private providers play an important role in malaria case management. According to the In-depth review of

malaria (NIMR, 2007), treatment by private providers / self-treatment is done in 51% of suspected malaria cases in Orissa and 34% cases in Assam. Under this proposal, a systematic effort at engaging private health care service providers (including medical practitioners, pharmacists), civil society volunteers will be initiated and a specific training program will be organized through the PR2 consortium members, and medical colleges, according to the NVBDCP treatment guidelines for private service providers (Annexure 8). Based on the experience, the initiative will be expanded to the World Bank supported districts and later elsewhere. Through PPP arrangements, RDTs will be provided to the trained non-government/private sector service providers, who in return will be expected to provide immediate treatment and also quality malaria surveillance data. Appropriate program guidelines will be disseminated to this group. Quality assurance from procurement through to delivery, storage, use is planned.

Treatment: The national drug policy on malaria recommends anti-malarial treatment only on the basis of a positive diagnosis as well as the use of ACT (Artesunate plus Sulfadoxine Pyrimethamine) for treatment of *P.falcipuram* cases to combat the increasing chloroquine resistance.

The strategies for treatment in Round 9 IMCP—II areas will be: effective treatment with ACT and single dose of primaquine for *Pf* cases and with chloroquine for three days and primaquine for 14 days to prevent relapses for *P. vivax* cases; provision of complete course of anti-malarial treatment as per drug policy and guidelines. The currently selected ACT is artesunate (3 days) + sulfadoxine-pyrimethamine (single dose on 1st day). ACT combi-blisters will be available in 5 different combinations to cater for the 4 paediatric age groups plus one for adults. The option of switching to an alternative fixed dose ACT is also being considered. This may become necessary, especially in the NE region, if the multidrug resistance prevalent in neighbouring countries spreads to India. It is assumed that the cost of the alternative ACT will be equal to that of the currently used combination.

It is envisaged that the national drug policy will be reviewed soon.

The private sector care providers are to be involved in treatment according to NVBDCP guidelines by training them; wide dissemination of the private sector treatment guidelines to as many private providers as possible in the project districts; supporting and strengthening the referral systems and management of severe malaria cases by enhanced referral systems and treatment in tertiary institutions. Pre-referral management of severe malaria cases is done at PHC level with injectable Artemisinin derivatives and others, before cases are transferred to the tertiary care centre.

There is great concern that the use of artemisinins as monotherapy in the private sector is on the increase, based on recent unpublished data from NIMR. Together with the national drug regulatory authority and WHO, NVBDCP has initiated a strategy to phase out the production of oral artemisinin monotherapy.

SDA 2.1: Diagnosis: RDT

Target population/group: ASHA/volunteer, health worker; health units; fever cases

Activity 2.1.1: Planning, identification and prioritization of areas (villages, health centres) for RDT, review of distribution and logistics supply management for RDT distribution (Reference no. 2.1.1): Although RDTs have been used for some years now; there is a need for more rigorous micro-planning and monitoring. The needs for RDTs will be estimated, village and sub-centre wise, according to data on annual blood examination rate (ABER) and annual numbers of Pf cases. Generally, about 25% of RDTs will be added to the estimates to ensure against shortages and stock-outs, especially in the initial period when this will be used through a new provider, as non-availability of tests can have a demoralizing effect on the providers as well as the clients. The district program managers will fill in a spreadsheet, data of population, microstratified by sub-centre and village, other relevant information as well as identify each village eligible for RDT distribution and use. The instrument has been piloted satisfactorily in two districts in Orissa supported by World Bank financing, as mentioned earlier. It includes calculation of requirements for ACTs as well, and information about storage of these supplies.

This planning will be included in the stakeholder consultation as mentioned under the previous SDA at regional level in the NE region. As in case of LLIN, the logistics supply management, etc will also be discussed at this forum along with capacity assessment of public sector and civil society/private sector, and distribution plan with timeframe. The operational manual (Annexure 6) detailing RDT distribution and use

will be disseminated to all stakeholders along with distribution plan. Subsequent to consultation, final list of villages/health centres will be prepared and kept with health worker/ASHA/volunteer, MTS, DMO/district project team, and state program/project team.

The planning will also take into consideration supplies to be provided to NGO/private sector care providers, who are involved in service delivery. They will receive RDTs for diagnosis provided they generate malaria data for the public health system. At the same time, assessment of laboratory capacity in each state, i.e. availability and working conditions for microscopic diagnosis with a view to strengthen this area will be carried out.

This exercise will be carried out concurrently with the LLIN distribution planning and after the first year will be integrated with routine annual planning.

Activity 2.1.2: Procurement (centralized) of RDT (Reference no. 2.1.2): Quantification and procurement planning for RDT will be based on the following estimation:

Year	2010-11	2011-12	2012-13	2013-14	2014-15
Total population living in project area (population projected to increase at the rate of 1.6% annually)	43.90	44.60	45.32	46.04	46.78
Estimated population not having easy access to microscopy facility (assumed to be approximately 50%)	21.95	22.30	22.66	23.02	23.39
RDT requirements to achieve 15% Annual Blood Examination Rate (ABER) based on fever attendance rates in the above population in areas not having easy access to microscopy facility	3.29	3.35	3.40	3.45	3.51
Number of fever cases to be tested with RDT	3.29	3.35	3.40	3.45	3.51
25% reserve (buffer stock) of RDT	0.83	0.83	0.85	0.87	0.88
Total RDT requirements	**4.12**	**4.18**	**4.25**	**4.32**	**4.39**

- The total population in project area is estimated to be 43.90 millions in 2009-10 and projected to increase at the rate of 1.6% annually.
- The population not having easy access to microscopy facility in the project areas is assumed to be around 50%; i.e., microscopy results are not available to this segment of population within 24 hours of reporting fever to a health care provider.
- Malaria endemicity in the project areas, viz., North-Eastern states, is high and therefore 15% ABER is the norm in all these areas in order to detect maximum number of malaria cases.

It is estimated that approximately 21.26 million RDT will be procured and delivered across 7 states over the 5 year project period. The RDT procurement planning, cycle will be harmonized with the overall procurement planning and processes of the national program for health products. The procurement will normally, as in the past, be undertaken by UNOPS. However other mechanisms, like the Voluntary Pooled Procurement (VPP) through GFATM will be considered, once it is launched and guidelines are known. Specifications for the RDTs have been prepared with support from WHO. These may be changed, when a WHO pre-qualification scheme possibly becomes functional. As mentioned before, it is anticipated that at least by 2011, the program will be switching to multi valent RDTs, which can also detect *P.vivax*.

Activity 2.1.3: Supply and storage of RDT to distribution point (Reference no. 2.1.3a, 2.1.3b, 2.1.3c, 2.1.3d, 2.1.3e): RDT will be directly supplied to states, from where they will be distributed to the districts and then to villages. The states and districts will be provided the NVBDCP operational manual to provide guidance on storage and transportation (Annexure 6).

RDTs will be supplied every 6 months to districts, where they will be distributed according to the mapping mentioned above. However, RDTs will be distributed every alternate month to ASHAs/volunteers/health workers, subsequent to stock taking. Inventory will be done by health worker/ASHA/volunteer. All efforts

will be made for adequate stock of RDT before the transmission season. The national, state, district VBD program officials will ensure smooth delivery of RDT to the distribution points.

As mentioned under SDA 1.1, at the state and district level, any existing storage with satisfactory conditions (examples, GMSD store, state store, etc), will be leveraged. However, if such facility is not available, especially to accommodate the health products, then storage space will be rented on yearly basis by the state/district, as per national guidance. This storage space will cater to storage of various health products as needed for program. As part of the individual plan, each state and district will ensure where RDTs will be stored and will document how they will ensure that temperatures in their stores are always maintained below 30^{o}C.

A micro-plan for transportation of RDT to distribution points will be prepared based on the recommendations outlined during the above-referred consultation as well as local experience. A round trip may include various health products, RDT, ACT, Arteether inj, etc. as needed. In villages with problems of accessibility (absence of roads, etc.), the RDT will be transported to the nearest point by vehicle and from there taken to the village by foot.

As mentioned already, for cost-effectiveness, it is proposed to arrange/hire transportation for health and non-health products to a district and then sub-district levels four times a year. This will ensure absence of stock outs of diagnostics and drugs. For further logistics supply chain management details, refer to SDA 1.1 and Activity 1.1.3.

Thus, the activities will be:
2.1.3a Supply of RDT to state (principal consignee) including handling
2.1.3b Renting of storage space for RDT at state level
2.1.3c Renting of storage space for RDT at district level
2.1.3d Logistics including transportation of RDT from state to district
2.1.3e Logistics including transportation of RDT from district to distribution points—village/health centre

Activity 2.1.4: BCC for community mobilization (Reference no. 2.1.4): BCC will be part and parcel of RDT distribution and use. The key message will focus on early case reporting to ASHA/health worker/health facility. The approach will mainly be IPC by health worker, ASHA, volunteer who will be involved in case detection.

Details of BCC activities and main implementing entity are given under objective 3 and SDAs 3.1 and 3.2.

Activity 2.1.5: Trainings at various levels for ASHA, volunteers, health workers; concerned program/project personnel (Reference no. 2.1.5): The state/district program, project team will be trained on management & M&E of RDT distribution and use according to the NVBDCP operational manual (Annexure 6). The health worker, ASHA/volunteer will also be trained on RDT use. Trainings will ensure effective RDT use and overall management supply of RDT, M&E related to this SDA.

Details of trainings and related activities and main implementing entity are given under objective 5 and SDA 5.1.

Activity 2.1.6: RDT use for diagnosis (Reference no. 2.1.6): Diagnosis with RDT by health workers, ASHA/volunteers with NGOs/FBOs/CBOs in target villages within 24 hours of fever; all results are recorded as per NVBDCP guidelines. Generally, a slide is taken at the same time that an RDT is done. If the RDT is positive, the slide is discarded. Guidelines, training and supervision materials include guidelines on safe disposal of sharps. ASHAs will be supervised for this by male and female MPHWs, who in turn are supervised by medical officers and MTS. In areas where there is no coverage by an ASHA or other suitable fixed provider of care, active case detection, if possible weekly or at least every fortnight by male health workers, will continue. Cases of (history of) fever will be sought by going house to house and managed just as those found in passive case detection.

Activity 2.1.7: M&E of RDT use (Reference no. 2.1.7): RDT use including BCC conducted, etc will be entered in a register. This register will be checked by appropriate supervisory authority—MTS/others as per M&E plan of NVBDCP (Annexure 7).

Details of M&E and main implementing entity are given under objective 4 and SDA 4.2

NVBDCP has prepared guidelines for RDT QA based WHO recommendations (Annexure 6). Drawing from these, NIMR has prepared a protocol for quality assurance of RDTs. Briefly, a sample of RDTs will be examined before procurement proceeds. Samples will also be taken from batches after consignments have been received by States. After supply to districts and sub district levels, samples will be taken from different storage sites at different levels, 3-4 times during the life-time of each RDT batch. All the collected samples will be examined against a panel of parasitized blood in state laboratories, which will have been capacitated by NIMR. Quality assurance is planned to be funded through domestic and World Bank sources. There will be also health facility surveys to check on the capacity, KABP of the health workers.

Summary of activities under SDA 2.1 disaggregated by implementing partner(s):

SDA	Activity	Implementing partner(s)
SDA 2.1	Activity 2.1.1: Planning with identification and prioritization of areas (villages, health centres) for RDT, review of distribution and logistics supply management (Reference no. 2.1.1)	PR1
	Activity 2.1.2: Procurement (centralized) of RDT (Reference no. 2.1.2)	PR1
	Activity 2.1.3: Supply and storage of RDT to distribution point (Reference no. 2.1.3a, 2.1.3b, 2.1.3c, 2.1.3d, 2.1.3e)	PR1
	Activity 2.1.4: BCC for community mobilization (Reference no. 2.1.4)	PR1, PR2
	Activity 2.1.5: Training of health care personnel, ASHA, volunteers; program/project managers/officers (Reference no. 2.1.5)	PR1, PR2
	Activity 2.1.6: RDT use for diagnosis (Reference no. 2.1.6)	PR1, PR2
	Activity 2.1.7: M&E of RDT use (Reference no. 2.1.7)	PR1, PR2

Targeted output: Number of fever cases tested with RDT when presented to an identified health worker/ASHA/volunteer/health unit. This is targeted in the performance framework.

Output indicator (as in the performance framework):

Output indicator	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5
Number of fever cases tested with RDT (not cumulative)	3190000	3,290,000	3,350,000	3,400,000	3,450,000	3,510,000

Note: For internal M&E purpose, additional output indicators will be developed, as the project starts apart from the indicator mentioned in the GFATM performance framework]

Targeted outcome: Proportion of persons reporting fever within last two weeks, who have obtained a test result (RDT/microscopy) no later than the day following onset of fever (as in the performance framework).

SDA 2.2: Prompt, effective treatment: Artemisinin based Combination Treatment (ACT)

Target population/group: ASHA/volunteer, health worker; health units; Pf malaria cases

Activity 2.2.1: Planning, identification and prioritization of areas (villages, health centres) for ACT, review of distribution and logistics supply management for ACT distribution (Reference no. 2.2.1): The needs for ACTs will be estimated like RDTs. The estimation is based on the number of Pf cases in previous years. Estimation of quantities required by age-group is then based on the age distribution of population in rural areas:

- 40% of total cases are from the pediatric age group and remaining 60% are adults.
- Amongst the pediatric age group, further distribution is: Under 1 year - 10%, 1 to 4 years -22%, 5 to 8 years - 30% and 9 to 14 Years - 38%.
- Deployment reserve: Each ASHA will keep 2 courses for each age group; sub centre will keep 3 courses for each of pediatric age group and 6 for adults; PHC will keep 10 courses for each of the pediatric age groups and 25 for adults and CHC will keep 15 courses for each pediatric age group and 50 for adults. There will be 25% buffer stock with a health provider/facility.
- At the state and district levels stock for replenishing will be kept on the basis of total Pf cases expected to be treated in a year which will include blisters of all age groups in a proportion: 60% for adults and

40% for the pediatric age groups.

- Previously, artesunate + SP blister packs were available only for adults. The MOHFW is giving necessary instructions to the Drug Controller General (India) for not granting any new manufacturing licence or renew any licence for marketing oral artemisinin monotherapies and withdrawing the permissions granted to manufacturers for marketing artemisinin monotherapies. It is expected that the pharmaceutical industry will now produce co-blisters and further on co-formulations for all age-groups, which will be available shortly.

As earlier, the district program managers will fill in a spreadsheet, data of population, microstratified by sub-centre and village, other relevant information as well as identify each village eligible for ACT distribution and use. The stakeholder consultations planned at regional level in the NE region will include ACT distribution and use as agenda point. As in case of LLIN, the logistics supply management, etc will also be discussed at this forum along with capacity assessment of public sector and civil society/private sector, and distribution plan with timeframe. Subsequent to consultation, final list of villages/health centres will be prepared and kept with health worker/ASHA/volunteer, MTS, DMO/district project team, and state program/project team.

The planning will also take into consideration supplies to be provided to NGOs/FBOs/private care providers, who are involved in service delivery. They will receive ACTs for treatment provided they generate malaria data for the public health system, as mentioned earlier.

This exercise will be carried out concurrently with the LLIN, RDT distribution planning and after the first year will be integrated with routine annual planning.

Activity 2.2.2: Procurement (centralized) of ACT (Reference no. 2.2.2): Quantification and procurement planning will be based on the following estimation:

Year	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
Total population living in project area (increasing at 1.6% annually)	43.90	44.60	45.32	46.04	46.78
Number of Pf cases in project area as per epidemiological data - expected to decline from the third year (2012-13) of the project, to decrease by 30% from present levels by 2014-2015.	0.13	0.12	0.11	0.10	0.09
Number of ACT courses required for cases treated in public sector health facilities	0.13	0.12	0.11	0.10	0.09
25% extra cases treated by non-govt facilities and ACTs required for those cases	0.03	0.03	0.03	0.03	0.02
Total cases to be treated in public and private sector facilities	**0.16**	**0.15**	**0.14**	**0.12**	**0.11**
25% Buffer stock for cases treated in public and private health facilities	0.04	0.04	0.03	0.03	0.03
Deployment reserves stocks to be maintained for 4 different pediatric age groups and one adult age group at all levels to ensure that there is no stock out in public sector and private sector	0.81	0.41	0.41	0.41	0.41
Total requirements (for public and private sector)	**0.85**	**0.44**	**0.44**	**0.44**	**0.43**

- The requirements of the Round 9 GFATM grant is based on the estimated Pf case load of 0.13 million in the GFATM project areas. The case load is expected to decrease by 30% by the end of the project period due to the intensive use of the interventions.
- The requirement has been taken based on the number of cases to be treated plus reserves to be maintained at all levels without stock-outs.

- Deployment reserves are essential to prevent stock-outs of ACT, which has a short shelf life of only 2 years (at the end point of distribution, the effective shelf life often comes down to only 1.5 years). In spite of the best supply chain management a certain percentage of wastage may become unavoidable.
- Deployment reserves have been calculated as follows for all ASHAs, sub centres, PHCs and CHCs reporting Pf cases:

41,798 ASHAs @ 10 courses each	-	417,980
7,608 subcentres @ 18 courses each	-	136,944
1,082 PHCs @ 65 courses each	-	70,330
209 CHCs @ 110 courses each	-	22,990
Total	**-**	**648,244**
25% of reserves to be kept in pvt sector facilities	–	162,061
Total deployment reserves for public and pvt sector	–	810,305

- Deployment reserves for subsequent years are kept at 50% of the first year requirements.
- Procurement in the Round 9 project is proposed to be done in such a manner, so as to minimize the wastage of ACTs.

Thus, the activities will be:
2.2.2a: Procurement of ACT (Blister pack for adults)—centralized
2.2.2b: Procurement of ACT (Blister pack for children)—centralized

It is estimated that approximately 2.6 million ACT will be procured and delivered across 7 states over the 5 year project period. The ACT procurement planning, cycle will be harmonized with the overall procurement planning and processes of the national program for health products. The procurement will normally, as in the past, be undertaken by UNOPS. However other mechanisms, like the Voluntary Pooled Procurement (VPP) through GFATM will be considered, once it is launched and guidelines are known. Specifications for the ACTs have been prepared with support from WHO.

Activity 2.2.3: Supply and storage of ACT to distribution point (Reference no. 2.2.3a, 2.2.3b, 2.2.3c, 2.2.3d, 2.2.3e): ACT will be directly supplied to states, from where they will be distributed to the districts and then to villages. The states and districts will be provided the operational manual on storage and transportation (Annexure 6).

ACTs will be supplied every 6 months to districts, where they will be distributed according to the mapping mentioned above, and distributed every alternate month to ASHAs/volunteers/health workers, subsequent to stock taking.

The systems and processes for storage and transportation of ACTs to the point of use—village level ASHA/health worker/volunteer will be the same as detailed above for RDTs. For further logistics supply chain management details, refer to SDA 1.1 and Activity 1.1.3.

Thus, the activities will be:
2.2.3a Supply of ACT to state (Principal Consignee)
2.2.3b Renting of storage space for ACT at state level
2.2.3c Renting of storage space for ACT at district level
2.2.3d Logistics including transportation of ACT from state to district
2.2.3e Logistics including transportation of ACT from district to distribution points—village, health centre

Activity 2.2.4: BCC for community mobilization (Reference no. 2.2.4): BCC will be part and parcel of ACT distribution and use. The key message will focus on early case reporting to ASHA/health worker/health facility and prompt treatment. Treatment adherence will also be another key message. It is expected that BCC will improve early case reporting, correct treatment and treatment adherence.

Details of BCC activities and main implementing entity are given under objective 3 and SDAs 3.1 and 3.2.

Activity 2.2.5: Trainings at various levels for ASHA, volunteers; concerned program/project personnel (Reference no. 2.2.5): The state/district project team, concerned state/district program official, DMO will be trained on management & M&E of ACT distribution and use according to the NVBDCP training modules (Annexure 8). Likewise, health worker, ASHA/volunteer will also be trained on ACT use.

Details of trainings and related activities and main implementing entity are given under objective 5 and SDA 5.1.

Activity 2.2.6: ACT use for treatment (Reference no. 2.2.6): Treatment with ACT by health workers, with health units with public sector, NGOs/FBOs/CBOs and ASHA/volunteers in target villages will be done within 24 hours of confirmed diagnosis according to NVBDCP guidelines (refer to NVBDCP operational manual). ASHAs, etc will be instructed to ensure adherence through follow up of patients for 3 days. P. falciparum cases, which do not show response to therapy will be referred to the nearest identified facility, where such management can be done. Similarly, P. vivax cases not responding to chloroquine therapy given for 72 hours will also be referred for further management.

Activity 2.2.7: M&E of ACT use (Reference no. 2.2.7): ACT use entered on MIS form—M1 will be done (refer to NVBDCP operational manual) [Annexure 6].

Details of M&E and main implementing entity are given under objective 4 and SDA 4.2

There is not yet a system for quality assurance of antimalarials, apart from routine quality assurance for all pharmaceuticals. This is planned to be developed during this project period, as operational research, with initial focus on North-east.

Therapeutic efficacy studies and pharmacovigilance (as cohort event monitoring—active surveillance) focusing on ACTs will be set up by NIMR with World Bank funding in about 20 sentinel sites countrywide. Out of these, 3 sites will be set up in NE region. If therapeutic efficacy finds more than 10% treatment failure with artesunate + SP, a new WHO approved ACT will be adopted, possibly for NE region only, due to proximity to international borders with drug resistance.

Summary of activities under SDA 2.2 disaggregated by implementing partner(s):

SDA	Activity	Implementing partner(s)
SDA 2.2	Activity 2.2.1: Planning with identification and prioritization of areas (villages, health centres) for ACT, review of distribution and logistics supply management for ACT distribution (Reference no. 2.2.1)	PR1
	Activity 2.2.2: Procurement (centralized) of ACT (Reference no. 2.2.2)	PR1
	Activity 2.2.3: Supply and storage of ACT to distribution point (Reference no. 2.2.3a, 2.2.3b, 2.2.3c, 2.2.3d, 2.2.3e)	PR1
	Activity 2.2.4: BCC for community mobilization (Reference no. 2.2.4)	PR1, PR2
	Activity 2.2.5: Training of health care personnel, ASHA, volunteers; program/project managers/officers (Reference no. 2.2.5)	PR1
	Activity 2.2.6: ACT use for diagnosis (Reference no. 2.2.6)	PR1, PR2
	Activity 2.2.7: M&E of ACT use (Reference no. 2.2.7)	PR1, PR2

Targeted output: Number of Pf cases treated with ACT (including non govt sector) by health worker/ASHA/volunteer/health unit. This is targeted in the performance framework.

Output indicator (as in the performance framework):

Output indicator	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5
Number of Pf cases treated with ACT	Not available	164,000	149,000	136,000	123,000	112,000

Note: For internal M&E purpose, additional output indicators will be developed, as the project starts apart from the indicator mentioned in the GFATM performance framework]

Targeted outcome: Proportion of fever cases presenting to a health worker/ASHA/other provider and had a test showing Pf, who received ACT within 24 hours of first contact with health provider onset of fever. Although this indicator is not in the Attachment A, it will be monitored as part of LQAS using the program's MIS form (M1) for recording of all suspected malaria cases.

SDA 2.3: Prompt, effective treatment: Management of severe and complicated malaria

Target population/group: Severe cases of malaria, medical, paramedical personnel in identified health facilities

Activity 2.3.1: Planning, identification and prioritization of areas (health centres) for injectable Artemisinin derivatives, review of distribution and logistics supply management (Reference no. 2.3.1): Deliberations on which health facilities at secondary and tertiary levels will need to supplied with injectable Artemisinin derivatives will be done at regional level consultation. The state program will collate district wise information from DMO, district medical officer and other partners—NGOs/FBOs/private sector prior to the consultation. The district program managers will also fill in a spreadsheet, data of severe malaria caeses, other relevant information in collaboration with the identified health units to manage the severe malaria cases. Based on this, the quantity of injectable Artemisinin derivatives will be estimated.

The stakeholder consultations planned at regional level in the NE region will include injectable Artemisinin derivative distribution and use as agenda point. As in case of RDT/ACT, the logistics supply management, etc will also be discussed at this forum with timeframe. Subsequent to consultation, final list of health units will be prepared and kept with MTS, DMO/district project team, and state program/project team.

The planning will also take into consideration supplies to be provided to NGO/FBO/private sector care providers, who are involved in service delivery. They will receive injectable Artemisinin derivatives for severe malaria case management provided they generate data for the public health system, as mentioned earlier.

T*his exercise will be carried out concurrently with the LLIN, RDT, ACT distribution planning and after the first year will be integrated with routine annual planning.*

Activity 2.3.2: Procurement (centralized) of injectable Artemisinin derivatives (Reference no. 2.3.2): Quantification and procurement planning will be based on the following estimation:

Year	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**
Average number of Pf cases in project area in the last three years	135134	122972	111904	101833	92668
Number of Pf cases in adults (60% of the average number of Pf cases)	81080	73783	67143	61100	55601
Number of Pf cases that may turn into severity (5% of above)	4054	3689	3357	3055	2780
Number of injectable Artemisinin derivative (Arteether injections--3 injections per case)	12162	11067	10071	9165	8340
25% buffer stock	3041	2767	2518	2291	2085
Total number of injections including 25% buffer stock	15203	13834	12589	11456	10425
40% reserve for emergencies	6081	5534	5036	4582	4170
Total requirement	**21284**	**19368**	**17625**	**16039**	**14595**

Note:

- These estimates are for Arteether inj. for adult patients
- For pediatric cases and pregnant women quinine injections are estimated with domestic funding. *It is possible that within next few years, the national policy may change to clearly recommend injectable Artemisinin derivative for these groups. In that case, the supplies planned here will probably still be adequate.*

The quantity of injectable Artemisinin derivative needed is estimated as maximum of 5% of Pf cases. However, 25% buffer stocks will be created for smaller in-patient units and potential outbreaks. The total quantity needed for 5 years thus is 0.10 million. The product will be procured like ACT, through UNOPS. However other mechanisms, like the Voluntary Pooled Procurement (VPP) through GFATM will be considered, once it is launched and guidelines are known. The specifications for the injectables have been prepared with the support from the WHO.

Activity 2.3.3: Supply and storage of injectable Artemisinin derivatives to distribution point (Reference no. 2.3.3a, 2.3.3b, 2.3.3c, 2.3.3d, 2.3.3e): Injectable Artemisinin derivatives will be directly

supplied to states, from where they will be distributed to the districts and then to villages. The states and districts will be provided the operational manual on storage and transportation (Annexure 6).

The timelines, systems and processes for storage and transportation of ACTs to the point of use—identified health facility with public and private sector will be the same as detailed above for RDT/ACT. For further logistics supply chain management details, refer to SDA 1.1 and Activity 1.1.3.

Thus, the activities and main implementing entity will be:
2.3.3a Supply of Injectable artemisinin derivatives to state (principal consignee)
2.3.3b Renting of storage space for Injectable artemisinin derivatives at state level
2.3.3c Renting of storage space for Injectable artemisinin derivatives at district level
2.3.3d Logistics including transportation of Injectable artemisinin derivatives from state to district
2.3.3e Logistics including transportation of Injectable artemisinin derivatives from district to distribution points--health centres

Activity 2.3.4: BCC for community mobilization (Reference no. 2.3.4): BCC will be part and parcel of community mobilization related to early recognition of signs and symptoms of severe malaria and the dangers of unnecessary injections. The approaches and tools will be the same as detailed above for RDTs/ACTs, like IPC by health worker/doctor who will be directly involved in case detection. ASHA, volunteer through IPC, community meeting and/or an infotainment activity supported by appropriate BCC tools will promote messages of early referral for case management.

Details of BCC activities and main implementing entity are given under objective 3 and SDAs 3.1 and 3.2.

Activity 2.3.5: Training of medical/para medical personnel in identified health centres; health worker, ASHA, volunteers; concerned program/project personnel (Reference no. 2.3.5a, 2.3.5b, 2.3.5c, 2.3.5d): The state/district project team, concerned state/district program official, DMO will be trained on management & M&E of health product distribution and use according to the NVBDCP training modules (Annexure 8). The training on antimalarial treatment (as is planned for all medical officers in target districts; medical and para medical personnel of identified health units and private providers) will emphasize the need to restrict treatment with injectables to severe cases only. The health worker, ASHA/volunteer will also be trained on recognition of early signs and symptoms and arrangement of referral and community mobilization.

Details of trainings and related activities and main implementing entity are given under objective 5 and SDA 5.1.

Activity 2.3.6: M&E (Reference no. 2.3.7): There is not yet a system for tracking/reporting severe malaria cases. The severe case management details will be recorded in the identified health units and reported to the public health information system. In identified sentinel surveillance site a system for case-based surveillance of all in-patient malaria cases will be set up. A QA system is still to be established. Then, The QA of injectable Artemisinin derivatives will be the part of the routine program. Further Details of M&E are given under objective 4 and SDA 4.2.

Management of severe malaria: *Patients with signs of severe malaria, symptoms suggesting diseases other than malaria as well as those patients who do not improve after treatment for 3 days quickly or those whose symptoms return within 14 days, will be referred to secondary and tertiary levels of care, where their disease can be managed with competence. A clear protocol is available for the referral system (in the NVBDCP operational manual—Annexure 6). Cases of severe malaria will receive in-patient care and parenteral treatment with artesunate, artemether, arte-ether or quinine by trained medical, para medical personnel as per NVBDCP guidelines (in operational manual at Annexure 6). The new guidelines will be emphasized, which include the compulsory use of oral ACT to complete any treatment initiated with injectable artemisinins. There are instances of malaria patients in some areas demanding treatment with injectables and the care providers many a times comply with such demand. This will be addressed as part of community program and health worker training.*

Summary of activities under SDA 2.3 disaggregated by implementing partner(s):

SDA	Activity	Implementing partner(s)

SDA 2.3	Activity 2.3.1: Planning, identification and prioritization of areas (health centres) for injectable Artemisinin derivatives, review of distribution and logistics supply management for injectable Artemisinin derivatives distribution (Reference no. 2.3.1)	PR1
	Activity 2.3.2: Procurement (centralized) of injectable Artemisinin derivatives (Reference no. 2.3.2)	PR1
	Activity 2.3.3: Supply and storage of injectable Artemisinin derivatives to distribution point (Reference no. 2.3.3a, 2.3.3b, 2.3.3c, 2.3.3d, 2.3.3e)	PR1
	Activity 2.3.4: BCC for community mobilization (Reference no. 2.3.4)	PR1, PR2
	Activity 2.3.5: Training of medical/para medical personnel in identified health units; health worker, ASHA, volunteers; program/project managers/officers (Reference no. 2.3.5)	PR1
	Activity 2.3.6: M&E (Reference no. 2.3.6)	PR1

Targeted output: Identified health units equipped with necessary medicines and trained medical and paramedical personnel for severe malaria case management.

Targeted outcome: Severe malaria cases managed in identified health units as per guidelines of NVBDCP and report shared.

Objective 3. To achieve at least 80% coverage of villages in project areas by appropriate BCC activities by 2015 to improve knowledge, awareness and responsive behavior with regard to effective preventive and curative malaria control interventions.

Policy and strategy

BCC is a systematic process that motivates individuals, families, communities, to change inappropriate or unhealthy behavior or to continue appropriate or healthy behavior. BCC is a key supportive strategy for the principal strategies for malaria prevention and treatment under NVBDCP. The national program recognizes that the success in malaria control efforts would stem from not only sound health systems, trained human resources but also from effective ownership of malaria control by people. For long, Information, Education, Communication (IEC) activities were being implemented under the national program to increase knowledge and awareness about malaria without much emphasis on appropriate action. Likewise, sensitization sessions, trainings of health care providers were focused on improving their technical knowledge and skills (behavior). Although there is evidence that knowledge and awareness of care takers and providers have increased over the years, there has been none or very little internalization of information and resultant behavior change. Therefore, BCC is being increasingly emphasized for informed decision-making and responsive behavior, while enhancing knowledge and awareness, especially about new malaria control interventions continue.

BCC is thus, directed at: early recognition of signs and symptoms and early, appropriate treatment seeking; treatment regimen and adherence; vulnerability of children and pregnant women and ensuring their protection; prevention of malaria; use of ITN/LLIN; acceptance of IRS, etc. Every year, BCC activities either as a campaign (for example, during anti malaria moth—June), or as routine program are planned and implemented at national and sub-national levels. Guidelines and resources (funding and at times prototype creative materials) are provided to the states for local planning, and adoption and dissemination to district/sub-district levels. An operational guide for anti-malaria month campaign is available at national, state, district levels. However, recent reviews and assessments (Social and Beneficiary Assessment, 2007; In Depth Review report, 2007; Joint Monitoring Mission report, 2007) have reflected inadequate knowledge, awareness, and inappropriate practices in high risk areas particularly that are rural, tribal, and having deficient health system.

Towards improving the scenario, BCC is included the strategic action plan for malaria control (Annexure 2). This include: locale specific BCC strategic planning, implementation at sub-national level through: direct, inter-personal channels of communication and community outreach supported by appropriate BCC tools, and complemented by mass media activities where there is reasonable reach and acceptance; centralized campaign, routine information dissemination through mass media; intensive BCC (campaign) for promotion of new tools: LLIN, RDT, ACT and acceptance of IRS; and meaningful engagement of stakeholders in BCC planning, implementation, and M&E.

The overall objective is to reach entire target population with correct information and encourage informed decision-making and responsive behaviour related to above-mentioned key issues.

Since the proposed project areas are mostly rural, tribal and hence, least likely to have access to mass media, BCC will be mostly based on direct, inter-personal communication and community outreach activities supported by appropriate BCC tools. The mass media will be utilized only where there is reasonable reach and acceptance. At the state/district level, campaigns, routine information dissemination will be attempted through mass media—local newspaper and radio. The specific activities will include: a) counseling/one to one direct communication between patient/family members and volunteer, ASHA, health worker, doctor in public and private sector, and change agents/influencers (religious leader/community leader, educator, traditional healers, etc) [IPC will also target vulnerable groups—pregnant women in antenatal clinics, patients coming to OPDs and in-patients]; b) peer group interactions between members of associations, youth clubs, etc; c) community/group meetings of civil society organizations/SHGs/ Panchayat, Rogi Kalyan Samitis/Village Health & Sanitation Committees, etc.; d) infotainment: popular folk song & drama, skits, puppetry, etc. by local groups, animators, etc.; e) village level rally, miking, wall writing, etc; f) school activities.

For effective and suitable mass media activities, media buying will be considered after negotiating the best price for best targeted reach through the BCC consultant agency to be hired under the World Bank project.

SDA 3.1: BCC: Community outreach, IPC

Target population/group: Individuals/patients (out patient/in patient), families, communities, care providers, primarily in rural, tribal areas

Activity 3.1.1: Regional workshop for consolidating/fine tuning BCC strategy and operational plan, tools (community outreach/IPC/Mass Media) based on knowledge, materials with NVBDCP (Reference no. 3.1.1)

Subsequent to problem definition for BCC; and setting of behavioral goal(s) and objective(s), a situation analysis (formative research) related to Knowledge, Attitude, Belief, and Practices is a key step for developing BCC strategy, plan, tools.

The World Bank project includes selection of a professional agency at national level to undertake formative research, develop and pretest multi-media campaign and undertake media buying for a nation-wide campaign with strong focus on endemic states. The BCC strategy, plan for the proposed GFATM Round 9 project will draw from this evidence and will be aligned with the overall strategy delineated under that project although there will be an overt emphasis on contextually appropriate IPC/community outreach activities by volunteers/health workers, ASHA with NGO and public sector. However, assessment of approaches and channels, creative materials, systems and capacity in public/private sector in the proposed project areas will also be reviewed closely to identify gaps in demand and supply side constraints, specific societal and gender-specific barriers to access, etc. Such assessment will also be conducted at the end of Year 2, as part of the overall project evaluation. The results from the assessment will be used to determine the effectiveness of BCC through IPC/community outreach/mass media and to plan further activities.

The workshops at regional level in the NE region are proposed for consolidating/fine tuning BCC goals and objectives, strategy and operational plan, tools (community outreach/IPC/Mass Media) based on knowledge, materials with NVBDCP including those generated through formative research. The plan will include target audience segmentation. Prior to this, at local levels, community will be consulted for inputs on BCC planning, implementation. This will help overcome the socio-cultural alienation of many communities and any indifferent response by the health care service providers. The participants will include PR1 & states, PR2, proposed sub-recipients, other stakeholders--NGOs/FBOs/private sector. The operational manual for anti malaria month (Annexure 6), BCC plan will be disseminated to all stakeholders.

Following the consultation, the BCC strategy, plan will be disseminated to all stakeholders at state/district/sub-district levels in PR1, PR2 areas.

Activity 3.1.2: Workshop at district level for local adaptation of BCC tools including give away materials to support community outreach/IPC (flip book, information card, infotainment script,

illustrative leaflet, caps, other locally appropriate material) [Reference no. 3.1.2): Based on existing knowledge (including formative research findings and generic tools generated by the BCC agency under the World Bank project) and outputs from the above-referred workshop, a BCC tool kit will be designed. The kit will be culturally and contextually adapted at district level consultations. Guidance will also be taken from the BCC experts at national/state levels. Subsequently, the tools and give away materils will be finalized after pre-tested before translation and replication.

Activity 3.1.3: Translation, replication and supply of BCC materials to distribution point (Reference no. 3.1.3a, 3.1.3b, 3.1.2c, 3.1.2d): Following finalization of prototypes, the tools will be translated in as many local languages/dialects as practicable (15) by language experts at state/district levels ensuring that the essence of the messages is not lost during translation. Replication will be undertaken at district level followed by dissemination to points of use, example village level for volunteers, ASHA, health workers in public/private sector, other potential BCC outlets to be involved in IPC/community outreach programs like schools, Anganwadi, ANC clinins/local offices (if any). A guide will accompany the tool kit to assist the volunteers/ASHA/health workers, etc on how to utilize the tools. This will be an important step to strengthen the IPC/community outreach activities. The tool kit will include: flip book, information card, infotainment script, illustrative leaflet, caps, and other locally appropriate material. The give away materials will also be disseminated at block, district levels—to health units, schools, etc. Local transportation will be hired for BCC tool distribution.

Thus, the activities will be:
3.1.3a Translation of BCC tools including give away materials for community outreach/IPC in local language/dialect of NE states
3.1.3b Replication of BCC tools for community outreach/IPC--flip book/Information card/Infotainment script/other locally appropriate material for PR1 and PR2 areas
3.1.3c Replication of BCC materials for community outreach/IPC--illustrative leaflet, caps other locally appropriate material
3.1.3d Logistics including transportation for dissemination of BCC tools, give away materials to distribution point--volunteer/ASHA/health worker/other BCC outlets in village/block/district

Activity 3.1.4: BCC—Community outreach/IPC implementation (Reference no. 3.1.4a, 3.1.4b, 3.1.4c, 3.1.4d, 3.1.4e, 3.1.4f, 3.1.4g, 3.1.4h, 3.1.4i, 3.1.4j, 3.1.4k, 3.1.4l, 3.1.4m, 3.1.4n): Implementation of BCC through community outreach/IPC will include any one or a combination of following activities.

- → Community/group meetings of civil society organizations/self-help groups/Local self government (Panchayat), Rogi Kalyan Samitis/Village Health & Sanitation Committees, etc
- → School campaign: Activities, meetings involving school children/teachers
- → Group sensitization of private health care service providers including traditional healers. This will include demonstration, health talks by religious leaders/community leaders, etc.
- → Infotainment: popular folk song & drama, skits, puppetry, and other such local entertainment means by local groups, animators, etc.
- → Village level miking, wall writings/illustrations, etc
- → Interpersonal communication (IPC)/counseling—one to one direct communication with patient/family members by volunteers, ASHA, AWW (Anganwadi workers), Health Workers, Doctors in public and private sector, religious leaders/community leaders, educators, peers, etc.; Antenatal clinic campaign targeting vulnerable groups

These activities will be supported by appropriate BCC tools--illustrated flip book, information card, caps, to support community outreach activities.

BCC activities will be implemented as campaign during the pre-transmission and transmission season especially intensifying in anti malaria month (on weekly/fortnightly basis) and as routine (monthly/once in every two months, as appropriate) during low transmission season. A calendar will be prepared in quarter 1 of the financial year, as the resources are disbursed. BCC campaign will also precede LLIN distribution, IRS. Availability of resources including funds, BCC materials will be ensured beforehand. Most activities will be implemented by the volunteers with NGOs/FBOs/CBOs/SHGs, ASHA, health workers, local doctor. Efforts will be made to identify ‘model’ households/families that have adopted appropriate behaviour. The household members, especially a female member will then be designated as a ‘change agent’ who can continue to motivate others on sustained basis.

Thus, the activities and main implementing entity will be:
3.1.4a BCC implementation by ASHA/health worker/volunteer through community outreach activity—facilitating organization of infotainment (folk medium, etc) and/or conducting group meeting and dissemination of BCC give away materials (in at least 90% of the total villages twice a year—one in pre-transmission/during transmission period, preparing/transmitting report) in PR1 areas
3.1.4b BCC implementation by ASHA/health worker/volunteer through community outreach activity—facilitating organization of infotainment (folk medium, etc) or group meeting and dissemination of BCC give away materials (in at least 90% of the total villages twice a year—one in pre-transmission/during transmission period, preparing/transmitting report) in PR2 areas
3.1.4c Infotainment performance by local group in at least 90% of the total villages twice a year—one in pre-transmission/during transmission period in PR1 areas
3.1.4d Infotainment performance by local group in at least 90% of the total villages twice a year—one in pre-transmission/during transmission period in PR2 areas
3.1.4e Miking in at least 90% of the total villages thrice during high transmission season (3 months) in PR1 areas
3.1.4f Miking in at least 90% of the total villages thrice during high transmission season (3 months) in PR2 areas
3.1.4g BCC implementation by ASHA/health worker/volunteer through IPC and dissemination of BCC give away materials in at least 90% of the total villages at least twice a year—one in pre-transmission/during transmission period, preparing/transmitting report in PR1 areas
3.1.4h BCC implementation by ASHA/health worker/volunteer through IPC and dissemination of BCC give away materials in at least 90% of the total villages at least twice a year—one in pre-transmission/during transmission period, preparing/transmitting report in PR2 areas
3.1.4i Local school activity for dissemination of messages, preparing/transmitting report in PR1 areas
3.1.4j Local school activity for dissemination of messages, preparing/transmitting report in PR2 areas
3.1.4k Wall writing (with illustration) in local languages in 4 prominent places in Year 1, 3, 5 in each village once during high transmission season in PR1 areas
3.1.4l Wall writing (with illustration) in local languages in 4 prominent places Year 1, 3, 5 in village once during high transmission season in PR2 areas
3.1.4m Community session for BCC message dissemination at village level (in at least 80% villages) once prior to/during high transmission season in PR1 areas (in these sessions, the participants will include members of village health & sanitation committee, panchayat—the local self government, other opinion leaders etc)
3.1.4n Community session for BCC message dissemination at village level (in at least 80% villages) once prior to/during high transmission season in PR2 areas

Activity 3.1.5: Trainings at various levels for ASHA, volunteers; concerned medical/paramedical/program/project personnel (Reference no. 3.1.5): The state/district project team, concerned state/district program official, DMO will be trained on oversight, M&E of BCC according to the NVBDCP training modules (Annexure 8). The medical, paramedical personnel, health worker, ASHA/volunteer will be trained on BCC activities, community mobilization.

Details of trainings and related activities and main implementing entity are given under objective 5 and SDA 5.1.

Activity 3.1.6: M&E of BCC (Reference no. 3.1.6): BCC programs are rarely monitored systematically and/or evaluated and hence, a myriad of approaches and methods are used whose effectiveness is still to be demonstrated. Concurrent monitoring (process evaluation) will be emphasized, through routine reporting by MTS/other concerned project and/or program officials based on field visit and reports submitted by ASHA/volunteer, health worker. At the end of each year, a rapid assessment will be conducted to determine whether activities has taken place, as planned and its effectiveness for further strengthening. The existing operational guide on observance of anti malaria month with the national program will provide guidance on the same. Further, the phase 1 and 2 end evaluations proposed for the Round 9 project will include evaluation of BCC as well. An M&E framework and adequate tools will be developed to support M&E. The large scale population surveys proposed to be carried out every second year of the project have a protocol generated with World Bank support including standard questions on KAP related to malaria. Additional questions will be formulated to assess specifically the reach and effect of project BCC. These surveys will also include standard MIS questions on ITN/LLIN, treatment seeking

and adherence. Thus, these will be of key importance for M&E of BCC activities.

Details of M&E and main implementing entity are given under objective 4 and SDAs 4.2

Summary of activities under SDA 2.3 disaggregated by implementing partner(s):

SDA	Key activity	Implementing partner(s)
SDA 3.1: BCC: Community outreach, IPC	Activity 3.1.1: Regional consultation for consolidating/fine tuning BCC strategy and operational plan, tools (community outreach/IPC/Mass Media) based on knowledge, materials with NVBDCP (Reference no. 3.1.1)	PR1
	Activity 3.1.2: Consultation at district level for local adaptation of BCC tools including give away materials to support community outreach/IPC (flip book, information card, infotainment script, illustrative leaflet, caps, other locally appropriate material) [Reference no. 3.1.2)	PR1, PR2
	Activity 3.1.3: Translation, replication and supply of BCC materials to distribution point (Reference no. 3.1.3a, 3.1.3b, 3.1.2c, 3.1.2d)	PR2
	Activity 3.1.4: BCC implementation (Reference no. 3.1.4a, 3.1.4b, 3.1.4c, 3.1.4d, 3.1.4e, 3.1.4f, 3.1.4g, 3.1.4h, 3.1.4i, 3.1.4j, 3.1.4k, 3.1.4l, 3.1.4m, 3.1.4n)	PR1, PR2
	Activity 3.1.5: Training of health care personnel, ASHA, volunteers; medical, paramedical personnel, program/project managers/officers (Reference no. 3.1.5)	PR1, PR2
	Activity 3.1.6: M&E of BCC (Reference no. 3.1.6)	PR1, PR2

Targeted Output: Number of BCC--community outreach/IPC activities held in villages.

Output indicator (as in the performance framework):

Output indicator	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5
Number of villages where BCC activity--community session for message dissemination, held	Not available	5000	15,000	30,000	35,000	35,000

Note: For internal M&E purpose, additional output indicators will be developed, as the project starts apart from the indicator mentioned in the GFATM performance framework]

Targeted outcomes: Following BCC through community outreach/IPC, LLIN is expected to be used for sleeping daily; person with fever will present to health worker/ASHA/volunteer within 24 hours of fever, etc.

SDA 3.2: BCC: Mass media

Target population/group: Individuals/patients, families, communities, care providers, primarily in rural, semi-urban, urban areas (where mass media reach is evident)

Activity 3.2.1: Regional workshop for consolidating/fine tuning BCC strategy and operational plan, tools for mass media based on knowledge, materials with NVBDCP (Reference no. 3.2.1): As mentioned already, mass media is not a key component of BCC in the proposed project. However, pre-proposal discussions had indicated that local radio on which programs/songs in local languages are broadcast is popular. Hence, in order to successfully achieve the key behavioural objectives, the community outreach activities will be complemented with mass media (radio) activities in areas with reasonable reach. During deliberations at the above-referred consultation, this component will also be discussed with the stakeholders.

Other mass media activities—TV, print will be planned and implemented by the national program with domestic and World Bank funding. The BCC consultant agency hired under the World Bank project will be involved.

Activity 3.2.2: Workshop at district level for local adaptation of mass media messages, materials

(radio) [Reference no. 3.2.2): During the district workshop mentioned earlier, local adaptation of mass media messages (radio) will be done.

Activity 3.2.3: Translation (dubbing) of mass media messages in local languages (approx. 15) [Reference no. 3.2.3]: The mass media messages (radio) will be dubbed in 15l languages; --national language, and in English. Local celebrities will be involved in this activity.

Activity 3.2.4: BCC—Mass media implementation—skit/jingle on radio (Reference no. 3.2.4): Mass media activities through radio will include: advertisement in form of jingle and/or short skit and will be aired at least 2 times every day for 3 months immediately prior to transmission season and during transmission season in local languages. It will be ensured that these campaigns are synchronized with the intensified community outreach/IPC activities and similar messages are delivered. Hence, it will reinforce BCC message dissemination towards maximizing impact.

Activity 3.2.5: M&E of BCC (Reference no. 3.2.5): M&E of BCC: Mass media will be clubbed with the overall BCC M&E, as mentioned above. (M&E details are under SDA 4.2).

Summary of activities under SDA 2.3 disaggregated by implementing partner(s):

SDA	Key activity	Implementing partner(s)
SDA 3.2: BCC: Mass media	Activity 3.2.1: Regional consultation for consolidating/fine tuning BCC strategy and operational plan, tools for mass media based on knowledge, materials with NVBDCP (Reference no. 3.2.1)	PR1
	Activity 3.2.2: Consultation at district level for local adaptation of mass media messages (radio) [Reference no. 3.2.2)	PR1
	Activity 3.2.3: Translation (dubbing) of mass media messages in local languages (approx. 15) [Reference no. 3.2.3]	PR1
	Activity 3.2.4: BCC—Mass media implementation (Reference no. 3.2.4)	PR1
	Activity 3.2.5: M&E of BCC (Reference no. 3.2.5)	PR1

Targeted Output: Expected output will be radio program(s) broadcast as planned.

Targeted outcome: Following BCC through radio, LLIN is expected to be used for sleeping daily; person with fever will present to health worker/ASHA/volunteer within 24 hours of fever, etc.

Objective 4. To strengthen program planning and management, monitoring and evaluation, and coordination and partnership development to improve service delivery in project areas.

Policy and strategy

Health work force: The national malaria control program is fraught with insufficient human resources at all levels. Efforts are ongoing to fill in the vacancies of the critical personnel at the peripheral level including establishment of such support as ASHA under the NRHM. Under various externally aided projects, including the Round 4 GFATM project, consultants and support staff have also been contracted to complement and supplement the efforts of the program technical and management staff. Experience has shown that this human resource input at national, state, district levels have had beneficial effect on project management and technical quality. It is expected that the human resource deficiencies will mitigate in the coming years. However, to sustain the progress made during the Round 4 project and smooth scale up of interventions, as proposed under IMCP—II, it is deemed beneficial to continue with current staffing including the recently recruited consultants at district level as well as further strengthen the work force by including experts from different fields. For example, Malaria Technical Supervisors (MTS) have been recruited recently, to support all monitoring and supervision activities in the periphery. It is too early to assess their outputs, but it is encouraging that these are science graduates of impressively high quality. Efforts will be made by the national program to retain this important cadre under NRHM or state health department. Further, in view of large scale vacancies of program management position at district level, it is proposed to position a District VBD (Malaria) Project Officer in each of the proposed districts. With adequate capacity building they are expected to strengthen the program planning, implementation and M&E. It is expected that after the project, many from this group will be retained by the state and/or or

NRHM.

Regional resource team for NE region: The epidemiological and operational situations are difficult in most of the areas of the north-east, which is to a large extent different from peninsular India in terms of malaria transmission and human ecology. The states, except Assam, are relatively small, and experience has shown that it is not always possible for limited staff of NVBDCP at national level to provide adequate, differentiated support to this region. . There is therefore a strong case for strengthening malaria control and research on a NE regional basis. Under the Round 9 project, it is proposed to set up a regional resource team for malaria control in the NE region. This team will be based in Guwahati in Assam state, where it will link up with the existing MOHFW Regional Office, PR1, PR2, NIMR, RMRC, regional research laboratories of CSIR, major universities and medical institutions, etc, which support most of the NE states. Guwahati is also connected by daily direct flights to the capitals of all the other 6 NE states. The terms of reference for the proposed regional team are as below.

1. To provide technical and managerial support to malaria control at state and district levels, with priority to those areas, where planning and implementation are manifestly the weakest.
2. To coordinate training in the region, involving relevant partner institutions, as needed.
3. To take charge of surveillance and M&E for malaria in the region, ensuring that data are used for program improvement and also rapidly transmitted to NVBDCP.
4. To facilitate the coordination of control operations and surveillance across state borders, as needed.
5. To facilitate collaboration between government, civil society and private sector (especially tea estates/associations) for malaria control across the region.
6. To facilitate field and operational research by NIMR (Guwahati), RMRC (Dibrugarh), DRDO (Tezpur), NEIGHRIMS (Shillong), North Eastern Hill University and others, which may be planned centrally and implemented in NE (e.g. drug and insecticide resistance).
7. To define the agenda for research, which is needed to strengthen malaria control in the region, i.e. applied field research, operational research and malaria related health systems research. To mobilize funds for this agenda (with the assistance of NVBDCP and partners), identify suitable local research institutions, sometimes participate in carrying out the research in collaboration with local health staff, research institutions, universities, NGOs and if needed with support from outside the region, thereby building local capacity.
8. To enhance the integration of malaria control with NRHM and health systems development in general in the region.
9. To promote IVM in the region in terms of collaboration for different vector borne disease control programs and between public health and the agricultural and other concerned sector.
10. Under the guidance of national authorities to engage in cross border collaboration for malaria surveillance and control.
11. To facilitate regular exchange of information, experience through a quarterly newsletter, planned under the Round 9 project in partnership with an NGO and regular meetings with government officers, researchers and civil society.

It will be expected that at the end of IMCP II, this unit will be integrated with existing government structures, either as part of the Regional/state/national offices.

M&E: NVBDCP is revising its M&E system and has developed a national M&E framework and plan attuned to new standards for malaria case management and vector control. The revised M&E system includes: 1) Routine Health Management Information System (HMIS), which is now being computerized as National Anti Malaria Management Information System (NAMMIS) (see below); 2) Sentinel Surveillance of severe cases and deaths; 3) Decentralized measurement of outcomes (ITN/LLIN or IRS coverage and prompt diagnosis and effective treatment) at district and PHC levels through Lot Quality Assurance Sampling (LQAS); 4) Population and household surveys; 5) Health Facility Survey; 4) Central evaluation; 5) Standardized supportive supervision, 6) Quality assurance for RDT, microscopy. 7) Joint evaluations, where the programme as a whole is reviewed by a WHO led group including external experts, 8) operational research.

The M&E provide data on case management, vector control, program management, coverage and utilization of services. The GFATM Round 9 project will draw from the existing knowledge and further strengthen the same over the project period for achieving targets proposed in the performance framework. Separately, monitoring for Pf Resistance, entomological aspects and quality assurance are also carried out. Pharmacovigilance of ACTs is also planned.

The national program's web based NAMMIS is being strengthened throughout the country with funding from the World Bank and domestic sources. In addition to systems strengthening, this also includes capacity building of various personnel. The same system will be leveraged in the proposed GFATM Round 9 project.

Further, MOHFW is in the process of establishing a comprehensive Logistics Management Information System (LMIS) for the health sector. On similar lines, an LMIS will be developed at NVBDCP to track LLIN, insecticides, RDT and ACT from their purchase or point of entry into India through the districts and to the decentralized distribution points. The LMIS will use a standardized form that records the quantity of each commodity at every point where an organization takes delivery or delivers these commodities. . This is outlined in the operational manual (Annexure 6). The detailed mechanisms of this system will be developed, when, as part of the World Bank support to NVBDCP, an agency with expertise in supply management will be recruited as a consultant. This agency will in collaboration with NVBDCP and its consultants prepare guidelines on logistics for antimalarial commodities in India and establish a training programme to capacitate central, state and district staff for working according to these guidelines. This training will be an integrated part of the training in management and M&E to be provided under IMCP-II as described under objective 5.

Both PR1 and PR2 will follow one M&E system for technical reporting. The NAMMIS includes all HMIS data, which is channeled from the most peripheral service delivery level (village/sub.centre/PHC/hospital/spray team, etc.) through the block (PHC) medical officer, the district NVBDCP officer and the state NVBDCP unit to central NVBDCP. The HMIS data includes malaria surveillance data (including sentinel surveillance) and operational data on case management and vector control. The details of this system are described in Chapter 11 of the operational manual and annexures therein at K1-11 (Annexure 6). This revised system is being applied country-wide in 2009 in parallel with the old system. By the end of the year, the performance of the new system will be assessed, and this will likely to lead to some modifications.

For PR2, the M&E will be managed by the Futures Group—SR. Once the project is approved, both PRs will have to generate performance report and submit to GFATM, LFA. Hence, the PR2 while feeding information on malaria cases/deaths, services completed (example, LLIN distributed, RDT/ACT used, etc) in their catchment areas, at appropriate reporting level and to appropriate authority of the national program (PR1); will also generate relevant data related to PR2/SR performance indicators within the overall performance framework of the Round 9 GFATM project. Further, PR2/SR planning and management, finance and accounting, will also be brought under M&E framework for effectiveness taking guidance from the revised NAMMIS.

The M&E systems strengthening tools of the GFATM will be employed to ensure a robust M&E system.

Surveillance: Malaria surveillance in India was traditionally based mainly on slide results. It relied on surveillance of fever cases in the community by means of fortnightly active case detection conducted mainly by the MPHWs based at PHC level. The intention now is to rely much more on passive case detection based on local services and community based structures, which are available any time. The progress of this approach will be monitored, as reporting will now be done separately for cases detected passively and actively. Currently, this will be monitored as villages having an identified provider of RDTs (if eligible for RDT) and ACTs, with the aim of 100% coverage. The introduction of RDTs has made it necessary to introduce a rule, whereby the blood smear slide is made and then discarded in case RDT is positive, to reduce the load on microscopy services and ensure that the data generated by RDT can dovetail with microscopy data. This means that most cases of mixed infection will not be detected at present. However, once multivalent RDTs are available, it will no longer be necessary to take a slide.

Under the GFATM Round 9 project, it is proposed to strengthen sentinel surveillance in order to capture trends on in-patient malaria cases, severe malaria, and malaria deaths, which are at present not captured. Health institutions with in-patient facilities in public and private sector will be identified for the purpose. In World Bank areas such surveillance is being introduced in two health facilities in each district. In the proposed Round 9 areas, where generally the health systems are weaker, introduction of sentinel surveillance will be based on number of districts and size of population. After two years of implementation, it is planned to be generalized with two units in all districts. Detection and reporting of cases will allow the

program to identify the transmission foci and accordingly target interventions. It is proposed that selected health units with PR2 consortium will also be utilized as sentinel surveillance sites, if all requisite criteria are being met by those institutions

The aim of the NVBDCP is to prevent or identify epidemics/outbreaks in their incipient stages and to prevent them from progressing into full-blown epidemics. Climatic/ environmental changes conducive to vector propagation, viz., rainfall, increase in humidity, flooding, population migration, lack of manpower and facilities for malaria surveillance, and logistics result in build up of malaria cases, which can lead to outbreaks. The early detection of signals include increase in fever rate (fever rate of one-third or more of new OPD cases) and increase in severe malaria cases in the population (as identified and informed by health workers and community volunteers), increase in malaria incidence (as compared to the same month of previous year), increase in TPR, Pf%, proportion of gametocytes to other stages, increase in resistance, increase in malaria mortality and increase in consumption of anti-malarials. Epidemic preparedness is part of NVBDCP and one of the main purposes of having a surveillance system since the goal of burden reduction cannot be achieved, if major epidemics occur. This topic will be included in the training curriculum, especially for MTS and project staff under IMCP--II, but it is not described as a separate activity. Fever alert surveillance for malaria has already been integrated with the country's Integrated Disease Surveillance Project (IDSP). The alert communicated to medical officers at PHC level enables them to pay the greatest attention to weekly trends.

Coordination and partnership building: It is well recognized that the efforts of the public health authority can be strengthened with effective multi sectoral collaboration with non health ministries/departments, private sector, NGOs. Strengthening of the human resource base, especially in the NE will improve capacity to engage especially ministries of agriculture, tribal affairs, defence, as well as plantations (especially tea estates) and Armed and Paramilitary forces. Engagement of NGO/FBO/private health sector, has already been mentioned. It is expected that collaboration with UNICEF will be particularly helpful for also engaging the education sector. Under the Round 9 project, sustained advocacy towards creating an enabling environment is planned.

SDA 4.1: HSS: Human Resources--Health workforce

Target population/group: Project/program personnel/volunteers, experts

Activity 4.1.1: Recruitment of teams for technical and management assistance, M&E assistance, planning and administration assistance at national, regional, state, district levels [consultants, experts/specialists, support personnel, malaria technical supervisors (MTS), District VBD (Malaria) project officer] [Reference no. 4.1.1a; 4.1.1b(i) to 4.1.1b(xii); 4.1.1c(i) to 4.1.1c(xix); 4.1.1d(i) to 4.1.1d(xv); 4.1.1e(i) to 4.1.1e(xi); 4.1.1f(i) to 4.1.1f(iii); 4.1.1g(i) to 4.1.1g(xxii); 4.1.1h(i) to 4.1.1h(xvi); 4.1.1i(i) to 4.1.1 (ix)]: For technical and management assistance, M&E, planning and administration, teams comprising experts, consultants, malaria technical supervisors (MTS), other staff will be positioned at national, regional, state and district levels by PR1. The details of the team composition are presented in Annexure 9 as well as in the budget table (Annexure 5).

Lessons learnt from the GF Round 4 project have reinforced that the technical assistance recruitment by the WHO with GFATM funding has contributed to the overall improvement in various technical and programmatic areas including monitoring and evaluation, financial management, procurement and supply chain management, and overall project coordination and oversight. Hence, in Round 9 project as well, the same technical assistance will be continued and increased with recruitment of 2-3 more experts for certain critical domains, like BCC, Public Private Partnership, etc. The necessary funds will be transferred to the WHO for the purpose. The positions will include NPO, consultants. The regional, state, district level positions will be recruited through the NVBDCP/state mechanisms. However, in case of any delay beyond six months of the stipulated time for positioning of the regional/state specialists, consultants, support staff, the national program will intervene and ensure recruitment through central mechanism, in coordination with the ROH&FW in Guwahati, Shillong, Imphal, Kolkata, Bhubaneswar. While most of the positions will require full time commitments, part time technical assistance by experts (national/international) is also proposed under IMCP—II.

All newly recruited and continuing (from Round 4 GFATM project) consultants and support staff will be trained. They will be equipped with necessary IT and office automation support. Support for adequate

work space at regional, state, district levels will be ensured for maximum motivation and outputs. Provision for necessary travel for planning, implementation and M&E is also proposed under IMCP—II.

The PR2/SR will have national, regional level experts, project managers, support staff for providing requisite technical inputs, overall coordination, oversight, M&E. These teams will strategize and plan community level implementation with the PR1. The regional team will be based at Guwahati and will provide support to PR2/SR district teams in implementation as well as coordination with PR1 structures at primary care level. The PR2/SR regional team will also coordinate with the regional resource team and provide support, as necessary. No separate PR2/SR state teams are proposed. At district level, one district team comprising project officer and support staff will be responsible for two districts for implementation of identified activities. In case of districts, where the number of blocks proposed to be covered is low (only 1), no separate district team will be constituted but the team proposed for adjacent districts will manage all activities in such district in coordination with the parent organization (PR2/SR). Detailed TORs of the personnel/team will be finalized at the beginning of the project. The positions will be recruited through the PR2/SR mechanisms in consultation with each other and with PR1. All newly recruited positions will be trained. They will also be equipped with necessary IT and office automation support. Provision for adequate work space will be ensured for maximum motivation and outputs.

Thus, the activities will be:
--PR1 support:
4.1.1a Technical Assistance (TA) through WHO to PR1 at national level
4.1.1b National level team for technical and management assistance, M&E assistance, planning and administration assistance with PR1
4.1.1c Regional resource team with PR1 (for NE region in Assam)
4.1.1d State level team for technical and management assistance, M&E assistance, planning and administration assistance with PR1
4.1.1e District level for technical and management assistance, M&E assistance, planning and administration assistance with PR1
4.1.1f Sentinel surveillance team in sentinel surveillance sites (in health units with public and private sector including PR2) [nodal officer, lab technician]

--PR2 support
4.1.1g National level team for technical and management assistance, M&E assistance, planning and administration assistance with PR2 & SRs
4.1.1h Regional level team for technical and management assistance, M&E assistance, planning and administration assistance with PR2 & SRs
4.1.1i District level team for technical and management assistance, M&E assistance, planning and administration assistance with PR2 & SRs (one team for 2 districts—24 teams in 49 districts)

All these teams will be trained as per NVBDCP operational manual. Details of trainings, related activities and main implementing entity are given under objective 5 and SDA 5.1.

Summary of activities under SDA 4.1 disaggregated by implementing entity:

SDA	Key activity	Implementing entity
SDA 4.1: HSS: Health workforce	Activity 4.1.1: Recruitment of teams of experts, consultants, malaria technical supervisors, other staff for technical and management assistance, M&E, and planning and administration [Reference no. 4.1.1a; 4.1.1b(i) to 4.1.1b(xii); 4.1.1c(i) to 4.1.1c(ix); 4.1.1d(i) to 4.1.1d(xv); 4.1.1e(i) to 4.1.1e(x); 4.1.1f(i) to 4.1.1f(iii); 4.1.1g(i) to 4.1.1g(xxii); 4.1.1h(i) to 4.1.1h(xvi); 4.1.1i(i) to 4.1.1 (ix)]	PR1, PR2

Targeted output: Teams of program/project teams for technical and management assistance, M&E assistance, planning and administration are positioned at various levels, as planned.

Targeted outcome: Well designed planning and efficient implementation of the program; achievement of proposed targets in the performance framework

SDA 4.2: HSS: Information system (M&E/MIS)

Target population/group: Program/project personnel with PR1 and PR2 at all levels; sentinel surveillance site personnel; research/other institutions (for surveys, operational research)

Activity 4.2.1: Regional consultation for consolidation and fine tuning of one M&E plan (Reference no. 4.2.1): Stakeholder consultation at regional level will be organized to discuss the one M&E plan as well as NAMMIS in Year 1. The participants will also be apprised about the performance framework of the Round 9 project including the indicators and targets that will be monitored by GFATM. A few additional process, output indicators and targets will be agreed for rigorous monitoring of state/district performance by the national program. Further, M&E guidelines, supervisory checklists as well as the M&E systems strengthening tools of GFATM will be discussed to ensure a robust M&E system. The PR2 will need to be present in this consultation to deliberate on alignment. The one M&E plan will be discussed annually during review meetings at state levels (mentioned below).

As mentioned, PR1 is now applying the revised NAMMIS with funding from domestic and World Bank sources. Through the regional consultation, the participants will be apprised about the guidelines, formats, as well as planned trainings/capacity building for NAMMIS.

Activity 4.2.2: Integration of M&E plan and performance monitoring for PR2 (Reference no. 4.2.2a, 4.2.2b): As already mentioned, both PR1 and PR2 will follow one M&E plan for technical reporting. However, once the project is approved, PR2 will have to generate quarterly/annual performance reports on indicators delineated for them within the overall performance framework of the Round 9 GFATM project and submit to GFATM, LFA. Hence, the PR2 will also generate relevant data related to PR2/SR performance indicators, while feeding information on cases, deaths, services provided (example, LLIN distributed, RDT/ACT used, etc) to appropriate reporting level and authority under PR1 using NAMMIS. The M&E systems strengthening tools of the GFATM will be employed by PR2 as well. Further, PR2/SR planning and management will also be brought under an M&E/MIS framework for effectiveness. For PR2, the M&E/MIS will be managed by the Futures Group—SR. They will set up a MIS for capturing data on their performance indicators, planning and management processes and systems, analysis and feedback.

Subsequent to the above-mentioned consultation by PR1 (see Activity 4.2.1), the PR2 will organize a consultation in Assam state to discuss the one M&E plan, performance indicators, targets, supervisory checklists, MIS formats with their stakeholders. The PR1 representative(s) will need to be present to guide on alignments, etc.

Thus, the activities will be:
4.2.2a Integration of M&E plan and performance monitoring for PR2: Consultation
4.2.2b Development of MIS for PR2 performance reporting, analysis, and feedback to GFATM/stakeholders

Activity 4.2.3: Printing and dissemination of M&E/MIS plan, guidelines, formats, checklists (Reference no. 4.2.3a, 4.2.3b): Following the consultation, the M&E/MIS plan, guidelines, formats; checklists will be disseminated to stakeholders till village level. Electronic copies will be shared up to the district level by the centre. This will be followed by printing, dissemination at local levels.

Thus, the activities will be:
4.2.3a Printing, dissemination of M&E/MIS plan, guidelines, formats; checklists to PR1 stakeholders
4.2.3b Printing, dissemination of M&E/MIS plan, guidelines, formats; checklists to PR2 stakeholders

Activity 4.2.4: Training on M&E (Reference no. 4.2.4): Training is a critical element of M&E. Such trainings of PR1 and PR2/SR personnel will be organized at different levels.

Details of trainings, related activities and main implementing entity are given under objective 5 and SDA 5.1.

Activity 4.2.5: Supervision and monitoring (Reference no. 4.2.5a, 4.2.5b, 4.2.5c, 4.2.5d, 4.2.5e, 4.2.5f, 4.2.5g): Supervision and monitoring by national, regional, state, district team personnel will be planned. Norms and checklists for supervision at all levels as defined in operational manual (11.4-5) and annexures

therein at K-13-14, 18-20) [Annexure 6] will be used. Whenever possible, PR1 representatives will join PR2 monitoring activities and vice versa.

It may be noted that many supervision and monitoring activities by program officials are part of regular program operations and will be funded through domestic sources.

Thu, the activities will be:
4.2.5a Supervision and monitoring visits by PR1 national team in PR1 areas
4.2.5b Supervision and monitoring visits by PR1 regional team in PR1 areas
4.2.5c Supervision and monitoring visits by PR1 state team in PR1 areas
4.2.5d Supervision and monitoring visits by PR1 district team—VBD project officer/MTS in PR1 areas
4.2.5e Supervision and monitoring visits by PR2 national team in PR2 areas
4.2.5f Supervision and monitoring visits by PR2 regional team in PR2 areas
4.2.5g Supervision and monitoring visits by PR2 district team in PR2 areas

Activity 4.2.6: Planning and review meetings related to GFATM project implementation, performance framework (Reference no. 4.2.6a, 4.2.6b, 4.2.6c, 4.2.6d, 4.2.6e): Program/project planning and review meetings with stakeholders will be organized periodically to discuss progress made, gaps, future planning vis-à-vis the performance framework. At the national and state levels, the frequency of planning and review meeting by PR1 will be annual, while at district level, such meetings will be organized quarterly. These review meetings will include project partners, concerned stakeholders.

The PR2 will also conduct planning and review meetings with their regional team and SRs annually at national level. At the district level, such meetings will be held quarterly. These review meetings will include PR1 representatives.

Thus, the activities will be:
4.2.6a Annual planning and review meeting at national level with regional, state teams, other stakeholders--PR1
4.2.6b Annual planning and review meeting at state level with districts, other stakeholders--PR1
4.2.6c Quarterly planning and review meeting at district level with stakeholders--PR1
4.2.6d Annual planning and review meeting at national level with regional team, SRs, other stakeholders--PR2
4.2.6e Quarterly planning and review meeting at district level with stakeholders--PR2

Activity 4.2.7: Lot quality assurance sampling (LQAS) [Reference no. 4.2.7]: LQAS will be established in each high risk district to track coverage and use of LLIN, RDT and ACT at PHC/block/sector level on an annual basis. It will also be used to assess IRS coverage. LQAS is a rapid survey method used by district managers (with MTS doing the field-work, data analysis and report preparation) to determine whether a block is reaching established targets for key program indicators. The same data can be used to calculate point estimates for outcome indicators for district and state levels. Data for a decision-making component will be established to determine underlying program problems identified with LQAS. All data will be used during annual work planning sessions to restructure and improve the program, as well as to set targets for the subsequent years. For LQAS, MTS will be provided transport (motorcycle). Further details are mentioned the operational manual.

Training of MTS in LQAS will start with World Bank and DFID support in Orissa in 2009. By 2010, MTS in all WB supported districts will have been trained and at least by 2011, it will be possible to start this training in Round 9 GFATM supported districts.

Activity 4.2.8: Large scale population and household surveys (Reference no. 4.2.8): Standard large scale surveys (modified from the RBM-MERG MIS) will be conducted in project districts in 2011, 2013 and 2014. They will provide data on vector control coverage and coverage by early diagnosis and prompt appropriate treatment as well as on reach of BCC activities. Random cluster sampling will be used for surveys. A baseline survey is being carried out in 2009 under the Round 4 GFATM project by NIMR. The scope of proposed surveys, when finalized will be published and institutions will be invited to bid. Proposals will be reviewed by at least two external reviewers and a committee comprising NVBDCP, WHO, World Bank.

Activity 4.2.9: Evaluation by independent agency (Reference no. 4.2.9): From time to time the national program has been evaluated by independent agency. Independent evaluation is proposed at the end of Year 2 and Year 4 of the GFATM Round 9 project period. The scope of evaluation, when finalized will be published and institutions will be invited to bid. Proposals will be reviewed by at least two external reviewers and a committee set up by NVBDCP, WHO, World Bank.

Activity 4.2.10: Joint program review by a mission (Reference no. 4.2.10): The national program--NVBDCP was assessed by a Joint Monitoring Mission (JMM) in 2007 comprising national and international experts from different fields. This proved to be quite valuable for program improvement. Joint program performance review by a mission will be arranged in Year 2 and Year 5 by NVBDCP in collaboration with the PR2, which will include desk review, field missions, etc. The mission members will include national and international experts. The mission will be financed jointly by World Bank and GFATM Round 9 funding. The organization of this activity will be done by the WHO. Prior to the mission visit, program/project personnel, consultants will undertake detailed data collation and analysis.

Activity 4.2.11: Production of annual program report and dissemination to stakeholders (Reference no. 4.2.11): The program proposes to undertake generation of an annual report along the lines of annual report of NRHM. The annual report will be printed and disseminated to various stakeholders.

Activity 4.2.12: Operational Research (Reference no. 4.2.12): Program relevant applied field/operational research activities, especially in the NE region are planned. The research agenda, when finalized will be published and research institutions will be invited to bid. Priority will be given to existing institutions in the NE region including the Regional Resource Centre, without going through the bidding process. Proposals will be reviewed by at least two external reviewers and a committee comprising NVBDCP, NIMR, RMRC, and WHO, experts. Certain proposed areas are:

- Drug quality monitoring system for antimalarials used in government sector and available in market
- Treatment seeking behaviour
- Treatment practices in private sector
- Use of mosquito nets by mobile population groups
- Sensitivity, specificity, practicality and end-user acceptability of to-be-procured pan RDTs
- Trials of different BCC approaches for specific ethnic minorities
- Monitoring entomological factors, especially biting time in areas with high LLIN coverage
- Screening of migrants as part of border malaria control
- Mobile health volunteers as part of small mobile groups
- Acceptability and effectiveness of special vector control methods for mobile groups such as repellents and hammock-nets.
- Reimpregnation of polyester LLIN in good condition that have lost chemical efficacy

Activity 4.2.13: Sentinel surveillance (Reference no. 4.2.13a, 4.2.13b, 4.2.13c, 4.2.13d): Sentinel surveillance will be established/strengthened in the project areas in a staggered manner based on number of districts and size of population and capacity of the system. Health institutions with in-patient facilities in public and private sector at district level will be identified for the purpose (including health units with PR2 consortium, if all requisite criteria are being met by those institutions). All NE states will start with a few sites: in Arunachal Pradesh (1), in Assam (4), in Manipur (2), in Meghalaya (2), in Mizoram (1), in Nagaland (1), in Tripura (2). The number of sites will be scaled gradually in NE districts, as the health systems improve. After two years of implementation in phase 2, it is proposed to establish two sites in each project district. In each site, staff for the purpose will be identified/positioned and trained.

The sentinel sites will manage the severe malaria cases as well as report cases, deaths to the public sector. This information will be then input into the strengthened NAMMIS and analyzed. A format for data capture and standardized output has already been created in NAMMIS. The detailed data will capture trends on in-patient malaria cases, severe malaria, and malaria deaths.

Thus, the activities will be:
4.2.13a Training of medical, paramedical personnel in sentinel sites *(details are presented under objective 5 and SDA 5.1)*
4.2.13b Sentinel surveillance support for reporting of severe malaria cases and deaths *(details are presented under objective 4 and SDA 4.1)*

The NVBDCP in collaboration with NIMR has developed protocols for monitoring of parasite and vector resistance; quality assurance of RDTs and pharmacovigilance for anti malarial medicines; etc. A pilot on pharmacovigilance (cohort event monitoring--active surveillance of Adverse Drug Reactions) is already planned through NIMR. Strengthened coordination and capacity building related to spontaneous Adverse Drug Reaction (ADR) reporting of antimalarials are also planned and the NIMR, DCGI, country's pharmacovigilance centres, experts are proposed to be involved. These activities will be funded through domestic and/or other external source (World Bank) of funding, also for the IMCP II districts. Revamping of NAMMIS is being undertaken with funding from World Bank as well. The national program's web based NAMMIS is being strengthened throughout the country with funding from the World Bank and domestic sources. In addition to systems strengthening, this also includes capacity building of various personnel.

Summary of activities under SDA 4.2 disaggregated by implementing entity:

SDA	Activity	Implementing entity
SDA 4.2: HSS: Information systems (M&E/MIS)	Regional consultation (in Assam) for consolidation and fine tuning of one M&E plan (Reference no. 4.2.1)	PR1
	Activity 4.2.2: Integration of M&E plan and performance monitoring for PR2 (Reference no. 4.2.2a, 4.2.2b)	PR2
	Activity 4.2.3: Printing and dissemination of M&E/MIS plan, guidelines, formats, checklists (Reference no. 4.2.3a, 4.2.3b)	PR1, PR2
	Activity 4.2.4: Training on M&E (Reference no. 4.2.4)	PR1, PR2
	Activity 4.2.5: Supervision and monitoring (Reference no. 4.2.5a, 4.2.5b, 4.2.5c, 4.2.5d, 4.2.5e, 4.2.5f, 4.2.5g)	PR1, PR2
	Activity 4.2.6: Planning and review meetings related to GFATM project implementation, performance framework (Reference no. 4.2.6a, 4.2.6b, 4.2.6c, 4.2.6d, 4.2.6e)	PR1, PR2
	Activity 4.2.7: Lot quality assurance sampling (LQAS) [Reference no. 4.2.7]	PR1
	Activity 4.2.8: Large scale population and household surveys (Reference no. 4.2.8)	PR1
	Activity 4.2.9: Evaluation by independent agency (Reference no. 4.2.9)	PR1
	Activity 4.2.10: Joint program performance review by a mission (Reference no. 4.2.10)	PR1
	Activity 4.2.11: Production of annual program report and dissemination to all stakeholders (Reference no. 4.2.11)	PR1, PR2
	Activity 4.2.12: Operational Research (Reference no. 4.2.12)	PR1, PR2
	Activity 4.2.13: Sentinel surveillance (Reference no. 4.2.13a, 4.2.13b, 4.2.13c, 4.2.13d)	PR1

Targeted output: Number of quarterly performance reviews; Number of annual performance reviews; establishment of sentinel surveillance sites

Output indicator (as in the performance framework—Attachment A):

Output indicator	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5
Number of supervisory visits to periphery by District VBDCP (Malaria) Officer (program/project) in a quarter and report submitted to state program officer/district chief medical officer	0	110	225	240	240	240

Note: For internal M&E purpose, additional output indicators will be developed, as the project starts apart from the indicator mentioned in the GFATM performance framework]

Targeted outcome: Quality services available. The expected outcome of establishing sentinel site will include report generation and dissemination of data on severe malaria cases and deaths.

SDA 4.3: Coordination and partnership development (community/public-private, national, international

Target population/group: Relevant departments within the MOH&FW, non health ministries and departments, Armed and Paramilitary forces, NGO/FBO/private sector

There is a need for giving renewed impetus to inter-sectoral collaboration in malaria control. This requires sustained advocacy efforts. Inter-sectoral collaboration is considered particularly useful in the NE region, with the tea estates/associations, armed and paramilitary forces, tribal welfare departments, etc. The PR1 and PR2 regional teams supported by the Regional MOHFW office and with the collaboration of UNICEF and other active partners in the region should be able to establish collaboration with some of these entities for service provision adapted to the needs of particular groups and particular economic activities. In some cases, it may also be possible to establish collaboration on environmental management, though this has a limited role in relation to local vectors. Inter.sectoral consultations and meetings are therefore, proposed at national level in the beginning of the project to strengthen the advocacy efforts, since most the organizational headquarters are located in Delhi. Subsequently, regional consultations and one on one meetings are planned.

Activity 4.3.1: National level consultation on coordination and partnership building with other departments/programs of MOH&FW, non-health ministries/departments, NGO/FBO, private sector, etc (Reference no. 4.3.1): A national level consultation with other departments of MOH&FW, non-health government departments, NGO/FBO, private sector, etc for coordination and partnership building is proposed in Year 1 in the beginning of the project. This will serve as an advocacy platform. Coordination and partnership recommendations will be documented and shared with all stakeholders. Program policy (including national drug policy and other policies, work place policy), guidelines, modules, annual reports, newsletters, etc. will be disseminated. An Action Plan will be prepared and followed up with each department/organization individually thereafter. Simultaneously, identification and mapping of organizations in NGO/private sector especially in high risk areas who are already engaged in malaria control or facing constraints on account of the disease will be undertaken by PR1 in coordination with PR2, SRs, states, etc. This list will be updated as phase 2 of the project starts.

Activity 4.3.2: One on one meeting with Armed and paramilitary forces, other non health ministries/departments including Ministry of Tribal Affairs, Environment & Forestry, Education, Women and Child Development, Industries, Labour, Transport; as well as Municipal Corporations, private sector (example, TATA Steel, Bharati Airtel, Reliance), public sector undertakings (example, SAIL, Coal India, ONGC), NGO/FBO for partnership and MOU under Public Private Partnership (Reference no. 4.3.2): One on one discussion with the participating organizations at national level at their headquarters/parent organization (if an organization has such structure) and/or at regional level is proposed following the above consultation. These meetings may lead to collaboration on an informal basis, or MOUs under Public Private Partnership. Such collaboration would consist, for example, a jointly funded training plan for health care staff in a tea estate, where the training would be provided by NVBDCP and its partners, or an agreement for provision of malaria control services to a particular population group with commodities provided by NVBDCP.

Organization(s) will be encouraged to sign MOU towards building a long term partnership. The partnership will be positioned as a mutually beneficial proposition to both organizations. Guidance will be drawn from the existing Public Private Partnership guidelines. Subsequently, nodal officers/consultants from both NVBDCP and partner organization will customize an action plan for integrating malaria control within existing programs and/or initiate activities, as needed and practicable within the overall framework of NVBDCP and the concerned department/organization. The action plan will include implementation responsibilities and mechanisms as well as resource sharing (infrastructure, personnel, knowledge and technical expertise, etc). Establishment of a reporting system with partner organization and integration under NAMMIS will also be planned. The national M&E plan will include M&E of inter-sectoral collaboration. Further, the training needs will be assessed. As already mentioned under objective 4, SDA 4.1, trainings of personnel with partner organizations with domestic funding will be undertaken, as needed. However, such trainings will be funded through domestic sources.

Activity 4.3.3: Inter ministerial meeting on observance of anti-malaria month (Reference no. 4.3.3): At the national level, efforts will be made to organize a meeting either prior to or in the month of June—the Anti Malaria Month chaired by the Honourable Prime Minister of the GOI. The participants will include Honourable Minister for Health & Family Welfare, Honourable Minister of State for Health & Family Welfare,

Honourable Ministers from other ministries relevant for malaria control (as mentioned above). At the end of the meeting, the Honourable Prime Minister may issue a statement. In this meeting, chambers of commerce, NGOs/corporate houses, international partners are proposed to be invited. This meeting will be planned with the domestic budget.

Activity 4.3.4: Regional level workshop on inter-sectoral coodination and partnership building with non-health ministries/departments, NGO/FBO, private sector, PSU, etc (Reference no. 4.3.4): A regional level workshop for intersectoral coordination and partnership building will be organized in NE region (Assam state) in year two of the project as a follow up of the national level efforts in Year 1 at local level. If required, further one on one meetings with various organizations will continue.

Activity 4.3.5: Inter country meeting on border malaria issues (Reference no. 4.3.5): Border malaria issues are considered critical in view of coordinated program planning and implementation in the border areas. An inter-country meeting is proposed in Year 1 in India. Such issues as, cross border migration, drug resistance etc will be included in the agenda. This activity will be managed and coordinated by the WHO.

Activity 4.3.6: Development & dissemination of newsletters (Reference no. 4.3.6): It is proposed to issue a newsletter twice annually. This will be coordinated and managed by PR2. However, PR1, states/districts, the regional resource team in the NE region, others will provide guidance and technical inputs and will be part of the editorial board. Other stakeholders will also be involved. The newsletters will act as advocacy tool in addition to providing updated information on malaria prevention and treatment; as well as program/project experiences, surveillance and M&E information, events, future plans, etc. Case studies from remote regions will also be included, which otherwise remain unknown in general. This will be distributed widely by various means of communication--electronic mail/courier/post, etc. besides posting on the websites of PR1, PR2, SRs, partners. It will be shared with all of India's state VBDCPs, who may eventually emulate it.

Summary of activities under SDA 4.3 disaggregated by implementing entity:

SDA	Key activity	Implementing entity
SDA 4.3: Coordination and partnership development	Activity 4.3.1: National level consultation with non-health government departments, NGO/FBO, private sector, etc for coordination and partnership building (Reference no. 4.3.1)	PR1
	Activity 4.3.2: One on one meeting with Armed and paramilitary forces, other organizations including Ministry of Tribal Affairs, Environment & Forestry, Education, Women and Child Development, Industries, Labour, Transport; as well as Municipal Corporations, corporate sector (example, TATA Steel, Bharati Airtel, Reliance), public sector undertakings (example, SAIL, Coal India, ONGC) for MOU under Public Private Partnership (Reference no. 4.3.2)	PR1
	Activity 4.3.3: Inter ministerial meeting on observance of anti-malarial month (Reference no. 4.3.3)	PR1
	Activity 4.3.4: Regional level consultation with non-health government departments, NGO/FBO, private sector, etc for coordination and partnership building [Reference no. 4.3.4]	PR1
	Activity 4.3.5: Inter country meeting on border malaria issues [Reference no. 4.3.5]	PR1
	Activity 4.3.6: Development & dissemination of newsletters (Reference no. 4.3.6)	PR2

Targeted output: Formal partnership established with an organization or organizations and MOU signed; inter—country meeting held to discuss border malaria issues.

Output indicator (as in the performance framework—Attachment A):

Output indicator	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5
Number of MOU signed with partner/stakeholder organization (NGO/private sector, non health	0	0	2	3	5	7

ministries/departments, others) [cumulative]						

Note: For internal M&E purpose, additional output indicators will be developed, as the project starts apart from the indicator mentioned in the GFATM performance framework]

Targeted outcome: Joint program planning and implementation in malaria endemic areas with non health/other organizations; inter—country coordination to tackle the border malaria issues.

Objective 5. To strengthen health systems through training, capacity building to improve service delivery in project areas.

Policy and strategy

Under the national program, needs and capacity of the medical, paramedical personnel, volunteers in public and private sector are assessed and trainings, re-reorientations are regularly organized. The national strategic planning entails: centralized training plan and SOPs based on needs assessment; customized training modules for different target groups—technical specialists, personnel, volunteers; national and sub-national job-specific training courses for new recruits; national and sub-national refresher training courses for in-service personnel, volunteers.

Trainings are planned as ongoing program with in-built provision for knowledge and skills update in the light of technical advances. The trainings generally follows a cascading model with three main tiers: district level, where specialist knowledge on malaria and its control must be present; intermediate levels, where capacity for generic public health functions including planning, training, supervision and monitoring is required, and the service delivery level, where skills for dealing with patients and managing small health care facilities are expected. It is recalled that the Indian district typically has a population of 1 million (up to 2 million) and would therefore resemble what is called a province in many other countries. For ASHAs, MTSs, VBD consultants/project officers, etc. who are newly introduced, preference is given to their technical training related to respective job duties. NVBDCP, in collaboration with the Public Health Foundation of India (PHFI) has established a comprehensive three-month course for VBD consultants/project officers being recruited to work at district and state levels. These consultants have been recruited under the World Bank project and training is ongoing. Such manpower is proposed in the Round 9 project and similar training is planned. Further, training of concerned personnel is also planned for efficient project planning and management including supply chain management, as per new NVBDCP guidelines.

Other ongoing training activities include: Training course on NAMMIS for state and district level staff; training course on LQAS that has been piloted for MTS in Orissa (once LQAS training is finalized, it will be integrated with the general training and annual training for MTS).

Trainings of private sector care providers is included in the Round 9 proposal, since around half of the population in endemic areas is accessing such care (JMM, 2007). This is planned through the Futures Group International India Pvt Ltd in active collaboration with Voluntary Health Association of India (VHAI) and others. These organizations are part of the NGO/FBO/private sector consortium led by Caritas India as SRs and necessary experience.

The available guidelines and training modules with NVBDCP include (Annexure 8):

- Operational manual for malaria control in high-burden areas including complete set of monitoring instruments
- Training module for Malaria Technical Supervisors
- Training module for Multipurpose Health Workers
- Training Module on Malaria for ASHAs
- Training Module for MO-PHCs
- Malaria treatment guidelines for medical officers in Public and Private sector
- Standard operating procedures (SOPs) for quality assurance of RDTs

At the national level, a resource pool of trainers will be created comprising NVBDCP senior staff, WHO, GFATM and World Bank consultants, PR2 experts and consultants, other multidisciplinary experts from various institutions, who on rotation will be trainers for national level trainings. Although this national level

resource pool will be available for state level trainings, the states will also be encouraged to draw a list of locally experienced trainers, who will be the part of the state resource pool of trainers. The proposed regional resource team will also be involved in trainings, once the proposed specialists are recruited. The state level trained personnel, consultants; regional team, in turn, will impart trainings to the district level personnel, and so on. Specialized trainings for personnel, consultants like District Malaria Officer, VBD (Malaria) project officer, and MTS are planned in regional/national technical institutions, including the Public Health Foundation of India (PHFI)—an institution of repute for capacity development in public health domain. Training on planning and management is planned for the national level program officials/consultants in country's premier management institutions.

The government training institutions like National Institute of Health & Family Welfare (NIH&FW), State Institute of Health & Family Welfare (SIH&FW) are conducting induction and refresher trainings of newly recruited health care staff/ASHA, lab technicians under NRHM that includes modules on various diseases, RCH, etc. These institutions as well as local medical colleges and private/NGO training institutions will be consulted for creating the resource pools of trainers, customization/translation of training modules of ASHA, etc. In addition to these institutions, the proposed regional resource centre will act as training centre and training coordinator in the NE region, in addition to other roles, once it is established.

The training in this project will impart, update and refresh knowledge and skills in case of the newly recruited contract staff and will also ensure that the existing staff can discharge the new responsibilities as identified above. As much as possible, the project trainings will follow existing NVBDCP plan and timeframe delineated in the operational manual. The trainings will be conducted according to the NVBDCP operational manual--chapter 7 (especially 7.6--training norms) [Annexure 6]. The existing training modules for specific trainee categories available with the program will be utilized or reviewed/updated, as necessary (example, a training module for private sector care providers will be prepared to complement the recently prepared guidelines for this group—Annexure 6).

All training activities will have training objectives; follow standardized approaches and methods including active learning/field exercises, and pre-and post- assessments. A standardized format will be used to establish a database for training activities carried out including facilitators, participants and results of pre- and post- assessment of and by the participants.

M&E of training will also be integrated in the overall one M&E framework.

SDA 5.1: HSS: Human Resources: Training/Capacity building

Target population/group: Program/project personnel; medical, paramedical personnel, volunteers in public and private sector; personnel with partner organizations, NGOs/private sector

Activity 5.1.1: Induction training of national, regional, state, district level teams for Round 9 project technical and management assistance, planning and administration, M&E with PR1 and PR2 (Reference no. 5.1.1a, 5.1.1b, 5.1.1c): This will be a one-off activity in Year 1. The trainings for the national, state teams with PR1 will be held at national level on technical and management assistance, planning and administration, M&E. Apart from this, trainings for the newly recruited district team personnel, namely comprising district VBD (Malaria) project officer, malaria technical supervisor will be conducted separately in technical institutions (further details are provided below).

Both PRs will have to generate performance reports periodically and submit to GFATM as mentioned earlier. Hence, induction trainings will be conducted the PR2/SR recruits in Year 1. An important module will be M&E. Although the PR2 will follow the one M&E system, information collection and aggregation, transmission to appropriate reporting level and authority of the national program (PR1), report generation, etc for PR2 will be required in addition to relevant data generation, analysis for PR2 performance indicators within the overall performance framework of the Round 9 GFATM project. Further, PR2/SR planning and management, finance and accounting, will also be brought under the M&E/MIS framework. The Futures Group—a Round 9 SR will plan, coordinate and manage the training on M&E for PR2. The PR2 will have their own resource pool of trainers, but also draw from the pool of trainers available with the PR1, especially on malaria related technical aspects.

Objective: To impart knowledge national, regional, state, district level teams about their new roles and

responsibilities, and apprise them about the norms of the national program operational manual related to broad technical and management aspects including supply chain management; and training, BCC activities, M&E.
Timeline: Year 1
Number of training workshops (PR1): 2 for national, state level teams at national level [the trainings for district level personnel--VBD project officer, MTS are presented separately]
Number of training workshops (PR2): 1 for national, regional level teams at national level; 2 for district level teams at state level
Duration: 5 days
Implementation level/venue: National level; state level institution
Participants per workshop: 25
Facilitators: 4-5 per workshop from the national/state pool of trainers

The training of secretarial assistant cum data entry operator at district level will be provided training during the ongoing refresher trainings on NAMMIS at state level through domestic funding.

Thus, the activities will be:
5.1.1a Induction training of national, state teams of PR1 at national level
5.1.1b Induction training of national, regional level teams of PR2/SRs at national level
5.1.1c Induction training of district level teams of PR2/SRs at regional level

Activity 5.1.2: Refresher training of national, regional, state, district level teams for Round 9 project technical and management assistance, planning and administration, M&E with PR1 and PR2 (Reference no. 5.1.2a, 5.1.2b, 5.1.2c): One day refresher training of the teams will be planned in Year 3. The refresher trainings will be planned together with the scheduled annual planning and review meetings.

Objective: To update national, regional, state, district level teams on the norms/policy of the national program related to technical and management aspects including supply chain management; and training, BCC activities, M&E.
Timeline: Year 3
Number of training workshops (PR1): 2 for national, state level teams at national level; [the trainings for district level personnel--VBD project officer, MTS are presented separately]
Number of training workshops (PR2): 1 for national, regional, state level teams at national level; 2 for district level teams at state level
Duration: 2 days
Implementation level/venue: National level; state level institution
Participants per workshop: 25
Facilitators: 4-5 per workshop from the national/regional/state pool of trainers

The training of secretarial assistant cum data entry operator at district level will be organized with the data entry operators who are given refresher trainings on NAMMIS at state level through domestic funding.

Thus, the activities will be:
5.1.2a Refresher training of national, regional, state level teams of PR1 at national level
5.1.2b Refresher training of national, regional level teams of PR2/SRs at national level
5.1.2c Refresher training of district level teams of PR2/SRs at regional level

Activity 5.1.3: Training of national level program personnel, consultants with PR1 co-managing GFATM grant on management (Reference no. 5.1.3): It is proposed that the national level program personnel, consultants co-managing GFATM grant will be trained on planning and management, since such skill development is a necessity for strategic planning and management of the grant. Besides, these enabled personnel, consultants will sensitize the state/district levels on improving planning and management.

Objective: To capacitate national level program personnel, consultants co-managing GFATM grant on planning and management skills.
Timeline: Year 1
Duration: 7 days
Implementation level/venue: In country premier management institutions

Participants per workshop: 15
Facilitators: Senior professionals in premier management institutions

Activity 5.1.4: Induction training of District VBD (Malaria) project officer (Reference no. 5.1.4): Because of the many vacant district VBD officer posts in the public health system, district VBD (Malaria) project officers are positioned to strengthen planning, implementation and M&E elements at district/sub-district level. [Some districts under the World Bank support have already contract-recruited district VBD (malaria) project officers and then provided induction training by PHFI]. Positioning of this cadre is proposed in the Round 9 proposal in project areas. Immediately after recruitment, they will undergo induction training.

Objective: To capacitate District VBD (Malaria) project officers on public health, malaria control, planning and management, training, supply chain, M&E, program norms.
Timeline: Year 1
Duration: 3 months
Implementation level/venue: External agency--PHFI at national level
Participants per workshop: 25
Facilitators: PHFI professionals

Activity 5.1.5: Refresher training of District VBD (Malaria) Project Officer (Reference no. 5.1.5): Refresher training for district VBD (Malaria) officer is planned from Year 2 every year as per NVBDCP operational manual. In districts, where such position is vacant, new recruitment is proposed in Year 1. Like their older counterpart, this group will also receive refresher training as per NVBDCP operational manual from Year 2 onwards by trained national program/project personnel, consultants, experts.

Objective: To update District VBD (Malaria) officers on planning and management, training, supply chain, M&E.
Timeline: Year 2 through Year 5
Duration: 7 days
Implementation level/venue: Regional level institution
Participants per workshop: 25
Facilitators: National program personnel, consultants/experts; Regional resource team

Activity 5.1.6: Induction training of MTS (Reference no. 5.1.6): Presently, about 50% of foreseen MTS are in position (in proposed project area) to strengthen supervision and monitoring, surveillance at district/sub-district level having been recruited with Round 4 project funds. These personnel have been provided induction training by technical institutions at regional/state levels. In districts, where such position is vacant, new recruitment is proposed. Immediately after recruitment, they will undergo induction training as per NVBDCP operational manual in Year 1, Year 2 (beginning). In Year 2, this group will receive training on LQAS along with refresher training.

Objective: To capacitate MTS in basic malaria, public health and particularly supervision, surveillance and M&E.
Timeline: Year 1, Year 2
Duration: 10 days
Implementation level/venue: Regional/state level institution
Participants per workshop: 25
Facilitators: 4 per workshop from regional/state pool of trainers

Activity 5.1.7: Refresher training of MTS (Reference no. 5.1.7): Refresher training for in-position MTS is planned in Year 2 of the proposed project as per NVBDCP operational manual. During these trainings, LQAS will be an essential module.

Objective: To train MTS on LQAS and to update them on supervision, surveillance and M&E.
Timeline: Year 2
Duration: 5 days
Implementation level/venue: Regional/state level institution
Participants per workshop: 25
Facilitators: 4 per workshop from national/state pool of trainers

Activity 5.1.8: Refresher training of medical officers from referral health units on management of severe malaria (Reference no. 5.1.8)
Objective: To update the medical personnel in district hospitals, other referral health units with public and private sector, on management of severe malaria.
.
Timeline: Year 1, Year 3
Duration: 2 days
Implementation level/venue: Regional/state level institution
Participants per workshop: 25
Facilitators: 2 per workshop from medical colleges/state pool of trainers

Activity 5.1.9: Training of medical, paramedical personnel (LT) in sentinel surveillance sites on surveillance, data reporting/management (Reference no. 5.1.9): As already mentioned, sentinel surveillance will be strengthened in the proposed project areas and all NE states will start with a few sites [in Arunachal Pradesh (1), in Assam (4), in Manipur (2), in Meghalaya (2), in Mizoram (1), in Nagaland (1), in Tripura (2)]. In phase 2, it is proposed to establish two sites in each project district in NE region. In each site, one medical and one paramedical official will be identified/positioned and trained on surveillance data collection, reporting, management as per NVBDCP operational manual.

Objective: To capacitate the identified sentinel site staff on surveillance data collection, reporting, management
Timeline: Year 2, Year 4
Duration: 2 days
Implementation level/venue: Regional/state level institution
Participants per workshop: 30
Facilitators: 2 per workshop from national/regional/state pool of trainers

Activity 5.1.10: Refresher training of medical personnel at Block PHC/PHC/CHC levels; sub district health units with PR2 (Reference no. 5.1.10): Refresher trainings of medical personnel in PHCs/CHCs as well as in identified health units of PR2 will be conducted as per NVBDCP operational manual. Further refresher training will also be conducted during the project period.

Objective: To capacitate Block PHC/PHC/CHC and other health unit officers on malaria case management, current drug policy, reporting
Timeline: Year 2, Year 4
Duration: 3 days
Implementation level/venue: Regional/state level institution
Participants per workshop: 25
Facilitators: 2 per workshop from district management teams supported by state pool of trainers

Activity 5.1.11: Refresher training of laboratory technicians (LTs) [Reference no. 5.1.11]: Under the Round 9 project, it is proposed to organize trainings for LTs in 50% of CHC/PHC. All 62 LTs recruited with the Round 4 project grant will be included in these refresher training. A major focus will be on: new norms for microscopy quality assurance based on new WHO norms that are in the process of adaptation in India (with World Bank support), as well as all aspects of RDT work especially SOPs for quality control.

Objective: To train LTs (in district hospitals, other referral health units with public and private sector) including on QA for microscopy and RDTs modules.
Timeline: Year 1, Year 2
Duration: 10 days
Implementation level/venue: Regional/state level institution
Participants per workshop: 25
Facilitators: 2 per workshop from regional/state pool of trainers

Activity 5.1.12: Revisiting existing training modules for ASHA/volunteers, customization, translation, replication, and dissemination (Reference no. 5.1.12a, 5.1.12b): The PR2 consortium partner and SR—Voluntary Health Association of India (VHAI) will undertake review of existing training modules for ASHA, volunteers and customization, translation (in 15 languages), replication for PR1 and

PR2 areas, prior to the training. The PR1, PR2 and other SRs, state/district program officials and various experts in this domain (example, from NIH&FW, Department of RCH of GOI, etc) will be consulted, as necessary.

Thus, the activities will be:
5.1.12a Revisiting, customization, translation of existing training modules for ASHA/volunteers
5.1.12b Replication/dissemination of training modules for ASHA, volunteers

Activity 5.1.13: Training of ASHA/volunteers (Reference no. 5.1.13): Refresher training of ASHA/volunteers in PR1 and PR2 areas will be conducted on malaria case diagnosis (using RDT), treatment (using ACT), preventive interventions etc every year. The trainings will be conducted at block level by district level pool of trainers (including trained MO PHC, MTS, NGOs, etc).

Objective. To build capacity of ASHA/volunteer on case diagnosis and management using RDT/ACT and preventive interventions, especially LLIN distribution and follow-up, recording and reporting, BCC activities.
Timeline: Year 1 to Year 4
Duration: 2 days
Implementation level/venue: Block level institution
Participants per workshop: 25
Facilitators: 3 per workshop from district pool of trainers (especially medical officers trained as per 5.1.10.); trainers with PR2

Activity 5.1.14: Revisiting, customization and translation of existing guidelines for private sector service providers (Reference no. 5.1.14a, 5.1.14b): The PR2 consortium partner— Futures Group (SR) will undertake review of the guidelines and develop corresponding training modules, and subsequently customize, translate, replicate for PR1 and PR2 areas, prior to the training. The Voluntary Health Association of India (VHAI) [SR] will be actively involved in this activity.

Thus, the activities will be:
5.1.14a Revisiting, customization, translation (in 15 languages) of existing guidelines and development of training modules.
5.1.14b Replication/dissemination of these materials.

Activity 5.1.15: Mapping of private health care service providers; training of private sector service providers in PR1 and PR2 areas (Reference no. 5.1.15a, 5.1.15b): A consultation in NE region is proposed to bring together PR1, states, key NGOs/FBOs, etc to deliberate on this vital issue. This consultation will be planned with the proposed regional consultation related to BCC. Prior to the consultation, micro level information on all private (i.e. for profit) providers of curative care for malaria, including pharmacists and drug vendors will be gathered by the other NGOs/FBOs as well as the district level VBD and medical officers with the public sector. The deliberations will also focus on structure and content of training modules and modalities of trainings of private sector care providers. Subsequent to the consultation, data will be aggregated on private sector service providers at district/sub district levels. Particular attention will be given to villages with no ASHA.

Subsequently, training of the private sector service providers will be organized. The PR2 consortium partners already have experience in training the private sector service providers. It is expected that it will be possible to train about 50% of the private providers identified in each district. The trainers will be PR2 consortium partners and district VBD (malaria) officers (government or project) for both PR1 and PR2 areas. Separate trainings will be undertaken for qualified and non-qualified practitioners.

Objective. To build capacity of private sector service providers at district/block levels and at village level on case diagnosis and management using RDT/ACT as per national policy and preventive interventions, especially LLIN for message dissemination through IPC, recording and reporting.
Timeline: Year 2 to Year 5
Duration: 1 day
Implementation level/venue: Block level institution for village level providers; District level institution for district/block level providers;
Participants per workshop: 25
Facilitators: 3 per workshop from trainers with PR2 and district malaria officers (government or project)

Thus, the activities will be:
5.1.15a Mapping, training of private sector service providers according to qualifications at district level.
5.1.15b Mapping, trainings of private sector service providers according to qualifications at block level.

It is emphasized that prior to trainings in the beginning of the project, the PR1 will assess the human resource needs and capacity at various levels with domestic funding. In addition, induction and refresher trainings of (government) DMOs; multi purpose health workers/supervisors; as well as training of personnel with partner organization (on as needed basis), etc will be conducted by NVBDCP with domestic funding.

Summary of activities under SDA 5,1 disaggregated by implementing entity(s):

SDA	Activity	Implementing entity(s)
SDA 5.1: HSS: Human Resources: Training/Capacity building	Activity 5.1.1: Induction training of national, regional, state, district level teams for Round 9 project technical and management assistance, planning and administration, M&E with PR1 and PR2 (Reference no. 5.1.1a, 5.1.1b, 5.1.1c)	PR1, PR2
	Activity 5.1.2: Refresher training of national, regional, state, district level teams for Round 9 project technical and management assistance, planning and administration, M&E with PR1 and PR2 (Reference no. 5.1.2a, 5.1.2b, 5.1.2c)	PR1, PR2
	Activity 5.1.3: Training of national level program personnel, consultants with PR1 co-managing GFATM grant on management (Reference no. 5.1.3)	PR1
	Activity 5.1.4: Induction training of District VBD (Malaria) project officer (Reference no. 5.1.4)	PR1
	Activity 5.1.5: Refresher training of District VBD (Malaria) project officer (Reference no. 5.1.5)	PR1
	Activity 5.1.6: Induction training of MTS (Reference no. 5.1.6)	PR1
	Activity 5.1.7: Refresher training of MTS (Reference no. 5.1.7)	PR1
	Activity 5.1.8: Refresher training of district medical officer, medical officer from sentinel sites, other referral health units on management of severe malaria (Reference no. 5.1.8)	PR1
	Activity 5.1.9: Training of medical, paramedical personnel (LT) in sentinel surveillance sites on surveillance, data reporting/management (Reference no. 5.1.9)	PR1
	Activity 5.1.10: Refresher training of medical personnel at Block PHC/PHC/CHC levels; sub district health units with PR2 (Reference no. 5.1.10)	PR1
	Activity 5.1.11: Training of laboratory technicians (LTs) [Reference no. 5.1.11]	PR1
	Activity 5.1.12: Revisiting existing training modules for ASHA/volunteers, customization, translation, replication, and dissemination (Reference no. 5.1.12a, 5.1.12b)	PR2
	Activity 5.1.13: Training of ASHA/volunteers (Reference no. 5.1.13)	PR2
	Activity 5.1.14: Revisiting, customization and translation of existing training modules for private sector service providers (Reference no. 5.1.14a, 5.1.14b)	PR2
	Activity 5.1.15: Mapping of private health care service providers; training of private sector service providers in PR1 and PR2 areas (Reference no. 5.1.15a, 5.1.15b)	PR2

Targeted output: ASHA/volunteer, MTS, VBD (Malaria) Project officer, LT, medical/paramedical personnel trained and various program/project cadres are trained through training programs.

Output indicator (as in the performance framework):

Output indicator	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5
Number of ASHAs/volunteers trained (cumulative)	20,000	62,500	75,000	39,000	41,000	41,000

ROUND 9 – Malaria

Note: For internal M&E purpose, additional output indicators will be developed, as the project starts apart from the indicator mentioned in the GFATM performance framework]

Targeted outcome: Improved service delivery at village level; increase in case detection as fever cases access their services; increased community acceptance of preventive interventions; etc

4.5.2. Re-submission of Round 8 (or Round 7) proposal not recommended by the TRP
If relevant, describe adjustments made to the implementation plans and activities to take into account each of the 'weaknesses' identified in the 'TRP Review Form' in Round 8 (or, Round 7, if that was the last application applied for and not recommended for funding).

NVBDCP is re-submitting the Round 8 proposal in Round 9 with some modifications in scope and scale to sustain the progress made during Round 4 project, close the gaps and scale up for impact. The Round 9 proposal hence, is proposed as "IMCP—II". NVBDCP (PR1 in Round 8 and Round 9 proposal) and Caritas India (PR2 in Round 8 and Round 9 proposal) are in agreement regarding these explanations.

TRP Comments	How addressed in Round 9 proposal
The budget and work plan lack sufficient detail to gauge the feasibility of the activities	The work plan and the budget have been prepared in sufficient detail in the Round 9 proposal to facilitate gauging of feasibility of activities.
Insufficient detail is provided for many activities (e.g. SDAs under 2.7: consist predominantly of titles – this is 10 million Euro for strengthening Caritas, there is also 14.5 million Euro for strengthening the PMUs at the different levels again without sufficient detail and 10 of the 11 states are the same as those targeted in the existing Round 4 grant)	In the Round 9 proposal, the NVBDCP Technical and Management Assistance teams at national, regional, state, district levels have been rationalized. The personnel with mainly M&E responsibilities have been separated and placed under appropriate category (M&E). Likewise, the Caritas India Technical and Management Assistance teams at national, regional, district levels have also been rationalized and aligned with the NVBDCP structure. No state teams are proposed under Round 9. Also, one district team is now being proposed to manage two districts, as the population size is small.
Discrepancies exist between the text and the budget/workplan (e.g. no budget for activity 2.2, and SDAs 2.1, 2.2 and 2.4 are not included in the summary budget table)	This has been addressed by linking section 4.5.1--"Implementation strategy", the work plan and the budget. Identical reference number is given to a proposed activity in the proposal as well as work plan and budget table.
Unclear which RDT will be used – this was not addressed from previous TRP feedback	The national program presently advocates anti-malarial treatment only on the basis of a positive diagnosis. In villages where microscopy results are mostly not available within 24 hours, monovalent *Pf* RDTs are being used for diagnosis of Pf malaria. Specific and heat-stable *Pv* RDTs and multivalent RDTs (which detect and differentiate *P.falciparum* and *P. vivax*) are expected to be available by 2011-12. The Round 9 proposal takes this into account and proposes its inclusion in Year 2 of the project.
SDA 2.3.2 (net stitching and retreatment with unspecified synthetic pyrethroid) is not recommended. The cost/net when producing 1 million nets is 178€ (with 3 treatments) whereas an LLIN is budgeted at 200€. A more effective public health strategy would either enter into a commercial agreement to stitch nets using long-lasting insecticide impregnated netting, or would specify treatment of stitched nets using a long-	The bed net stitching component has been dropped completely and the program will be distributing only WHO recommended LLIN to the eligible population; which also meets the country technical specifications.

lasting treatment formulation thereby saving the cost of retreatment. The preferred approach would be to phase out conventional net retreatment and only distribute WHOPES recommended LLINs	
The detailed budget should be in the same unit of currency as the text	This has been ensured by providing all costs in US$.

4.5.3. Lessons learned from implementation experience

How do the implementation plans and activities described in 4.5.1 above draw on lessons learned from program implementation (whether Global Fund grants or otherwise)?

In the recent past the Ministry of Health through its National Vector Borne Disease Control Program (NVBDCP), which includes Malaria control, has undertaken two major projects through external funding: Enhanced Malaria Control Program (EMCP) supported by World Bank (1996-2005) and the ongoing GFATM IMCP (2005 -2010). Both have focused on areas with intense malaria transmission, high proportion of falciparum, high levels of chloroquine resistance, low population density and weak health services.

Various studies have been conducted to assess the program[11]. These together with experience of program staff have provided lessons, which are summarized below. For additional details, reference is made to the Strategic Action Plan.

Programmatic and Technical--

a. **Early diagnosis and prompt treatment** Fever treatment depots and drug distribution centres have facilitated access in some areas, but according to treatment seeking studies, they have been used little, probably because they only treat malaria, but possibly also because of the high attrition rate related to irregular payment of honorarium. There is therefore now a gradual re-orientation towards the ASHA (see glossary).

   Due to lack of sufficient microscopy centres at peripheries, collection of blood smears, transport to microscopy and reporting back leads to delayed treatment or non-treatment. This in turn resulted in increased morbidity. Also, quality assurance of microscopy was not satisfactory. In contrast, the feed-back from health staff in endemic districts indicates that RDTs are well accepted by providers and patients and make it possible to provide immediate effective treatment with ACTs. However, logistics for RDTs were not worked out properly from the start leading to a few instances, where batches had to be withdrawn as a result of improper storage. Guidelines on supply chain management and quality assurance have now been developed and their application is part of Round 9 planning.
   Faced with the worsening drug resistance and investigations indicating widespread irrational and ineffective antimalarial treatment in the private sector as a major contributory cause of death, it has been decided to introduce ACT treatment for falciparum malaria in all the 201 high-endemic districts and other areas, where chloroquine resistance has been documented, thus for over 90% of Pf cases in the country.

b. **Management and Coordination**: The districts which are the functional units often have limited capacities in planning, assessment, budgeting and monitoring This led to the creation of district level Project Management units (PMU) which today are becoming the mainstay of effective program management.

   Inadequate co-ordination within and beyond the health sector has led to poor planning, implementation and monitoring. The NRHM has addressed this with the formation of State and district level health missions (societies). These integrate all health programs, involve civil society and sometimes the private sector and promote inter sectoral co-ordination.

[11] WHO (2007). Joint Monitoring Mission for review of NVBDCP (2007). Unpublished Report, SEA-MAL 249, WHO/SEARO, New Delhi, 2007; National Institute for Malaria Research & National Vector Borne Disease Control Program (2007). In-depth Review on Malaria for National Vector Borne Disease Control Program 2006–07. National Institute for Malaria Research, New Delhi, 2007

c. **Mosquito nets**: Several million nets have been distributed in the past decade. The distribution has often been undertaken by NGOs and targeted to people below the poverty line. Targeting has therefore been inaccurate in relation to the malaria burden, it has not been monitored which populations were covered and it has been impossible to demonstrate impact. The coverage of re-treatment has varied from district to district. On the other hand NGOs have in many cases been successful in motivating populations for correct use of nets. This experience has led to a re-orientation towards LLINs (but continuation of re-treatment, where this has provided high coverage) and targeting and monitoring for 100% coverage in communities identified as ITN eligible.

d. **Lack of NGO and private sector participation** – The program has till now been primarily driven by the public health system. Though it has a large reach, the private sector including CBOs, NGOs and FBOs form an important service provider in treating cases of fever/malaria including severe malaria in endemic areas. The strength of this sector also lies in its presence in certain remote and inaccessible areas. NGOs are also in a good position to organize training courses for private sector providers. A recent study NIMR (unpublished) shows that artemisinin monotherapy is becoming widespread in the private sector, giving one more reason for prioritizing more intense articulation.

e. **Procurement:** Delay in procurement of supplies has hindered optimal performance of previous and current projects. Though capacities have increased substantially in distribution systems, procurement processes are being strengthened to manage legal outfalls and shorten delays. Meanwhile, the procurement process has been outsourced to external agencies to prevent programmatic delays. This will continue until internal capacities are competitively increased.

Human Resource related

The challenges related to shortage of personnel especially skilled personnel like doctors and lab technicians, male health workers, has resulted in poor coverage of underserved areas and underutilization of services. Most of the districts are located in difficult terrain. The situation has now improved with increased recruitment to vacant positions by the respective state governments like medical officers, lab technicians and MPWs. The National Rural Health Mission has facilitated recruitment of local volunteers, Accredited Social and Health Activists (ASHAs), who are paid a honorarium for their contribution. At present, of the nearly 96,000 villages proposed under Round 9, trained ASHAs exist in around 15-20% of villages.

Monitoring and Evaluation

The existing system for M&E provides data on case management activities, surveillance coverage and basic malaria surveillance as well as IRS coverage. It is wholly inadequate in relation to human resource situation, ITNs and detailed coverage data for such tools as RDTs and ACT. As a result, the reporting which it has been possible to provide to the GFATM, although providing output data has not allowed the program to learn about the community coverage or impact (or lack thereof) of the new interventions. With the support of consultants from WHO (funded by GFATM) and the World Bank as well as intense iterative consultation with state and district level staff, it has now been possible to design an ambitious, fully revised M&E system, which is being applied from 2009 in parallel with the old system (the old system will be replaced by the revised system eventually).

Important lessons from IMCP - I

- **Procurement**. The Government of India has a transparent procurement policy, which includes mechanisms for aggrieved parties to seek redressal. This has resulted in repeated legal entanglements in the past with respect to procurement of nets and insecticides, as a result of which there has been a delay in supply of the same. Therefore, an external agency has been nominated as the procurement agency. The MOHFW has identified UNOPS as the agency for all procurement related to external aid/assistance, including GFATM and World Bank. For all domestic budgets, Hindustan Latex Limited is the designated agency. These agencies have been directed to follow international competitive bidding for procurement value greater than 1 million USD, and national competitive bidding for value less than 1 million USD. By designating external agencies for procurement, the NVBDCP has been able to reduce delays in supply chain management.
- **Public Private Partnership**. As involvement of civil society and the private sector has been poor and the PPP schemes were not taken up by government staff at state and district level, the Round 9

envisages enhancing the participation of NGOs through a national level consortium, which will be a Principal Recipient (PR) along with MOHFW, but work under the overall technical guidance of NVBDCP.

- **Health personnel.** Deployment of health personnel for public health care system in states is a state responsibility. Recruitment continues to get delayed due to insufficient management resources at state level. However, there is significant improvement resulting from NRHM, which mobilizes additional domestic resources for recruitment and the state governments have recently notified the appointment of various key cadres including laboratory technicians, male health workers, medical officers etc. Accredited Social Health Activists (ASHAs) are now present in most villages in the project area. They are trained on anti malaria interventions as part of their basic curriculum, but this does not yet include the new norms, so that under IMCP - II they will need to receive special training focusing on correct use of RDTs, ACT, and LLINs.
- **Information system**. Strengthening and revision of National Anti Malaria Management Information System (NAMMIS) has been resumed with several revisions to ease the flow of data and information on malaria. Data entry at district level needs to be enhanced, so support in the form of Data Entry Operators (DEOs) is budgeted in the Round 9 of the Project.
- **Capacity for implementation at state and district level**. The suboptimal managerial capacity at state and district levels resulted in lack of field level supervision and monitoring. State level M&E consultants were hired under phase 2 of the project and will be continued in Round 9. Also, district level consultants for vector borne diseases are included in the Round 9 project. The training of these consultants will be done through the World Bank Funding. In addition, as an innovation, a core group for management, supervision, technical support and operational research will be established in Guwahati, Assam, to work along with MOHFW's regional office for the North-east to support the seven North-eastern states.
- **Antimalarial interventions**. Use of ACT for treating *Pf* cases, following confirmed diagnosis, by RDT in remote hard to reach areas has proved effective. However, a serious problem, which has emerged during implementation of Round 4 IMCP has been the over-use of arte-ether injections, which according to the monitoring data must have been used to a large extent for non-severe cases. The number of arte-ether treatment courses is therefore no longer to be used as a performance indicator. Training materials emphasize the need to avoid monotherapy for uncomplicated cases and for completing any treatment with injectables for severe cases with an oral ACT. It has been found in some districts that the introduction of RDTs leads to laxity in relation to microscopy, i.e. slides are not taken, even if the RDT result is negative. Operational research will be undertaken during the IMCP - II period, with support from the World Bank to assess the utility of RDTs, which are also sensitive to *P. vivax*. New monitoring standards, new WHO guidelines on microscopy quality assurance and MTSs will help ensure that microscopy is done as prescribed. Availability of LLINs in large numbers will facilitate high coverage of target populations and overcome the manifest difficulties in providing timely net retreatment.
- The weak program capacity to implement and especially monitor the project has been identified and is being strengthened under the current grant and even more under the expected Round 9 by:
  - Continuing technical assistance from WHO in the form of one NPO, two M&E consultants, a procurement consultant and a finance consultant to work at national level.
  - Establishment of a regional resource centre in Guwahati, Assam, to provide ongoing support to states and districts in the North-east.
  - Recruitment and training of state level M&E consultants.
  - Recruitment and training of district level NVBDCP consultants
  - Recruitment and training of 3-5 MTSs per district to work at the sub-district level.

4.5.4. Enhancing social and gender equality

Explain how the overall strategy of this proposal will contribute to achieving equality in your country in respect of the provision of access to high quality, affordable and locally available malaria prevention, treatment and/or care and support services.

*(If certain population groups face barriers to access, **such as women and girls, adolescents, sexual minorities and other key affected populations**, ensure that your explanation disaggregates the response between these key population groups).*

Ensuring Equal Access to Women, Girls and Sexual Minorities:

Women and Girls: In many parts of India, one of the primary factors affecting the health of women and

girls is their decreased ability to leave the house or community in order to access health services. The health care needs of men and boys are consistently met first, as their health is seen as a priority, while social norms and familial duties keep women and girls in or near their homes.

However, it may be noted that in the NE states, i.e., the project states, the status of women are not as bad as elsewhere. In fact, in some project states, the status of women is relatively high since many are economically active and often are the main earning member in the household. Therefore, discrimination related to LLIN use, accessing diagnosis and treatment services, etc is expected to be minimal.

Nevertheless, this proposal will address any gender inequity and inequality in the project areas in a number of ways in general, and ensure that the pregnant women—the vulnerable section is taken care of adequately, in particular.

First, the expansion and decentralization of services to the village level as detailed will mean that basic services and linkage to services are available closer to the home. Second, the increased role of grassroots health workers, including female outreach workers, ASHAs, ANMs, and AWWs, will help ensuring that women including the pregnant women receive key information and basic services in their own home/ante natal clinics, and are encouraged to seek timely care and treatment. In addition, self help groups and women's groups available in almost in every village will be engaged in increasing demand and spreading awareness among women. Further, emphasis will be given on personal protection for pregnant women by LLIN. Further, BCC will also be specifically designed to address this issue in order to reduce maternal and infant mortality due to malaria. Prophylaxis for pregnant women is recommended according to the drug policy and under medical supervision.

Ensuring Equal Access to People Living in Poverty and Rural Populations: India is facing high levels of social inequality, with 30% of the population living below the poverty line, and 70% of the population living in rural areas, where access to quality health care is limited. In addition, health infrastructure, literacy, and economic development vary widely across the country. Because poverty and illiteracy are often contributing factors for poor health seeking behavior. This proposal aims to increase access to malaria and general health care services among poor and rural populations through interventions described under the section on women and girls, such as decentralized service delivery and increased outreach by grassroots health workers/community volunteers. In addition, mass, folk media and innovative education tools will be employed to increase knowledge about services and to emphasize the importance of accessing them.

As in other Asian countries, there is a very strong association between malaria and ethnic minority groups. It is therefore, obvious that IMCP—II has the potential to contribute to greater equity and improvement in the NE region.

Community mobilization – Empowering communities is a sustainable strategy to address demand side constraints and issues and ensure timely accessibility to appropriate services. The proposal aims at training ASHAs(Accredited Social Health Activists), who are female community representatives and volunteer their services. All the villages proposed to be covered under the project will have at least one trained volunteer, who will facilitate services like diagnosis using RDTs, collection of blood smears, treatment of cases; distribution and utilization of LLIN; etc. Local-self governments, local CBOs, will ensure community organization and their active participation in the malaria control. For example, involvement of these community structures, networks in the distribution of LLIN as well as in BCC communication activities will increase the utilization of nets on a consistent basis and also seeking treatment early in cases of fever.

4.5.5 Strategy to mitigate initial unintended consequences

If this proposal (in s.4.5.1.) includes activities that provide a disease-specific response to health system weaknesses that have an impact on outcomes for the disease, explain:

- the factors considered when deciding to proceed with the request on a disease specific basis; and
- the country's proposed strategy for mitigating any potentially disruptive consequences from a disease-specific approach.

The Round 9 project is driven by an urgent need to deploy effective health products in the high endemic

areas in the country. While this would ideally have been planned as an integral part of the health systems strengthening, it can reasonably be assumed that given the coordinating NRHM umbrella and the way the Round 9 project is designed, it will serve to strengthen local health systems without in any way weakening them.

One concern is however, the intense reliance of the malaria program on the ASHA who should be a general front-line health worker. There is a risk that ASHA could be torn between different programs and finally become less motivated and may opt out. The supervisors will be guided to pay attention to potential problems.

From central level, it will be attempted as soon as possible to integrate new malaria case management guidelines in IMNCI and integrated management of adult illness.

The new malaria resource centre for the north-east foreseen in this proposal will be placed in Guwahati together with the MOH/GOI Regional Office, which provides support to most of the states concerned. This resource centre will potentially strengthen the general inter-state collaboration as well as articulation between public health practice and research and Government and civil society in this part of the country.

The major assistance planned to strengthen the health system include,

- Additional consultants and contractual staff at national, state and district level
- Capacity building of key personnel including ASHAs, Lab technicians, Medical officers, MTS, MPWs. Orientation training will also be given to private practioners on malaria case management.

The additional consultants in key areas of Public health, Finance and M & E will strengthen government health systems, and will not be a replacement for existing staff. They are expected to help the national program to sustain itself in these key areas beyond the project period by concurrent capacity building. Similarly, district VBD (malaria) malaria control project officer will strengthen the functioning of the existing District malaria officer in micro-planning, budgeting, monitoring, evaluation and logistics management. The capacity building benefits are expected to last beyond the project period.

4.6. Links to other interventions and programs

4.6.1. Other Global Fund grant(s)

Describe <u>any</u> link between the focus of this proposal and the activities under any existing Global Fund grant. *(e.g., this proposal requests support for a scale up of ACT treatment and an existing grant provides support for service delivery initiatives to ensure that the treatment can be delivered).*
Proposals should clearly explain if this proposal requests support for the same interventions that are already planned under an existing grant or approved Round 7 or Round 8 proposal, and how there is no duplication. Also, it is important to comment on the reason for implementation delays in existing Global Fund grants, and what is being done to resolve these issues so that they do not also affect implementation of this proposal.

This proposal is attempting to intensify the Round 4 program in the same geographic areas with the exception of west Bengal and Jharkhand that have been left out of the scope of the GFATM funding and will be covered under other funding options.

It requests for scale up in coverage of the North Eastern States and parts of Orissa with intensified LLIN coverage, intensified BCC coverage through involvement of Civil Society as well as the increased use of RDT and treatment with ACT.

This proposal builds on the lesson learnt in implementing the Round 4 grant and envisages to consolidate on the gains made and scale up the program to achieve impact on the malaria situation in the North Eastern states through focused strategies developed to cater to the significantly different geo-political-sociological-ecological in these states.

The health structures and systems will be significantly strengthened and the partnership with the providers in the private sector will also enhance reach and accessibility to early detection and treatment and combined with increased knowledge and acceptance and use of personal preventive measures is expected to bring about perceptible impact.

4.6.2. Links to non-Global Fund sourced support

Describe <u>any</u> link between this proposal and the activities that are supported through non-Global Fund sources (*summarizing the main achievements planned from that funding over the same term as this proposal*).

Proposals should clearly explain if this proposal requests support for interventions that are new and/or complement existing interventions already planned through other funding sources.

The country has successfully negotiated a funding proposal with the World Bank for supporting malaria control in 8 states covering 93 districts. The implementation commenced in 2008. NVBDCP is the lead agency to oversee implementation of this project. The states included are Orissa, Jharkhand, Chattisgarh, Madhya Pradesh, Andhra Pradesh, Gujarat, Maharashtra and Karnataka.

Collaboration with World Bank supported malaria control activities have already been mentioned in the earlier sections.

Since the start of the preparation of the "WB project" in 2007, there has been seamless coordination of GFATM and WB support. Thus, the GFATM consultants and WB consultants have worked as a team with NVBDCP colleagues for the preparation of a revised operational manual, training materials and M&E protocols, methods, plans and instruments. Training courses arranged with WB support have included staff working in GFATM areas. Conversely, it is expected that resources developed, especially by civil society under GFATM support will benefit also WB supported areas (and of course other parts of the country).

4.6.3. Partnerships with the private sector

(a) The private sector may be co-investing in the activities in this proposal, or participating in a way that contributes to outcomes (even if not a specific activity), if so, summarize the main contributions anticipated over the proposal term, and how these contributions are important to the achievement of the planned outcomes and outputs.

(Refer to the <u>Round 9 Guidelines</u> *for a* ***definition of Private Sector*** *and some examples of the types of financial and non-financial contributions from the Private Sector in the framework of a co-investment partnership.)*

In the Round 9 proposal, the Futures Group International India Pvt. Ltd—a for-profit private sector organization is participating as a sub recipient. They are a partner with the PR2—Caritas India led FBO/NGO/private sector consortium. The Futures Group specializes in the design & implementation of Public Health and Social Programs. Its mission is to develop and deliver innovative, locally relevant, evidence- based solutions to improve health and well- being of people worldwide. Since its inception in 1971, it has had a presence in over 100 countries in Asia, Africa, Middle East, Central and Eastern Europe , Latin America , Caribbean. **In India**, it has been working in the states of Orissa, Bihar, Uttarakhand, Maharashtra, Tamil Nadu, West Bengal, Jharkhand, NE Region, Uttar Pradesh and Chhattisgarh. The staff consists of more than 1400 full time employees and a large number of short- term and long- term consultants. In India it has more than 70 highly qualified staff and a large pool of consultants located in the country office in the NCR region and in its various project offices in the different states. Futures Group has been implementing large scale projects in India and elsewhere in the areas of HIV & AIDS, Family Planning and Reproductive Health, Maternal and Child health, Malaria, Tuberculosis, Avian Influenza, Environmental Health and Geosciences. The Futures Group's core expertise includes: Public Health, Monitoring and Evaluation, Training/Capacity, Operational Research, Economics and Health Finance, Demography, Epidemiology, Gender, Social Marketing and Communications, Public Policy, Law and Human Rights.

The above-mentioned technical expertise and experience of the Futures Group will be applied to the Round 9 project thereby contributing to project outcomes, impact proposed. The Futures Group will provide technical support to the PR2 consortium in developing, implementing the M&E processes and aligning them with the one M&E system of the country. They will also provide assistance in carrying out evaluation of the program on a periodic basis. In addition, they will also provide technical assistance in terms of training/capacity building of the private service providers in project areas. This is important since, a significant proportion of the population access their services. The provision of training to private sector providers will significantly improve the participation of the private sector providers in adopting the protocols of the National Program. Involvement of associations of private sector providers will also be a strategy adopted by the project. It is also envisaged that the national program may seek their technical assistance in carrying out operational research.

Apart from involvement of this organization, no specific partnerships are planned at this stage. However, as mentioned before, it is anticipated that some partnerships will be developed during the Round 9 project period (refer to section 4.5.1; SDA 4.3).

(b) Identify in the table below the annual amount of the anticipated contribution from this private sector partnership. *(For non-financial contributions, please attempt to provide a monetary value if possible, and at a minimum, a description of that contribution.)*

Population relevant to Private Sector co-investment (*All or part, and which part, of proposal's targeted population group(s)?)* ➔	Not applicable

Contribution Value (in USD or EURO)
Refer to the Round 9 Guidelines for examples

Organization Name	**Contribution Description** (*in words*)	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
[use "Tab" key to add extra rows if needed]							

4.7. Program Sustainability

4.7.1. Strengthening capacity and processes to achieve improved malaria outcomes

The Global Fund recognizes that the relative capacity of government and non-government sector organizations (including community-based organizations), can be a significant constraint on the ability to reach and provide services to people (e.g., home-based care, outreach prevention, etc.).

Describe how this proposal contributes to overall strengthening and/or further development of public, private and community institutions and systems to ensure improved malaria service delivery and outcomes. ➔ *Refer to country evaluation reviews, if available*.

The Round 9 project is conceived at a point in time, when India's economy is growing, and there is increasing government commitment to greatly increasing investment in health care, as manifested by the NRHM vision and results. The project is intensely focused on community mobilization and local capacity development. The Round 9 project will also lay the foundation for a regional malaria resource centre for NE region, for which there is a recognized need. Provided the project is able to show impact, it is reasonable to assume that the many of the personnel recruited under the project, will gradually be absorbed by the health care services at the respective levels.

The ASHAs that are positioned under the NRHM will be trained in basic diagnosis and provision of treatment services to ensure early diagnosis and comprehensive treatment for malaria cases identified. ASHA will also be empowered to carry out Behavior Change Communication at the community level to increase the treatment seeking behavior as well as in adoption of prevention tools such as correct and consistent use of LLIN.

In the 46 districts where the PR2 will be active, the community volunteers and members of the community based organizations will also be trained to provide basic services such as diagnosis, treatment, preparing community for acceptance of preventive tools such as IRS and LLIN and other home based practices as well as in provision of BCC messages and materials to the community through locally appropriate mediums.

It is estimated that currently a significant portion of the population seeking treatment uses the services of private sector providers and formal and non-formal providers at the village level. The program seeks to develop partnerships with the private service providers and train them in the diagnosis and treatment protocols as well as provide them with diagnostic kits and drugs required for treatment as per the NVBDCP guidelines. This will also significantly improve the case reporting into the government system as the providers will report on the number of cases diagnosed and treated as part of the partnership arrangements.

NVBDCP structures for malaria at the National, State and District levels are also being strengthened under the proposal. The personnel in these structures will be trained in the areas of project management, planning, monitoring and supervision, analysis and use of data/information for feeding back into the program strategies. This will strengthen the program management as well as build in the result orientation of the personnel at the different levels. A training calendar of induction training and refresher training has been planned for different levels of personnel in order to enhance and sustain the capacity.

Coordination and partnership building with other non-health ministries, NGOs/private sector as well as intra-ministerial organizations will be able to to bring about coordinated action to reduce the malaria endemicity in the different geographic locations.

4.7.2. Alignment with broader developmental frameworks

Describe how this proposal's strategy integrates within broader developmental frameworks such as Poverty Reduction Strategies, the Highly-Indebted Poor Country (HIPC) initiative, the Millennium Development Goals, an existing national health sector development plan, and other important initiatives, such as the 'Global Roll Back Malaria Strategic Plan 2006-2015' for malaria collaborative activities.

This proposal is completely in line with and an essential support for the **National Rural Health Mission**, which aims at accelerating better health outcomes by increasing local capacities at the community level and simultaneously improving health infrastructure.

Malaria control in India has for about a century been seen as a **socio-economic development issue** just

as much as a health issue. This explains why since independence, there has always been strong Government commitment manifested through the budget for controlling malaria in all parts of the country.

The last decade has seen a rise in other **vector-borne diseases** including Dengue and Chikungunya. Filaria, Japanese encephalitis and Kala-azar are also endemic in many parts of the country. In order to have a unified effort against all vector-borne diseases the directorate of National Anti Malaria Program was redesignated as National Vector Borne Disease Control Program in 2002. With a clear understanding of the epidemiological situation of various VBDs discrete strategies are in place to address them. Though the actual need is higher, the 11th 5-year plan has an outlay of around 875 million USD for addressing all the VBDs, of which around 400 million USD (about USD 80 million per year) is earmarked for malaria control, which clearly more than the total external support foreseen.

The proposal is in alignment with **MDG** 6 which is to combat HIV/AIDS, Malaria and other diseases. Target 8 of this goal states that by 2015 to have halted and begun to reverse the incidence of malaria and other major diseases. It will also contribute to lowering child mortality (MDG 4).

The **RBM partnership** has identified India as one of the 43 countries that need to be supported under Scale Up For Impact (SUFI). This will mean that India needs to rapidly scale up so as to ensure universal access to appropriate preventive and curative services and achieve 80% utilisation of services. This is in fact th thrust of the IMCP II in combination with the WB support. By 2011 the RBM outlines India, among other countries, to enter into sustained control with universal access and 80% utilization of services until elimination is feasible for them. Further, to achieve this RBM identifies Health systems strengthening and Monitoring & Evaluation system strengthening as key focus areas. The round 9 proposal precisely identifies these areas as key interventions for scale-up.

4.8. Measuring impact

4.8.1. Impact Measurement Systems

Describe the strengths and weaknesses of in-country systems used to track or monitor achievements towards national malaria outcomes and measuring impact.
Where one exists, refer to a recent national or external evaluation of the IMS in your description.

The NVBDCP has an inbuilt system of Monitoring & Evaluation including nationwide malaria surveillance since the 1960s. The system with 16 recording and reporting formats were in use to furnish information on fever surveillance, case detection & treatment and indoor residual spray.

In addition, periodic surveys and evaluations are done to validate field level implementation of the program, in particular to measure coverage of curative and preventive services. Recently, in 2006, a systematic evaluation was conducted to ascertain outcomes and impact, including population and health facility surveys [In-depth Review (IDR)] conducted by NIMR in 2006 (Annexure 10) followed by a Joint Monitoring Mission (JMM) commissioned by NVBDCP and led by WHO in 2007 (Annexure 11). Over the years, the national malaria program has, in fact, been evaluated by the WHO roughly every five years.

Currently, studies on the national burden of malaria mortality and morbidity are being conducted by a group of national and foreign research institutions with support from the WHO. The results are expected in late 2009.

Key weaknesses:
Despite the fact that a system for M&E existed several shortfalls existed which can be identified as follows:

1. The above mentioned M&E system of 16 reporting formats relied on manual recording & reporting—a tedious process to maintain, transmit and compile data. This resulted in manual errors and transmission delays, which in turn hampered timely remedial action by the program.
2. Malaria surveillance, was based on an a target of annual blood examination rate (ABER) of minimum 10% in all at risk areas, which provided an indication of trends in the malaria situation and its geographical distribution. However, certain weaknesses exist: The dogmatic application of the 10% benchmark--conceived for eradication earlier, meant that large numbers of slides are being collected in areas with almost no malaria, while in highly endemic areas, too few slides are collected to capture all malaria cases. The possibility of generating data through active case detection therefore makes deliberate bias possible.

3. The national program evolved over the years and new interventions like RDT, ACT, ITN (and now LLIN) have been introduced subsequent to policy changes. However, M&E system for effective implementation and utilization were not in place. This implied that much of the resource inputs were not monitored in terms of output/outcome.
4. Limited HR availability and capacity, particularly at the level of primary care also contributed to the problem
5. Data on inpatients and severe malaria has not been collected and the data on mortality are so scanty as to be of little value for assessment of trends or geographical distribution.

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Remedial Measures:

NVBDCP over the last few years had felt the need to address the above-referred key weaknesses. The donor agencies--World Bank and GFATM have also been keen to overhaul and strengthen the M&E system.

1. In 2005 under the World Bank aided Project, NVBDCP made an effort to convert the manual system of recording & reporting into a system of Web Based MIS called the National Anti-malaria Management Information System (NAMMIS) which could overcome the problems identified. Unfortunately its implementation was marred by lack of connectivity in remote parts of country and shortage of skilled manpower
2. Through collaborative efforts the M&E System was reviewed and revised addressing the identified gaps. The system is described in detail in the country M&E framework on malaria and the Operational Manual on Implementation of Malaria Control (Annexure 6). The country initiated the implementation of this system in January 2009 and is now in the midst of transition from the old to the new one. Improving and ensuring systematic use of NAMMIS is now a priority of the program and for the purpose an IT vendor has been hired to operationalise it in the districts and upgrade it as per the revised M&E system. It is anticipated that by 2010 the revised NAMMIS will be be efficient and effective countrywide.
3. Enhancing institutional capacity: Towards strengthening the overall M&E, institutional capacity is also being enhanced at all levels. NVBDCP staff is present at National, State and District level; however, large number of vacancies and difficulties in recruitment has limited the programs capacity to closely monitor various aspects. In order to overcome this shortfall, Program Management Units (PMUs) have been constituted at National and State level with dedicated staff for malaria in the areas of M&E, Finance and Procurement in GFATM and WB Projects. Selected districts are also being strengthened under the World Bank Project by making provision of District Malaria Consultant/ District VBD (malaria) consultant/project officer and sub-district level Malaria Technical Supervisors (MTSs) which will enable close monitoring at the point of program implementation.

4.8.2. Avoiding parallel reporting

To what extent do the monitoring and evaluation ('M&E') arrangements in this proposal *(at the PR, Sub-Recipient, and community implementation levels)* use existing reporting frameworks and systems (including reporting channels and cycles, and/or indicator selection)?

NVBDCP component of the proposal is concerned, program based approach will be followed and the project will rely entirely on the national Monitoring and Evaluation system. It has been outlined earlier in this section that the program has a Management Information System (MIS) which was reviewed and revised in light of the recent changes witnessed in program policies and prevention & control interventions. This system collates data right from the community level up to the national level. This updated system will be the backbone for all routine data and indicators selected for the purpose of monitoring under the project. The MIS is designed to collect information on case detection & management on a fortnightly basis which will be collated as per project requirement into a system of quarterly reports prescribed by GFATM. Since vector control is a seasonal activity it is reported only during the transmission season on completion of the entire activity. These indicators will therefore be furnished to GFATM in quarters corresponding to the transmission season.

For outcome and impact evaluation, special surveys (population and household surveys) will be conducted in the project every 2 years. These areas will also be subject to evaluation under In depth review (IDR) and Joint Monitoring Mission (JMM) which are conducted by the national malaria control program on a country wide basis periodically.

The Civil Society's PR will contribute to virtually all the service delivery areas of the proposal. It will

therefore develop a system of M&E for the Civil Society's partners. This system will derive from the Country M&E Framework in Malaria Control and will be closely integrated with the MIS of the National program. Convergence between the two PRs will occur at the optimum reporting point and Civil Society's partner will also maintain the integrity of its system to account to GFATM directly for Quarterly reports.

4.8.3. Strengthening monitoring and evaluation systems

What improvements to the M&E systems in the country (including those of the Principal Recipients and Sub-Recipients) are included in this proposal to overcome gaps and/or strengthen reporting into the national impact measurement systems framework?

➔ *The Global Fund recommends that 5% to 10% of a proposal's total budget is allocated to M&E activities, in order to strengthen existing M&E systems.*

Monitoring & Evaluation is an ongoing activity in the program which is amenable to modifications as per changing program needs. Under the Round IX project proposal --------proportion of budget is earmarked for M&E activities. To strengthen it, features like exclusive human resource for M&E, field visits, provision of mobility, reviews, periodic surveys and evaluations have been incorporated.

The capacity at regional level will be strengthened by creating a Regional Team for North east comprising of a Public Health specialist, an M&E specialist and an Entomologist for monitoring & supervision, close to the states. This interface between Directorate NVBDCP and States will also liaise with a similar regional unit of civil society PR and will be housed in common premises with them. The regional teams will be adequately trained in program M&E by Dte NVBDCP.

It has been identified in Global Fund reviews based on onsite visits that inventory records are poorly maintained and supply chain management is weak, therefore for the purpose of close monitoring of logistics & supply chain a Logistics Manager will be placed in each state. In addition the state M&E Consultants from Round IV will be continued.

The proposal is a continuation of Round IV GFATM project, in which provision of manpower for monitoring & supervision at sub-district level was made for the first time. In the proposed initiatives of Round IX, one Consultant will be hired in each project district. At sub-district level Malaria Technical Supervisors (MTSs) will be expanded beyond Round IV. The district Consultants will be a given rigorous 3 month training through a professional institute on all program aspects including M&E. The MTSs are likely to improve local program implementation through regular visits to subcenters and community volunteers. The program also envisages adopting Lot Quality Assurance Sampling (LQAS) conducted quarterly to cross validate service delivery and provide program outcomes with regularity and consistency. This will be operationalised with technical support from World Bank and DFID and MTSs will be the key surveyors for this tool.

Another innovation is the introduction of sentinel surveillance, where, two in-patient facilities in each district will undertake case-based surveillance of malaria in-patients with the objective of providing reliable trends for incidence of severe malaria and mortality. This will be implemented gradually over the coming three years in all GFATM supported districts.

The M&E staff will take field visits as per program norms and adequate mobility support has been provisioned in the proposal. The regional unit, state teams and district consultants will use existing health service or hired four wheel vehicles to undertake field visits. The MTSs will be equipped with motorcycles to undertake a minimal of 10 field visits in a month. NAMMIS was revived from the funds available in Round IV and it will be sustained through funding from the World Bank. As an additional input in Round IX, to facilitate fortnightly data entry into NAMMIS a Data Entry Operator (DEO) will be provided at the district level.

The civil society PR will contribute to program performance in all areas of service delivery. They will develop a system to track their M&E requirements based on the Country M&E Framework in Malaria. This system independent of NAMMIS is essential to cater to the civil society PR's requirement of furnishing reports to the Global Fund. Points of convergence will be developed between this system and the program based NAMMIS, so ultimately all information on malaria prevention & control will be channeled into data base of the national program.

Over and above the routine system of data collection and collation, household surveys will be conducted

2009, 2011, 2013 and 2015. These will help identify progress and enable mid-course corrections if required. Joint evaluations led by WHO will be arranged in 2010, 2012 and to support a terminal evaluation at the completion of project. These evaluations will be a common process for both the government and civil society PRs.

4.9. Implementation capacity

4.9.1 Principal Recipient(s)

Describe the respective technical, managerial and financial capacities of each Principal Recipient to manage and oversee implementation of the program (or their proportion, as relevant).

*In the description, discuss any anticipated barriers to strong performance, referring to any pre-existing assessments of the Principal Recipient(s) **other than 'Global Fund Grant Performance Reports'**. Plans to address capacity needs should be described in s.4.9.6 below, and included (as relevant) in the work plan and budget.*

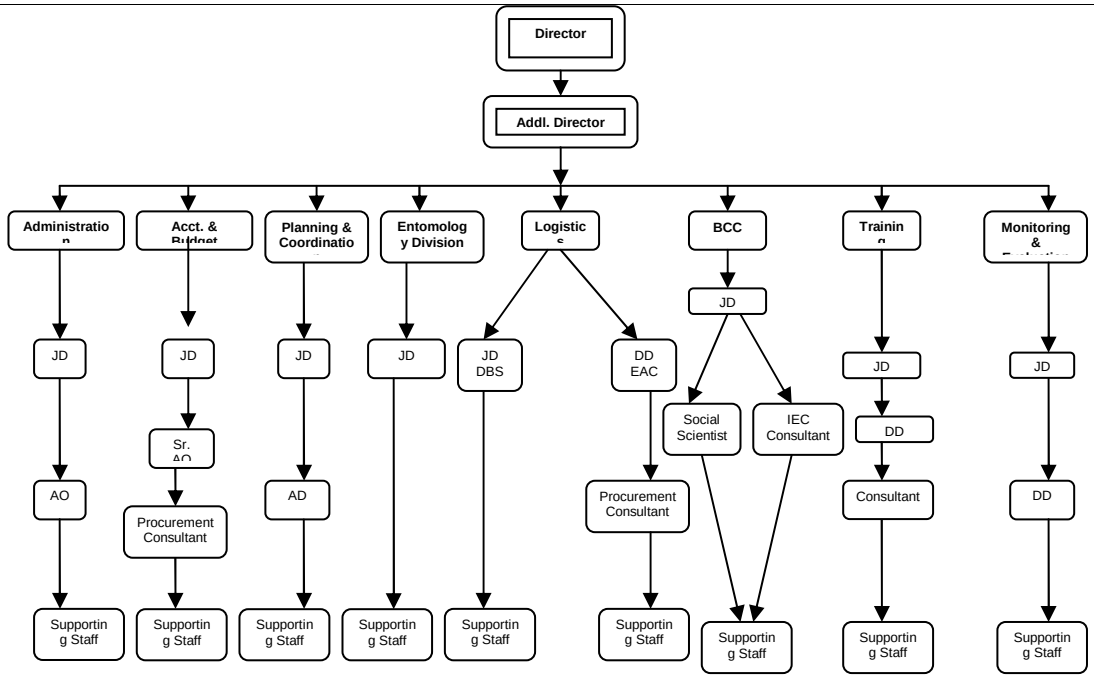
PR 1	National Vector Borne Disease Control Program
Address	No. 22, Sham Nath Marg, New Delhi – 110054 Ph: +91 11 23967745 Fax: +91 11 23968329

Background

The National Vector Borne Disease Control Programme (NVBDCP) came into operation as an umbrella programme to cover prevention and control of malaria and other vector borne diseases-- Kala-azar, Filaria, Dengue, Chikungunya, and Japanese Encephalitis, in 2003. NVBDCP is presently one of the most comprehensive and multi-faceted public health activities in the country. The Directorate of NVBDCP is the nodal agency for programme planning, implementation, and oversight in coordination with states (provinces). The NVBDCP is also an integral part of the Government of India's National Rural Health Mission (NRHM) launched in 2005 to improve access to health care services in rural areas through strengthened infrastructure at the level of primary care, community based systems, community empowerment, flexi-financing for context related use. NRHM's special focus is on resource challenged settings and vulnernable groups.

Technical capacity:

The Directorate of NVBDCP, is responsible for framing technical guidelines & policies to guide the States for implementation of Programme strategies. It is also responsible for budgeting and planning the logistics pertaining to the central sector. The Directorate carries out evaluation of Programme implementation from time to time. The resource gap is also assessed to provide equitable support based on the magnitude of the problem. The human resource at the Directorate of NVBDCP is indicated below.



In addition there are 19 The Regional offices in the country, these are manned by technical people to co-ordinate and monitor the National Programme in the concerned States through close liaison and field visits. They are also responsible for providing technical advice as well as assistance to the State. Under the National Vector Borne Disease Control Programme, these offices are entrusted with the responsibility of conducting the entomological studies in collaboration with zonal entomological setup of the State, drug resistance studies, cross checking of blood slides for Quality control, capacity building of the states, etc. there are 72 entomological units which are mainly responsible for the entomological studies for ascertaining the sensitivity pattern of the vector to the insecticides used in the programme.

Procurement capacity

NVBDCP is not directly involved in procurement of various commodities. The Ministry of Health has identified UNOPS as the agency for all procurement related to External Aid/Assistance, including GFATM and World Bank. For all procurement through domestic budget, Hindustan Latex Limited is the designated agency. These agencies have been further directed to follow international competitive bidding procedures for procurement the NVBDCP has been able to offset several inherent problems and delays in Purchase and supply of vital commodities. The Procurement department within NVBDCP is headed by a Joint Director and has 2 fulltime consultants and 14 other staff.

Procurement values in the past (**in USD million**)

Externally Aided Component			
Year	**Health Products**	**Drugs**	**Total**
2005-06	65.11	0.00	65.11
2006-07	395.34	196.41	591.75
2007-08	1003.44	125.30	1128.74
2008-09	247.38*	25.05*	272.43*
TOTAL	**1711.27**	**346.76**	**2058.03**

** provisional*

Management capacity

The **Directorate of National Vector Borne Disease Control Programme (NVBDCP)** is the central nodal agency for the prevention and control of vector borne diseases i.e. Malaria, Dengue, Lymphatic Filariasis, Kala-azar, Japanese Encephalitis and Chikungunya in India. It is one of the Technical Departments of the Directorate General of Health Services, Government of India. The NVBDCP has a total of 121 technical staff at the National and 21 at Regional levels. There are 238 non-technical staff.

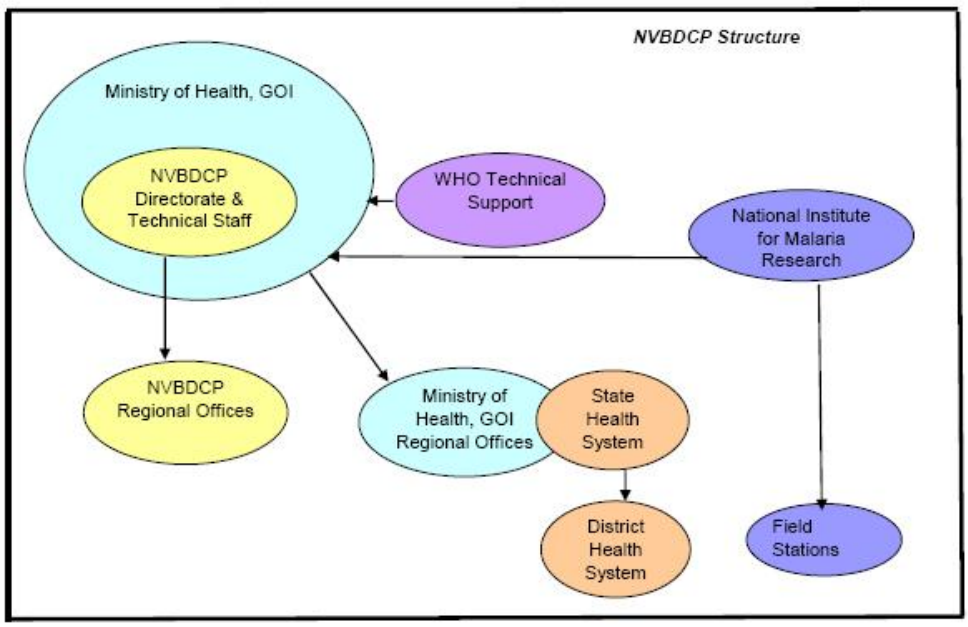
The Directorate of the NVBDCP, at the National-level, is equipped with Technical Experts in the field of Public Health, Entomology, Toxicology and parasitology aspects of malaria.

As mentioned above, under the Union Ministry of Health and Family Welfare, Government of India, 19 Regional Offices for Health and Family Welfare (ROH & FW) are functioning. These offices are located at different state headquarters. The ROH&FWs are also responsible for coordinating the national malaria control program with the state health department, other stakeholder at sub national levels.

Infrastructure

The National Vector Borne Disease Programme has large infrastructure in New Delhi, needed for coordination of all programme activities including training, research and administration. There are laboratories in NIMR and NICD as well as in NBVDCP. There are also laboratory facilities in the 19 regional offices. All the Regional offices have large training facilities, some with hostel facilities. The District Health Offices also have training centers, which are utilised often by the Malaria officers. State Institutes of Health and Family Welfare, also have training facilities.

Organizational coordination of NVBDCP



Financial capacity

National Rural Health Mission has integrated the implementation of the Health Programmes and the financial outlay for all the components is allocated at the beginning of the year. The Directorate has the manpower for addressing the various budgetary components. The Planning Division deals with the plan budget. The Externally aided component is dealt by the respective divisions. The Financial capacity of the Directorate has been enhanced with the Financial consultants under the World Bank and under the Technical Assistance from the WHO. NVBDCP has now been integrated under the umbrella of National Rural Health Mission (NRHM) which is an endeavor of Govt of India to uplift rural health. Towards the end of the calendar year, and/or beginning of the calendar year, all states/ districts undertake the annual process to plan out prevention and control activities in malaria control to be executed in the Plan year. The states combine all the district level plans to prepare a State level Annual Action Plan. This plan should be based on epidemiological parameters related to malaria, programme guidelines & eligibility criteria and availability of resources. These Plans are discussed technically at NVBDCP in the month of December or January. These discussions are followed by similar discussions under NRHM and the finalized Plan is approved under Plan expenditure. Cash is released to the states based on the balance available with the states. For further details, refer to section 3.3 of the Round 9 proposal.

Budgets handled (in USD million) :

ROUND 9 – Malaria

Year	Approved Budget (Budget Estimates)	Approved Revised Estimates	Actual Expenditure
2002-03	**51.08**	**46.52**	**44.95**
2003-04	**53.27**	**52.20**	**43.70**
2004-05	**58.48**	**53.48**	**47.10**
2005-06	**75.75**	**57.45**	**56.62**
2006-07	**80.78**	**82.95**	**69.17**
2007-08	**86.85**	**86.85**	**83.78**
2008-09	**102.66**	**78.06**	**59.78***
TOTAL	**508.87**	**457.51**	**345.31**

** provisional(Upto Jan 09) / Conversion 1USD = 46INR*

Global Fund experience:
NVBDCP had proposed and received GF grant Round 4 in 2005. The Agreement between the Department of Economic Affairs (DEA), Ministry of Finance, Government of India and the Global Fund Secretariat was signed on 28th June 2005. The details of the GFATM grant implementation and outcomes, impact are already detailed in section 4.5.1, and 4.5.3.

The Round 4

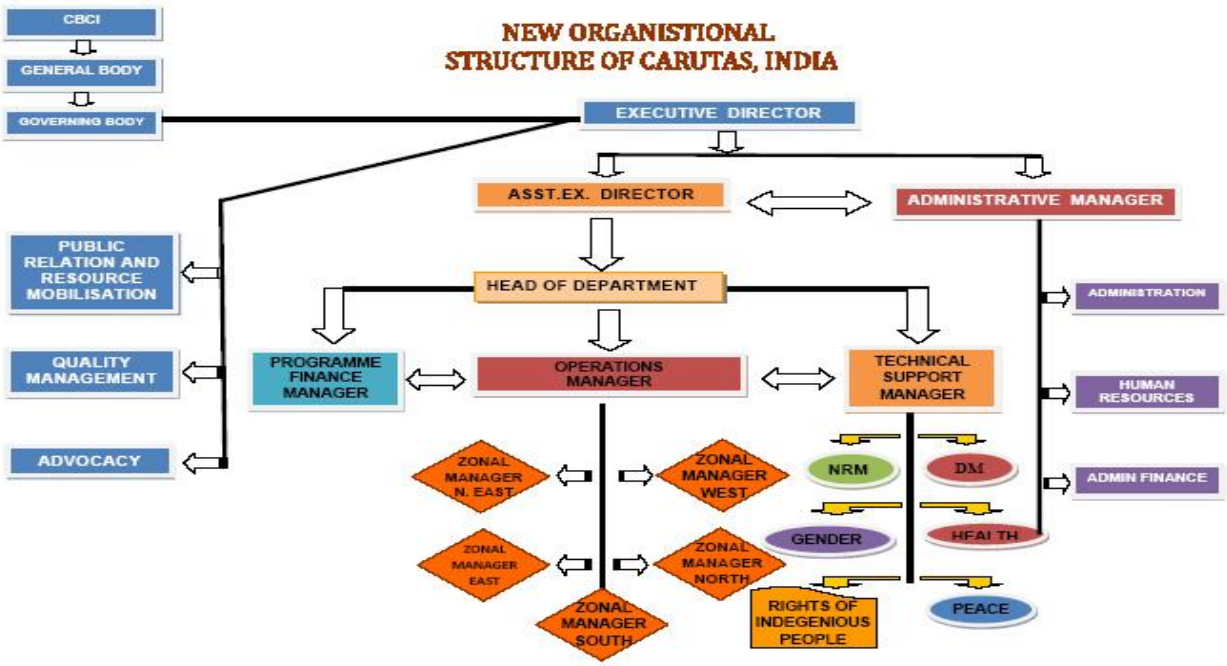
PR 2	Caritas India
Address	CBCI Centre, 1, Ashok Place, New Delhi-110001

Organization Details:
Name: Caritas India
Address: CBCI Centre, 1, Ashok Place, New Delhi-110001
Phone: 91 1123363390
Fax: 91 11 23715146
Email: director@caritasindia.org
Website: www.caritasindia.org
Chief: Fr. Verghese Mattamana, Executive Director
Year of establishment: 1962

Caritas India, is the official National Organization of Catholic Bishops' Conference of India (CBCI) for Social Development. It was established in 1962 and has been operating in India for the last 47 years. It is a Registered Society under the Societies Registration ACT. It is one of the largest Faith Based Organizations (FBO) working in the field of development and humanitarian response in the country. It focuses on programs and services for the marginalized scheduled castes and tribes, fishing communities, landless laborers and the urban poor, particularly working with women and children. It is a secular organization. Caritas India's head office is situated in New Delhi and has 5 zonal offices, covering all the states of India. It works with and strengthens an extensive range and network of partners at grassroots level. These include 12 Regional Fora, 160 Diocesan Social Service Societies (DSSS), and over 140 non-Church based NGOs.

Caritas India is a network organization with 160 local counterparts who are the Diocesan Social Service Societies (DSSS) and hundreds of NGO partners. Through partnerships, Caritas India strives to reach the remotest parts of the country. In addition to its implementing partners, Caritas India supports some 250,000 self help and other community groups covering more than 2.5 million beneficiaries. With this extensive network of partners, ***Caritas India*** has implemented major programs across several sectors including: Poverty alleviation; Sustainable livelihoods; Water and sanitation; Empowering marginalized groups to claim their rights; Disaster preparedness, relief and rehabilitation; Community Health and HIV & AIDS; Natural resource management.

The structure of the organization is provided below:



Key Clients (Donor Partners): Other Caritas offices, CIDA, CORDAID, CRS, ECHO, EU, Irish Aid, KFO, Austria, Misereor, SCIAF

Community Development Projects:

The organization is strong in its community base through its Integrated Development and Empowerment to Action (IDEA) program develops the strengths of the Community Based structures such as the Self Help Groups (SHG) or other community groups through awareness generation and also motivating them to take up collective action and work towards social transformation. This is carried out through the process of animation. The programs consist of elements of community organization, poverty reduction, human rights, and environment, gender and networking issues integrated unto it. A large number of such groups have been federated at the panchayat (village), block, and district and state levels. The main objectives of interventions are:

- Sustainable development of people through community organization and formation of grass root level groups who are able to reflect on their problems, take collective actions to solve their problems and realize their needs. The strategies used for this are capacity building at various levels, organizing self help groups and federating them at different levels
- Reduction of poverty through promotion of appropriate programs. Towards this upgrading management skills, regular savings at SHG level, linkage of groups with banks/government institutions are made
- The local people are made aware of their social and other rights in order that they engage meaninGFATMully with the local governance structures
- In order to make the programs more gender sensitive issues of unequal power relations are addressed through these programs

A large amount of resources from various sources are invested in this area and the ability to mobilize community and involvement of the community is one of the significant and related strengths that CI is bringing as a PR especially in the remote areas of the North East where CI and its consortium partners have significant presence especially in the hard to reach areas.

The annual amounts that have been expended on the projects in this area are US$ 0.8 million annually.

Community Based Disaster Preparedness program

ROUND 9 – Malaria

This is another area of intervention that C**I is c**losely involved. This program is implemented in the states of west Bengal, Bihar, Orissa and in the states of Assam, Tripura, Meghalaya and Mizoram in the North East. The major tasks involved are:

- Participatory learning and action to develop village maps with resources and other areas that can be used at the time of disaster using standard symbols that are understood by the community.
- Formation of task forces in the following areas to make the community prepared is carried out:
    - Early warning
    - Rescue
    - Relief
    - First aid/medical
    - Camp management
- Development plans for the village and advocacy with the state government for approval and implementation
- Provision of family survival kits in order that the families can take care of their valuable documents and personal lives till such time the relief measures reach
- They are imparted the skill of coordination among the different task forces in order that the operations for relief are smooth and seamless

The interventions are funded by European Commissions Humanitarian Office (DHPECHO). The outlay involves US$ 5.5 million annually.

This project again is a community mobilization project and developing community based structures to manage any emergencies and the same structures can be used to mobilize the community for prevention and behavior change initiatives planned under the current program.

Community based environment management program:
This was implemented in the hard to reach regions of Jharkhand state. This involved the following:
The project villages were located in the remote areas of the region, which was difficult to access, and had no communication facilities. The basic facilities like drinking water, sanitation, electricity, approach roads, education facilities etc. were also not available. Insurgent groups were active in most of the project villages due to which the development intervention by the government was paralyzed. In the project area, the following were achieved through strategic interventions:

- The village community was being organized for the cause of development.
- The women were empowered to participate in the development process
- The community was prepared for undertaking innovative initiatives
- The farmers are able to replicate the activities in their farm.
- The project areas have managed to arrest the fertile soils erosion.
- The community has adopted the measure of water harvesting in their area and lands.
- Emerging of structures in the villages.
- The different committees were formed to perform different roles in the villages for development.
- The community is making efforts to take the benefits from the constructed structures for their livelihood.
- Village community was made aware of their rights in trying to get government schemes to their villages.
- The community has become more aware of dynamics of the local politics.

Project Outlay
Aus$ 435,000-- This project is again an outline of the capability of the organization to mobilize community and bring about change in behavior towards realizing their responsibility towards development of the village.

Global Fund experience:
1. Promoting Access to Care Treatment program (PACT)- GFATM Round 4
CBCI Health Commission and Caritas India is a sub-recipient to Population Foundation of India (PFI) under the GFATM R6 for setting up 45 community care centers for People Living with HIV (PLHIV) in 5 states (Gujarat, West Bengal, Orissa, Bihar and Chattisgarh) with the objective of ensuring treatment of opportunistic infections, nutritional support, psycho-socio counseling and improving drug adherence. Caritas India is responsible for the knowledge management component of the project.

2. Link Workers Scheme under GFATM Round 7

Caritas India in partnership with Gujarat State AIDS Control Society is implementing the Link Workers Scheme Project in 4 Districts of Gujarat under National AIDS Control Organization (NACO) with grants from GFATM Round 7. This project aims to reduce HIV risk and vulnerability among high-risk individuals, bridge group and general population especially women and youth. The basic premise of this project is to mobilize rural communities to respond to the HIV and AIDS pandemic.

PR 3	[Name]
Address	[street address]
[Description]	

➔ ***Copy and paste tables above if more than three Principal Recipients***

4.9.2 Sub-Recipients	
(a) Will sub-recipients be involved in program implementation?	☉ Yes
	○ No
(b) **If no**, why not?	
(c) **If yes**, how many sub-recipients will be involved?	☉ 1 – 6
	○ 7 – 20
	○ 21 – 50
	○ more than 50
(d) Are the sub-recipients already identified? *(If yes, attach a list of sub-recipients, including details of the 'sector' they represent, and the primary area(s) of their work over the proposal term.)*	☉ Yes
	○ No **Answer s.4.9.4. to explain**
(e) **If yes**, comment on the relative proportion of work to be undertaken by the various sub-recipients. If the private sector and/or civil society are not involved, or substantially involved, in program delivery at the sub-recipient level, please explain why.	

The service delivery by civil society organizations will be substantial. The sub-recipients are of two categories:

- Sub-recipients who are implementing interventions
- Technical Support Sub-recipients

Sub-recipients implementing Interventions:

The sub-recipients including the Principal recipient will be implementing interventions at the specified states and districts where the respective organizations have facilities and community prescence. During the proposal preparation process the geographic focus and service delivery capability of each of the sub-recipients have been assessed before arriving at the geographic locations. The following are the implementing sub-recipients:

- Voluntary Health association of India (VHAI)
- Christian Medical Association of India (CMAI)

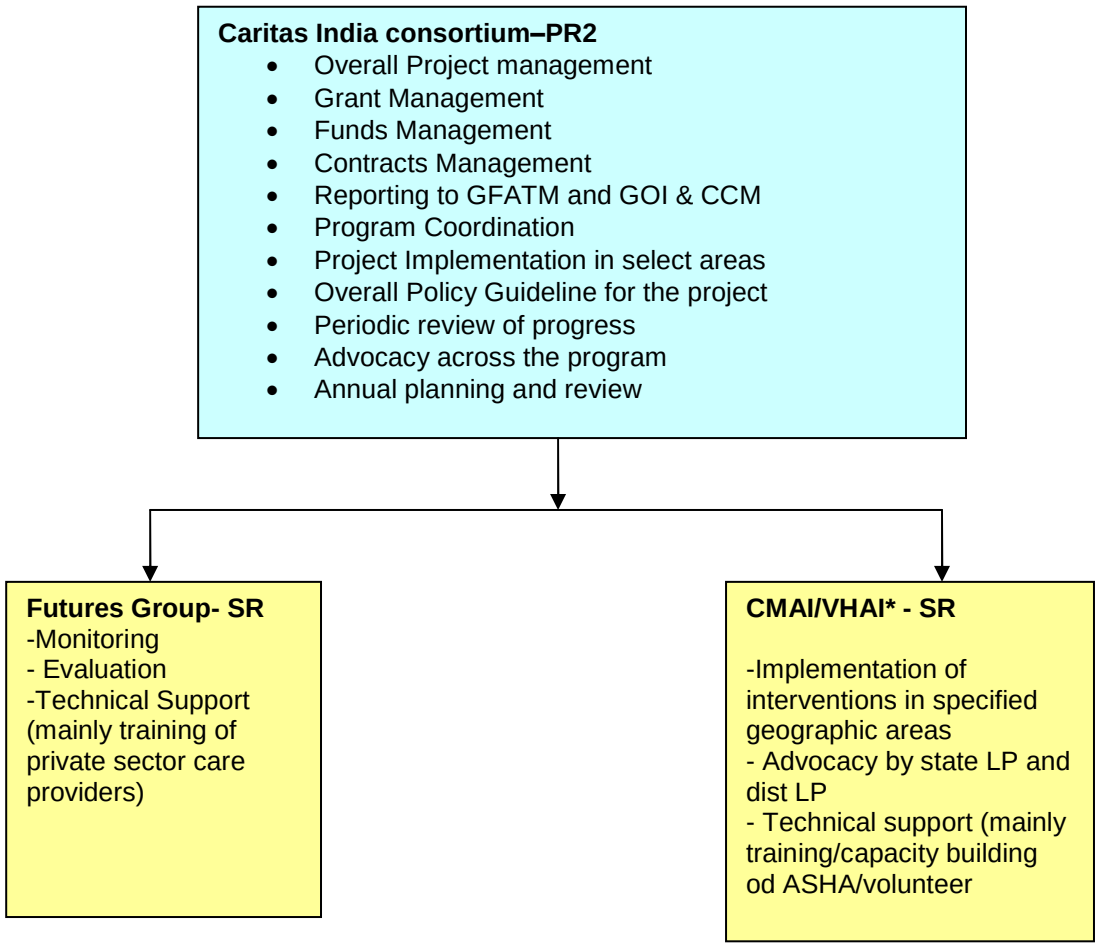
The geographic focus of the intervention by the Consortium will be the North Eastern States where the public health infrastructure in the remote areas is weak. The areas have been chosen based on the following criteria:

- Community presence of the partner
- Availability of health facilities and infrastructure
- Past experience in working on malaria and other diseases
- Ability to carry out community outreach and community based activities

Sub-recipients providing technical support:
The sub-recipient Futures Group International India will provide technical support to the consortium in developing and implementing the monitoring system. It will also provide assistance in carrying out evaluation of the program on a periodic basis. This sub-recipient will also provide technical assistance in terms of capacity building of the private sector providers in both the areas served by caritas India consortium and the areas served by NVBDCP. The sub recipient –VHAI will be involved in training/capacity building of ASHA/volunteer.

The sub-recipient VHAI apart from implementing programs in the select areas will also provide technical support for capacity building of ASHA in the entire program implementation area of both NVBDCP and the Caritas India Consortium.

The roles of the sub recipients is captured in the following schematic:



PROPOSED PR2 CONSORTIUM PROJECT AREAS:

Partner	State name	District name	Block name	Village no.	Household no.	Population
VHAI	**Arunachal P.**	Papumpare	Itanagar	13	4000	20000
			Naharlagun	15	4400	22000
			Doimukh	4	1300	6500
			Balijan	5	1440	7200
		West Siang	Aalo Town	14	4320	21600
			Gensi	3	790	3951
		East Siang	Passighat	11	3200	16000
			Ruksin	2	500	2500

		Lower Subansiri	Ziro Circle	12	3700	18500
			Deed Neelam	4	1157	5785
		West Kameng	Bhalokpong	4	1104	5519
			Thrizino	2	640	3202
		Upper Subansiri	Daporijo Circle	10	3000	15000
			Nacho	3	754	3768
Caritas		Changlang	Miao Khagam	10	12000	75000
			Bordumsa	10	10000	50000
		Dibang valley	Roing	15	10000	50000
		Lohit	Tezu	20	20000	120000
		Tirap	Khonsa	5	700	22000
			Deomali	5	500	20000
			Namsang	5	400	18000
			Longding	5	600	20000
		Lower Subansiri	Boasmila	15	3500	30000
			Yachuli	20	2300	25000
		Papumpare	Gopur	25	4000	30000
		West Siang	Kaying	10	830	9000
		West Kameng	Buragav	10	350	5000
		East Kameng	Seppa	25	4000	35000
			Seijosa	10	800	8000
VHAI	**Assam**	Golaghat	Gamariguri	28	3442	17212
			Sarupathar	30	4000	20000
			Bokakhat	35	5000	25000
			Padumani	5	1000	5000
		Naugaon	Simanabasti	23	1415	7073
			Kathiatoli	37	2532	12660
		Sonitpur	Balipara	13	1434	7168
			Biswanath	4	2352	11761
			Chaiduar	10	997	4985
			Dhekiajuli	9	1904	9518
Caritas		Karbi Anglong	Bokajan	31	1122	5111
			Howraghat	6	228	1075
			Lumbajong	42	1492	6682
			Nilip	41	1045	4784
			Rongmongwe	7	185	840
			Samelangso	14	458	2169
			Socheng	10	258	1113
VHAI	**Manipur**	Bishnupur	Moirang	23	11315	68049
			Bishnupur	28	11350	65578
		Imphal	Imphal East	50	5812	31405
			Haorangsabal	134	58429	324084
			Wangoi	48	20649	120298
		Tamenglong	Tamenglong	170	16149	111499
		Churachandpur	Samulamlan	126	5600	31680
Caritas		Churachandpur	Churachandpur	279	12590	190490
			Henglep	123	7049	22807
			Tipaimuk	54	7585	26466
			Singngat	71	4222	135874

			Thanlon	51	2535	12886
		Ukhrul	Chingai	33	5273	35809
			Ukhrul	27	10354	60924
			Kamjong	54	3521	15060
			Phungyar	63	2861	17235
			Kasom Khullen	27	1862	13869
		Senapati	Mao-Tadubi	16	29082	116355
			Paomata	18	10985	43935
			Purul	26	11009	44050
CMAI	**Meghalaya**	East Khasi Hills	Mawphlang	40	1600	8000
			Mawkynrew	30	1200	6000
			Katar Shnong	20	800	4000
		West Khasi Hills	Mawshynrut	20	800	4000
			Nongstoin	40	1600	8000
			Mairang	40	1600	8000
			Mawkyrwat	80	3200	16000
			Mawthadraishan	40	1600	8000
		Jaintia Hills	Thadlaskein	50	2000	10000
			Amlarem	42	1680	8400
		Ri Bhoi	Umsning	103	4120	20600
Caritas		Garo Hills	Gasuapara	177	7308	40528
			Chokpot	147	3872	24319
		East Garo Hills	Rongjeng	74	1795	8565
			Songsak	20	830	4100
			Kharkuta	52	2110	11200
			Samanda	43	1726	8739
		West Garo Hills	Zikzak	199	13975	71739
			Rongram	63	2344	12378
			Gambegre	54	1362	8336
			Dalu	23	2048	12277
			Selsella	180	8719	48144
			Tikrikilla	200	13994	75459
CMAI	**Mizoram**	Chawngte	Chawngte	60	2400	12000
		Hnahthial	Hnahthial	22	880	4400
		Lawngtlai	Lawngtlai	70	2800	14000
			Bungtlang south	33	1320	6600
			Sangau	19	760	3800
		Lunglei	Lunglei	60	2400	12000
			Bunghmun	35	1400	7000
			Lungsen	62	2480	12400
		Saiha	Saiha	17	680	3400
			Tuipang	43	1720	8600
		Aizawl	Aibawk	22	26646	15987
			Darlawn	38	7028	42169
			Tlangnuam	29	40464	242789
			Phullen	12	2056	12337
			Thingsulthliah	27	5066	30394
		Serchhip	Serchhip	28	6719	40312
			East Lungdar	17	3078	18469

		Champhai	Champhai	28	6954	41726
			Ngopa	18	4034	24202
			Khawbung	31	3266	19598
			Khawzawl	39	5500	33000
		Kolasib	Bilkhawthlir	20	7114	42681
			Thingdawl	33	49549	29729
		Mamit	Reik	22	2319	13915
			West Phaileng	22	2724	16344
			Zawlnuam	42	4569	27415
Caritas	**Nagaland**	Dimapur	Dimapur	50	13522	67610
			Dhansiriphar	2	1329	6647
			Kuhuboto	13	2278	11390
			Nuiland	40	2942	14712
		Kohima	Kohima	10	3890	23340
			Cheiphobozou	6	878	4392
		Kiphire	Kiphire	3	1287	6437
			Pongru	18	2627	13135
		Mon	Tobu	9	2726	13625
		Peren	Peren	20	874	4372
			Jalukie	30	2340	11700
			Tening	20	1129	5647
		Phek	Meluri	11	1347	6735
			Pfutsero	2	240	1440
		Tuensang	Noksen	11	1689	10134
			Samator	14	1633	8165
		Wokha	Bhandari	28	1378	6892
			Sanis	10	1363	6817
VHAI	**Tripura**	Dhalai	Manu R.D.	8	4200	21489
		North Tripura	Dasda	28	15169	75847
			Pecharthal	13	8160	40800
			Damchhara	9	3960	19798
			Jampui	7	2343	11715
			Gaurnagar	4	3130	15650
			Kumarghat	5	3348.6	16743
			Panisagar	4	1071	5356
			Kadamtala	3	1018	5091
		South Tripura	Rupaichhari	26	10289	48771
			Satchand	49	11269	83803
			Bagafa	45	15500	132480
Caritas		Dhalai	Ambassa R D	10	1065	7158
			Dumburnagar	19	2835	15738
			Salema R D	10	681	3621
		South Tripura	Karbook	10	341	2188
			Ompi Khowai RD Block	11	1036	5805
Futures	**All states**	49	152	5201		
	Total	49	**152**	**10402**	**682444**	**3606416**

4.9.3. Pre-identified sub-recipients

Describe the past **implementation experience** of key sub-recipients. Also identify any challenges for sub-recipients that could affect performance, and what is planned to mitigate these challenges.

ROUND 9 – Malaria

SR1: Voluntary Health Association of India--VHAI (SR2)

Contact person: Dr P Bhatnagar, VHAI
Ph. +91-9811309121; E mail : pramesh9@gmail.com

About VHAI
The Voluntary Health Association of India (VHAI) was founded in 1970 as a secular non-political, non-profit organisation. It was formally registered in 1976 under Societies Registration Act XXI of 1860 as a Non-Governmental agency. VHAI federates 27 State level voluntary health associations in the country. An Executive Board of eminent persons elected democratically by its General Body governs VHAI. Elections to the Board are held every two years. VHAI is linked to over 4000 member institutions through state voluntary associations for health and development. VHAI promotes social justice and human rights in the provision and distribution of health and social care services with emphasis on the disadvantaged millions. VHAI believes that such an equitable health and social care system should be culturally acceptable, universally accessible and affordable. VHAI envisions a sustainable, rational and dynamic health planning and management system in the country with the active participation of people.

VHAI strives to build a people's movement for health and development in the country by advocating a cost-effective, preventive and promotional health and social care system through innovative approaches in Community Health. VHAI's programs are designed for health and development workers, community leaders, voluntary agencies, professionals, social activists, media, government functionaries as well as policy makers. Benefits of VHAI's programs are extended to everybody, irrespective of their socio-economic, religious, political or any other such considerations.

Focus Areas: VHAI works closely with the State Voluntary Health Associations, their member organizations and other network partners and a large number of associates and partners in India and abroad. It facilitates research on vital issues and does campaigns, advocacy and lobbying both at the central and state levels for evolving congenial policies aimed at improving health and social status of people. Focus areas are:
--Strengthening voluntary action through formation and support of state level organizations, networking and building up relations with State VHA and NGOs;
--Policy research, Advocacy and Policy interventions e.g. National Health and Population Policies, National Policy on HIV/AIDS;
--Gender issues Women's health and development, RCH;
--Organizing formal and non-formal training programs and doing active follow-up to strengthen capacity building of voluntary agencies, members and associates;
--Strengthening grassroots-level health care delivery by equipping village health workers with training and communication materials;
--Reaching out to remote areas through comprehensive community health and development projects like Khoj and PACS projects;
--Implementing effective communication strategies through use of print, electronic media (TV & Radio) and folk mediums well as campaigns;
--Disseminating and repackaging information on various aspects of health issues for use by people at various levels;
--Disaster management, mitigation and preparedness
--Global networking with the UN and other international agencies for sharing of expertise and resource includes a Health Workers collective of over 12000 members, spread across the country.

These make VHAI one of the largest health and development networks in the world. The Government of India recognizes VHAI as an institution of national importance. Therefore, donations to VHAI are exempted from Income Tax under Section 10(23C) IV as applicable to institutes of importance throughout India and under Section 80-G of IT Act 1961. VHAI's networking with various national and international organizations has brought VHAI to the centre stage of health promotion. This is evidently demonstrated by its induction into various reputed bodies like WHO and other UN Agencies, World Bank and World Health Assembly, Asian Development Bank etc. VHAI has also represented Indian NGOs in several national and international fora.

Technical and Management experience, capacity
Project Experience: VHAI has vast experience of project planning; appraisal, implementation, monitoring and evaluation accrued over a span of more than 30 years and covering situations of enormous

geographical, cultural, linguistic and economic diversities. VHAI also extensively shares its experience with its network members and project partners across the country. In recognition of VHAI's capacity in these areas the Government of India has been involving VHAI for appraisals, monitoring and evaluations of aspirant or NGOs under its RCH program. Bilateral agencies also involve VHAI for evaluation of projects funded by them in the country.

For capacity building of NGOs, VHAI is a recognized training institute on health and development. It gives emphasis has been on developing a cadre of health trainers on the regional level and for that purpose well-structured Training of Trainers programs are conducted frequently. VHAI mainly conducts Training Program for its Member Organisations as well as other NGOs and also for Government Functionaries. These Trainings are tailor made to suit the requirement of the participants. Training programs are conducted for following project functionaries: i) Project Manager/Coordinators, ii) Project Supervisors, iii) Village level functionaries including health workers, Panchayat members, Peer Educators etc. The Training Programs are conducted on technical issues like Reproductive Child Health, Communicable Diseases like Malaria & TB, HIV/AIDS, Non-Communicable Diseases as well as on issues like community mobilization, gender sensitization etc. VHAI is also invited by LBS Academy to conduct sensitization programs for their various training programs being conducted for civil servants. For conducting these programs VHAI has developed complete range of manuals and modules (detailed list of Training Programs enclosed). In recognition of the same,

- The Ministry of Health & Family Welfare Government of India and UNFPA awarded VHAI the status of a *Regional Resource Centre* to cater to the capacity building needs of Mother NGOs from eight Northern States.

MNGO – Scheme of Ministry of Health and Family Welfare, Govt. of India:

- In partnership with the NGO sector, a comprehensive RCH program, the Mother NGO scheme was launched by the Department of Health and Family Welfare under the ambit of Ministry of Health and Family Welfare (MoHFW), GOI. The MNGO Scheme came as a new paradigm and initially four National NGOs were designated as RRCs, with financial assistance from MoHFW & UNFPA. Voluntary Health Association of India (VHAI) started formally functioning as Regional Resource Centre (RRC) since January, 2002. Since April, 2005 RRC-VHAI has been responsible for the States of Rajasthan, Uttaranchal, Delhi, Jammu and Kashmir and Himachal Pradesh. Currently there are 52 MNGOs (including 28 new MNGOS - 4 in Delhi, 7 in Uttaranchal, 10 in Rajasthan, 2 in J&K and 5 in Uttaranchal) as per the revised allocation of States with more than 400 FNGOs. The key areas of RRC-VHAI function include technical assistance to NGOs working to improve rural community health services, creating and supervising FNGOs and SNGOs, networking and maintaining close links with the central and state governments, conducting training courses, dissemination of IEC materials and offering capacity building, advocacy and documentation services on NRHM, JSY and RCH-II issues.
- VHAI has also established a *Resource Centre on HIV/AIDS* supported by Christian Aid. The resource centre is also maintaining a database on demographic profiles and indicators, service delivery infrastructure and guidelines in both public and private sectors. The Centre is a key referral point for updated information on HIV/AIDS and regularly disseminating latest news and information to state partners, KHOJ and PACS partners, and bilateral and multilateral partners, NGOs, People Living with AIDS (PLWA) etc.

VHAI also has the first hand experience of implementing grassroots community based projects like,

1. KHOJ is a comprehensive health & development project being implemented in 22 different pocket of the country. 'KHOJ' have created successful alternative models of health and development. The focus of the 'KHOJ' is on to the search of the solution of people's problem with them. The community involvement from the planning stage is another strong point of these projects. The projects have succeeded in changing most of the health parameters like IMR, MMR, etc. There is significant improvement in antenatal care, natal care and post natal care. There is reduction in morbidity, especially due to communicable diseases like diarrhoea, malaria, ARI as well as due to pregnancy and associated complications. Through KHOJ projects VHAI has succeeded in reaching the marginalised communities.
2. Poorest Area Civil Society (PACS) programs are being implemented in ten poorest blocks in the states of Uttar Pradesh, Madhya Pradesh, Chhattisgarh and Jharkhand. These programs are christened as "Parivartan" and are being implemented with the help of five partners of VHAI. These programs aim at poverty alleviation through strengthening Civil Society in the villages.

Here the role is purely that of a facilitator and a capacity builder and in such a way that it does not create any dependence of the communities over the project. The approach here is different from Khoj as no service component is provided, rather communities are urged or motivated to demand their rights from the government. This is totally an exercise in empowerment. Encouraging results are coming.

3. RCH intervention in Mewat Region: Although Haryana is a prosperous state in India but there are certain pockets that are quite backward from health point of view and Mewat is one of them. Malnutrition, poor reproductive health and communicable diseases used to reign the region throughout the year. Realising all these VHAI initiated the Reproductive and Child Health (RCH) intervention in Mewat Region in collaboration with the Mewat Development Agency and Govt. of Haryana in hundred villages of Nuh and Firozpur Jhirka blocks. The project primarily focused on improving the health conditions of women and children, however, in doing this it involved the larger community into many extents. First phase of the project was completed in the year 2003-04. Final phase of the project was carried out during the year 2004-05 with the help of following activities. Several capacity building programs were conducted on RCH related topics for volunteers, SHG members, teachers and students that include workshops, puppet shows and magic shows. As per the local-need project developed many IEC materials like Posters, Leaflets and Exhibits those were utilised in different campaigns. Although the activities were completed in brief period but the project was quite successful in mobilizing the community. Panchayat Raj Institutions, SHGs, Government Health Workers, Anganwadi Workers and opinion leaders were highly involved in project activities and we expect that they would continue to work for the promotion of RCH status in respective communities even after the completion of project. Institutions like Panchayats, Primary Health Centres (PHCs) and Community Health Centres (CHCs) strengthened their links and many community residents appreciated the need of proper utilisation of these institutions. Exposure visits to PHCs and CHCs were highly helpful for the community.
4. Project Arunodaya: VHAI was invited by the Government of Arunachal Pradesh to take over five non-functioning Primary Health Centres to revamp them under the Public-Private-Nonprofit Partnership. After a series of discussions, VHAI took over the management of five PHCs under Project Arunoday: Nacho PHC, Upper Subansiri District, Deed Neelam PHC, Lower Subansiri District, Thrizino PHC, West Kameng District, Gensi PHC, West Siang District, Lumla PHC, Tawang District. Arunodaya is striving to deliver quality healthcare keeping a balance between preventive, promotive and curative approaches. The project is also closely monitoring the improvements in the health status of the community. Some of the initial achievements of the project are: A detailed survey conducted in almost all the villages of the operational area; Appointment of staff in all the five PHCs; Making OPDs and Emergency services available (round-the-clock, fully functional); Streamlining drug supply and laboratory investigations; Improvements in routine Immunisation for children and Ante-natal and Post-natal care for eligible women; Establishing health education and outreach program at community level; Introduction of disease surveillance system through regular house visits.

VHAI also uses many other available forums to build up capacities of specific groups. Over the years, VHAI has established a large network of health workers in the country. Programs for Health Workers are aimed at their skill enhancement and capacity building through training programs and conventions as well as use of a popular health workers' newsletter 'Hamari Chithhi Aapke Naam' (HCAN).

Gender: Gender is an important policy issue for VHAI. In all VHAI programs dealing with gender issues, vulnerability of women due to gender discrimination is highlighted. Several programs on Gender Violence, Sex Determination and Female Foeticide (SDFF) are going on across the country with special focus on sates like Punjab, Haryana, Rajasthan, Himachal Pradesh, and Madhya Pradesh where the discrimination is high. Gender programs involve our partner organizations in the states for conducting research and state level advocacy.

Policy advocacy: VHAI has been in the forefront of advocating policy issues. It collaborates with the government on programs that are priority both for VHAI and the government. VHAI has also never flinched to engage the government at appropriate levels, wherever aberrations in the government system were noticed. This spirit has been regarded very positively by successive central and state governments and has contributed further in nurturing the relationships. This is reflected by a whole spectrum of programs, which VHAI has been implementing with the government support like RCH, Malaria, Women

Health and Empowerment, Sex Determination and Female Feticide, Ambedkar Hasta Shilp Vikas Yojna etc. and VHAI's memberships of the various committees set up by the government from time to time. VHAI also engage the Parliament, the Planning Commission and other national forums for national level advocacy. Rational use of drugs is another policy issue on which VHAI has been working over the years.
Independent Commission on Health in India. ICHI, which was set up by VHAI, has been instrumental in influencing decisions in formulation of National Health Policy and National Population Policy as well as their operationalization. In addition, the Commission has also been closely working with NACO in policy formulation and implementation. The Commission is currently critically examining priorities of the tenth five-year plan vis-à-vis the national policy goals and revamping primary health care infrastructure, implementation of population policy and reaffirmation of national priorities, HIV/AIDS and role of private sector in health care.

Development of Communication Material:
Communication occupies an important place in VHAI's functioning. Over the years, VHAI has acquired a rich and diverse communication skill and experience to cater effectively to felt needs of a whole spectrum of users, the government, NGOs, students, researchers and academicians. The communication processes have continuously evolved with time and the range of products presented (in print, audiovisuals and folk art) is also low cost, innovative and interactive. VHAI's desk top publishing unit, together with its own printing press present not only a scope for experimentation and a close watch on quality control, but also offer opportunities for raising funds – a step towards self sustainability. VHAI has developed complete range of educational material including Video, Audio and print for different type of audience ranging from policy maker, Project coordinators & managers, Supervisors, Trainers Health workers and community members.

VHAI's Experience in Malaria:
VHAI believe in integrated approach to health therefore its program are focused on a range of activities. Malaria Control activities are also taken as an important component of all the community health projects of VHAI. Following are some of the other activities undertaken by VHAI for Malaria Control

Member of Technical Advisory Committee on Malaria: This is the highest technical committee constituted under the chairmanship of DGHS to advice on the technical issues to NVBDCP. VHAI is a member of this committee.

Member of Committee to monitor Anti-Malaria Month activities: Anti-Malaria Month is observed in the month of June and various activities are organized to promote community involvement in Malaria Control Activities. VHAI is not only a member of this committee but along with its network partners active ly participate in organizing various activities in different locations.

Implementation of Malaria Control Activities: Malaria control is an important component of all community Health project of VHAI. The activities undertaken include EDPT, Integrated Vector Control and Community mobilization. Presently these activities are being undertaken in 42 locations in the states of Assam, Manipur, Nagaland, MP, UP, Orissa, W. Bengal, Jharkhand, Rajasthan and Chhattisgarh

Training & Capacity Building: VHAI has organized a series of programs for its member for training their workers for different activities related with Malaria Control including EDPT, Slide collection, training of Lab technicians, training of Doctors in management og severe & complicated cases of Malaria. In collaboration with NVBDCP VHAI trained more than 1000 Doctors of ISM & H in management of severe Malaria. VHAI is also training 4000 ASHA on Malaria in Arunachal Pradesh.

Malaria Control as PHC activity: VHAI is managing 5 PHCs in Arunachal Pradesh for Government of Arunachal and 2 PHC new in Orissa. Malaria control is an integral component.

Study to Assess the Impact of Irrigation Project on Malaria Situation: This research study was conducted by VHAI for Japan Bank for International Cooperation (JBIC) in two of large irrigation project supported by them one Rengali Irrigation Project in Dhenkanal District of Orissa and other at Rajghat Irrigation Project in MP. Following the recommendations given by VHAI Malaria control activities have become a part of Rengali Irrigation project to be implemented by health department and VHAI is providing hand holding & monitoring support for the same.

Financial management capacity
A sound financial planning system exists within VHAI. Annual plan and budget is formulated at the beginning of the year in consultation with the staff and presented before the VHAI Governing Board, which passes the same and subsequently presents it before the Annual General Body Meeting of VHAI for final approval. For the interim period, a specially constituted Finance Committee takes all major financial decisions, including for new projects and contingency plans. VHAI accounts are maintained on cash basis with relevant cost centres. Internal audit is done, and at the end of the year final audit is done by an auditor appointed by the General Body. The General Body also receives and approves the audited statements. Financial sustainability has been a major effort of VHAI in the last few years.

SR2--CHRISTIAN MEDICAL ASSOCIATION OF INDIA

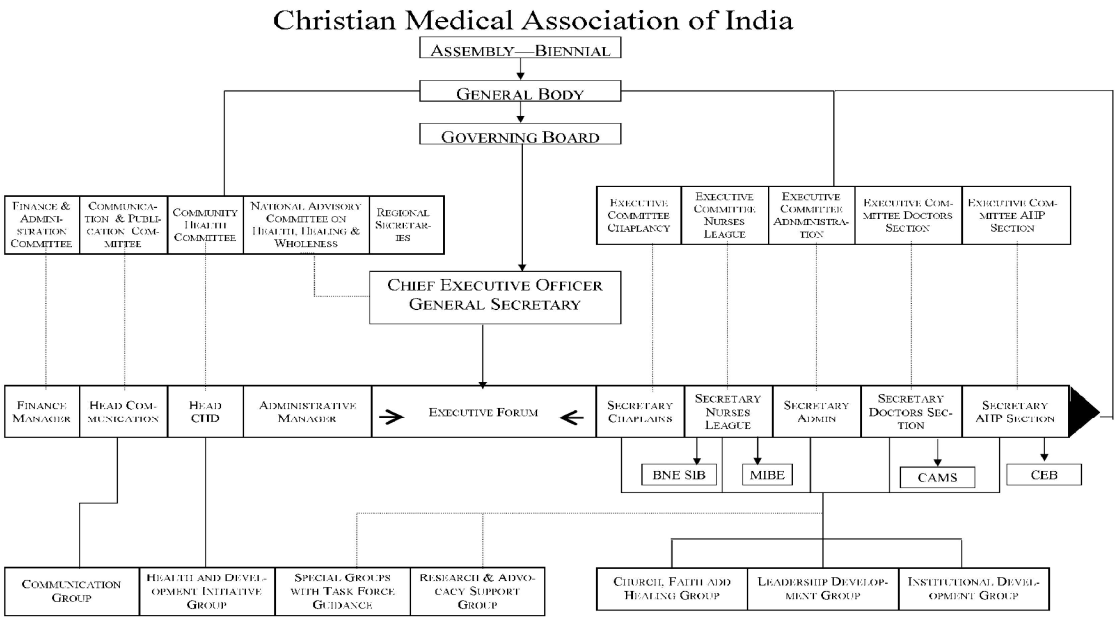
Contact person: CEO/General Secretary: Dr.Vijay Aruldas
Address : Plot 2, Local Shopping Centre, Janakpuri A 3, New Delhi 110058.

Organization's mission, structure, and governance.
The Christian Medical Association of India started in 1905 when expatriate health workers from countries in the "north" were sent by their respective churches or organizations to work among the poor. Before CMAI became a registered body, the organization was know as Medical Missionary Association. In 1912 Medical Missionary Association was appended to the National Missionary Conference Council and this council is now known National Council of Churches in India (NCCI). In 1926 Medical Missionary Association's constitution was modified and the organization renamed as Christian Medical Association of India. CMAI is the health agency of the National Council of Churches in India, which has 29 member churches and 16 Regional Christian Councils. CMAI is National body of Christian Healthcare working in India, incorporating members from the Protestant, Orthodox, Evangelical and Independent Churches. It has over 330 member institutions including Medical colleges at Vellore, Ludhiana, Kolencherry, and Karakonam, secondary care hospitals such as St Stephens and Holy Family Hospital in Delhi, Christian Hospital in Bissamcuttack Orissa, Community programs such as CRHP Jamkhed, Maharashtra. It also has over 7000 health professionals as individual members, working in government, NGO and corporate sectors across the country.

Vision
That they may have life …… and life in its fullness.

Mission
In response to the love and command of Christ CMAI's mission is to serve the Church in India in its ministry of healing, to build a just and healthy society.

Structure and Governance
The CMAI has its head office at Delhi. Its General Assembly of over 7000 members meets biennially. It has a General Body with members from across the country, different professional groups, and experts which meets annually, and an Executive Body which meets bi-annually. Its membership has a regional structure, with 13 regions.



CMAI works in Health and Development Initiatives, Policy Advocacy, Leadership Development, Institutional Development, Church involvement in Health, and Communications. CMAI has a mandate to serve the Churches in India, and build a healthy and just society, in response to Christ's love and command. CMAI therefore has a responsible and multifaceted role in strengthening fellowships, building capacity, and forming coalitions and advocating on health and development issues, in the light of Christ's healing ministry.

Organizational capacity to undertake a project such as the one being proposed.

- CMAI has a separate Community Health Department to deal with issues of health and development which is managed by competent staff. The CMAI network also has a wealth of Competence in Community Health and Development which can be used for training, monitoring and evaluation of projects.
- The CMAI network because of its national presence has been involved in relief and rehabilitation during and after disaster related emergencies. A project of relief and rehabilitation has been successful in the state of Gujarat during the earthquake in January 2001, where the organization was involved in providing medical and psychological relief in the acute phase of the disaster. After the acute phase building the life of the affected communities through psychosocial interventions and building the capacity of the families to address their pre-existing socio-economic vulnerabilities that became worse after the earthquake.
- Through the network CMAI has also been responsible for providing relief after cyclones in Orissa and more recently in the earthquake that affected Kashmir. CMAI has been involved in relief work in the coastal districts of Tamil Nadu, Andhra Pradesh and Kerala in the immediate aftermath of the tsunami in December 2004.

Past performance: Example of 3 projects in last 5 years, preferably technically similar to the current proposal—title, value, period, place, source of funding, brief description of services, and relevance to current project

--Community Health and Development projects NEI : CMAI has been facilitating Community Health and Development projects in 8 sites in four states in North East India. The focus of these project sites are control of Malaria along with access to health care for other communicable diseases and socio-economic development through SHGs. Project staff have been trained in taking and preparation of blood smears, treatment of community owned nets. Linkages have been made with government for procurement of bed-nets, glass slides and for diagnosis and treatment. CMAI member institutions in the area also participate in investigation and training along with government support. The projects have been operational since

1998. Source of funding is the PCUSA.

--Community Health and Development project – Chotanagpur (1998 – 2008) Project covering nearly 2 L population in Chotanagpur areas of Jharkhand and Orissa. Activities similar to above. Source of funding LWR.

--CMAI stop TB project in Meghalaya: CMAI in partnership with the churches in Meghalaya is working in 3 districts of Meghalaya alongside the government in ACSM towards improving diagnosis and case holding in tuberculosis. Activities are awareness building through community meetings, one to one meetings with persons having symptoms, referral to government for diagnosis and treatment. The project is funded by USAID and started in 2008.

SR3--Futures Group International India Pvt. Ltd.

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About Futures Group
The Futures Group International India Pvt. Ltd specializes in the design & implementation of Public Health and Social Programs. Its mission is to develop and deliver innovative, locally relevant, evidence- based solutions to improve health and well- being of people worldwide. Since its inception in 1971, it has had a presence in over 100 countries in Asia, Africa, Middle East, Central and Eastern Europe , Latin America , Caribbean. In India, it has been working in the states of Orissa, Bihar, Uttarakhand, Maharashtra, Tamil Nadu , West Bengal, Jharkhand, NE Region Uttar Pradesh and Chattisgarh. The staff consists of more than 1400 full time employees and a large number of short- term and long- term consultants. In India it has more than 70 highly qualified staff and a large pool of consultants located in the country office in the NCR region and in its various project offices in the different states.

The Futures Group's core expertise includes: Public Health, Monitoring and Evaluation, Training/Capacity, Operational Research, Economics and Health Finance, Demography, Epidemiology, Gender, Social Marketing and Communications, Public Policy, Law and Human Rights.

Futures Group has been implementing large scale projects in India and elsewhere in the areas of HIV & AIDS, Family Planning and Reproductive Health, Maternal and Child health, Malaria, Tuberculosis, Avian Influenza, Environmental Health and Geosciences.

Its key clients in India include: Government of India (GOI), State Governments, DFID, USAID, GFATM, World Bank, BMGF, UNAIDS, UNDP, NGOs and Professional Associations, Indian Nursing Council, Indian Medical Association, CBCI.

Some of the major projects being implemented by the Futures Group are presented below.

1. **Capacity Building and training of Nurses on HIV/AIDS prevention, care and treatment (Donor – GFATM Rd 7; total value – US$ 1 million):** As Sub Recipient (SR) of the GFATM Round 7 grant, providing technical and management support to the Indian Nursing Council--INC (Principal Recipient). Futures Group is planning, implementing trainings of 90,000 staff nurses on HIV/AIDS prevention, care and treatment. This covers nurses from tertiary, district and sub-district health facilities in the government, private and charitable institutions. Futures Group is supporting the INC in developing the training guidelines, materials, organizing TOTs and trainings of nurses, monitoring the trainings, establishing an MIS. The SR responsibility also includes providing supportive supervision to the 55 nurses training institutions across the country.
2. **Innovations in Family Planning Services II Technical Assistance Project (ITAP) [Donor USAID; total value - US$ 40.5 million):** Under ITAP, Futures Group is currently providing technical assistance (TA) to the USAID Mission's bilateral projects in Uttar Pradesh, Jharkhand, and Uttaranchal, and to the Ministry of Health and Family Welfare to establish a National Health Systems

Resource Center**.** The project is helping in setting up mechanisms to increase demand for services and improve the quality of FP/RH services. Futures Group is playing vital role in developing, implementing, monitoring, and documenting different public-private partnership (PPP) models through ITAP. NHSRC is assisting the Ministry in preparing a user manual on Management Information and Evaluation Systems (MIES) reporting formats for the NRHM. NHSRC is also preparing a software package for data entry. In collaboration with UNFPA and DFID, ITAP has prepared a Community Monitoring Framework for RCH II, which included development and implementation of a system for community monitoring, quality assessment and management processes. The TA through ITAP also entails operations research studies for piloting innovative methods in PPP, social marketing and behaviour change communication (BCC). Futures Group prepared a strategy paper on social marketing of intrauterine contraceptive devices (IUCD) and social franchising of sterilization services and prepared a note on the inclusion of performance objectives in the contracts of social marketing organizations (SMOs) besides reviewing the policy and guidelines for social marketing. Prepared a note on how to initiate bar coding for contraceptive supplies being procured by MoHFW. Evaluated the area specific social marketing projects being implemented by SMOs and other NGOs. Assisted the Ministry in finalization of the media implementation plan for contraceptives. In addition to these, training is a key element. The Futures Group coordinated with the National Institute of Health and Family Welfare (NIHFW) for conducting training programs for all Program Management Units (PMU) in all states and union territories and compiled the training reports and other relevant materials. Further, a review of the State Program Implementation Plans with particular reference to human resources was carried out to streamline the arrangements for PMU staff. Collected and compiled fiscal and program performance reports from all states; analyzed the utilization of financial resources and suggested steps to revamp program management activities.

3. **The POLICY II Project (POLICY) [Donor – USAID; total value - US$ 159.97 million]:** Futures Grropu's global POLICY project is aimed at facilitating the development of reproductive health, family planning, and HIV/AIDS policies and plans. Futures assisted the states of Andhra Pradesh, Rajasthan, Madhya Pradesh, Uttaranchal, Jharkhand, and Uttar Pradesh in development of population and reproductive health policies. In India, the initiative is documenting the voucher scheme for RCH implemented in Uttar Pradesh by pilot-testing a costing tool that demonstrates the costs and benefits of providing family planning and other family-friendly practices in private sector companies. HPI's coordinator in India consulted with the Confederation of Indian Industry, the International Labor Organization, and other workforce-oriented organizations to compile a preliminary list of private sector companies to invite to participate in a roundtable. HPI's staff prepared a phased-interview guide for use during the initial company meetings and identified companies that have already implemented family-friendly and/or FP initiatives in the workplace. HPI will convene a roundtable in India to obtain data and stakeholder input for the costing tool. The technical assistance provided by POLICY included advocacy training, NGO capacity building, support to specific groups such as PLHIV and faith-based organizations (FBOs), provision of advocacy and policy information, financial and economic analysis tools, advocacy and planning models, and policy research. The project employed over 600 field staff and worked closely with hundreds of local consultants and partners, thereby fostering "policy communities" in each country that will sustain policy work long after the project's end.
4. **Essential Advocacy Project (EAP) for Avahan (Donor – Bill & Melinda Gates Foundation; total value - US$6.25 million):** Futures managed the capacity building component of the EAP. The project focused on HIV prevention among the groups most at-risk of HIV infection in India's six high-prevalence states (Andhra Pradesh, Maharashtra, Manipur, Nagaland, Karnataka and Tamil Nadu) and along the nation's highways. The main goal is advocacy and capacity building to ensure that laws and public policy protect the rights of key populations; support effective programs; reduce vulnerability to HIV; and mitigate its consequences. Activities centre on one-on-one consultations; trainings including preparation of toolkits; group discussions and workshops; advocacy strategy development; policy and advocacy analysis; and development and dissemination of relevant materials. Key stakeholders include political leaders and government officials; police and uniformed services; vulnerable populations; health care providers; legal bodies, community leaders, faith-based organizations, and business leaders.
5. **Technical Support for UPSACS & UKSACS (Donor- USAID/NACO, GOI; total value – US$ 0.3 million):** Futures Group provides technical assistance to the Targeted Intervention projects for HIV/AIDS prevention, care and treatment in UP and UK according to the NACO (GOI) guidelines. This includes supervision and monitoring of field activities and capacity building field staff, NGOs and the private sector. The various stakeholders that have been provided training, mentoring are project managers, doctors (including private sector physicians), outreach workers and peer educators in all

the districts of the two states.

6. **AIDSRelief (Donor – PEPFAR; total value – US $10 million):** AIDSRelief trains clinical staff in HIV patient monitoring and management (PMM) system including data collection. AIDSRelief has a training database that is used to track trainings. The database includes O/GAC program areas; objectives of the training; funder; facilitators; time period; attendees; and attendee qualifications--physician, nurse, nurse assistant, etc. The system allows users to enter, manage, and analyze HIV patients' clinical and demographic data. Through extensive training and technical assistance, the PMM system has been implemented in multiple sites in the nine AIDS Relief countries and has resulted in improved data management towards better outcome and quality of the ART program. In addition, AIDSRelief: project has an on-line tutorial/training session for reporting of HIV services--http://64.242.197.233/aidsrelief/index.cfm.

4.9.4. Sub-recipients to be identified

Explain why some or all of the sub-recipients are not already identified. Also explain the transparent, time-bound process that the Principal Recipient(s) will use to select sub-recipients so as not to delay program performance.

Not applicable

4.9.5. Coordination between implementers

Describe how coordination will occur between multiple Principal Recipients, and then between the Principal Recipient(s) and key sub-recipients to ensure timely and transparent program performance.

Comment on factors such as:

- **How Principal Recipients will interact where their work is linked** *(e.g., a government Principal Recipient is responsible for procurement of pharmaceutical and/or health products, and a non-government Principal Recipient is responsible for service delivery to, for example, hard to reach groups through non-public systems)*; and

- **The extent to which partners will support program implementation** *(e.g., by providing management or technical assistance in addition to any assistance requested to be funded through this proposal, if relevant)*.

The PR1 is NVBDCP responsible for the national malaria control program. The PR1 will be mainly responsible for the Round 9 project planning, procurement of health products/pharmaceuticals, implementation, and M&E. The PR2, which is a FBO/NGO/private sector consortium led by Caritas India will complement PR1 activities at community level in selected high endemic districts (49) in the NE region many of which are fraught with problems of accessibility and inhabited by various tribal groups. The major activities will include: LLIN distribution; RDT/ACT use; BCC; training of community workers/volunteers and private sector care providers. Outline of PR2 and the SR activities are presented below:

- Principal Recipient 2—PR2—Caritas India : Overall project/grant management, implementation of interventions (prevention and treatment), BCC, advocacy, capacity building of project personnel, M&E including reporting to GFATM, GOI, and joint planning and review, etc.
- Sub Recipient 1—SR1—Christian Medical Association of India: Implementation of interventions (prevention and treatment), BCC, etc.
- Sub Recipient 2—SR2—Voluntary Health Association of India: Implementation of interventions (prevention and treatment), BCC, capacity building of community workers/volunteers, etc.
- Sub Recipient 3—SR3—Futures Group International India Pvt. Ltd.: M&E (for PR2/SRs), capacity building of private sector care providers at district/sub-district level

There will be a provision of coordination structures within the project management teams of NVBDCP and Caritas India. The planning will be carried out at the central level and each PR will disseminate the same plan to the state levels for coordination at the state level. There have been mechanisms built into the structure in order that the joint planning is carried out at the state, district and block level in order that the mutually dependent activities are coordinated well.

Further, in order to provide services such as diagnosis and treatment the NVBDCP will directly through its

implementation structure at the state, district and block level will assess the health facilities available with the PR2 and designate them for provision of services. These facilities will be provided kits and drugs directly by PR1 as it does for other public health facilities. These facilities will directly report the cases found and treated to the desired level of the public health system.

In the case of provision of training to the private sector providers the PR2 will take the lead and the training will be based on the training curriculum developed and approved by NVBDCP. The training of private sector providers in the complete geographic area of the project will be vested with the PR2. The training of front line workers such as ASHA and Lab Technicians will be vested with the PR2 for the entire area of the project but the training will be based on the curriculum developed and approved by NVBDCP. Adequate planning and coordination mechanisms and joint planning has been built into the project management structure for smooth functioning of inter dependent outputs.

4.9.6. Strengthening implementation capacity

The Global Fund encourages in-country efforts to strengthen government, non-government and community-based implementation capacity.

If this proposal is requesting funding for management and/ or technical assistance to ensure strong program performance, summarize:

(a) the assistance that is planned;**

(b) the process used to identify needs within the various sectors;

(c) how the assistance will be obtained on competitive, transparent terms; and

(d) the process that will be used to evaluate the effectiveness of that assistance, and make adjustments to maintain a high standard of support.

** *(e.g., where the applicant has nominated a second Principal Recipient which requires capacity development to fulfill its role; or where community systems strengthening is identified as a "gap" in achieving national targets, and organizational/management assistance is required to support increased service delivery.)*

The technical and management assistance (TA) package for the Round 9 subsumes TA through the WHO, contracting through appropriate processes for efficient and timely delivery of quality malaria control interventions. Several evaluations, the JMM (2007) report, as well as lessons learnt during the implementation of the Round 4 GFATM grant have indicated the need for the TA to the national program.

The TA support includes long term/short term consulting, technical advice, development of concepts, strategic planning, guidelines, oversight, etc at national and regional levels. The technical and management assistance will strengthen the program planning, implementation, oversight through technical and management inputs for M&E, procurement and supply chain management, BCC, Public Private Partnership, training, finance management. In addition, training/capacity building will be a major responsibility. Further, finalizing research and survey protocols, tools, etc will also be included under the TA. Ideally, such support system shoukd be an integral component of the national program framework. Hence, continuous efforts will be made to build program capacity in the long run for sustainability.

The national program has difficulty in recruiting and retaining staff with appropriate capacities over the tenure of the Round 4 GFATM project and hence desires to seek the TA through the WHO (India), as is being done now under Round 4 GFATM grant. Under NVBDCP, as the desired objectives of scaling up of interventions for universal coverage is being targeted, several manuals, technical guidelines, protocols, etc are in the process of finalization. In addition, hands on technical inputs are provided for efficient program implementation including surveillance, M&E. The entire Technical Assistance component that will be vested with the WHO are detailed in Annexure 12.

Assessment of this TA is currently being done on monthly and yearly basis. The proposed TA under the Round 9 project will also follow the same pattern of evaluation.

Further, The epidemiological and operational situations are extremely difficult in most of the areas of the

north-east. It is not physically possible for limited staff of NVBDCP directorate to provide adequate, differentiated support to this region. This makes it necessary to establish a regional technical and management assistance team to support the sub national malaria control efforts in the NE states. Field research program to assess the highly variable operational and technical determinants relevant to malaria control will be an essential element of this TA in addition to other responsibilities. Under IMCP—II, it is proposed to set up a regional resource team for malaria control in the north-east region. This team will be based in Guwahati in Assam state, where it would link up with the existing MOHFW Regional Offices, PR1, PR2, SRs, for TA (epidemiology, entomology, M&E, BCC/Public Private Partnership, training). NE states. The terms of reference for the proposed regional team are presented in section 4.5.1, SDA 4.1. At the end of IMCP II, this team is expected to be integrated with existing government structures, at regional/state/national offices, possibly through NRHM, or other such mechanism, etc.

Likewise, TA is planned for PR2 as well to provide technical inputs, prepare guidelines, etc. Management of grant, oversight and governance, implementation guidance to different levels especially on community organization, BCC, etc will also be key elements. Such TA will be contracted as per their standard procedures.

The program evaluations proposed under the Round 9 project in Year 2, Year 4 as well as the joint monitoring mission will assess these TA.

4.10. Management of pharmaceutical and health products

4.10.1. Scope of Round 9 proposal	
Does this proposal seek funding for any pharmaceutical and/or health products?	☐ **No** ➔ ***Go to s.4B if relevant, or direct to s.5.***
	☒ **Yes** ➔ ***Continue on to answer s.4.10.2.***

4.10.2. Table of roles and responsibilities

Provide as complete details as possible. *(e.g., the Ministry of Health may be the organization responsible for the 'Coordination' activity, and their 'role' is Principal Recipient in this proposal). If a function will be outsourced, identify this in the second column and provide the name of the planned outsourced provider.*

Activity	Which organizations and/or departments are responsible for this function? *(Identify if Ministry of Health, or Department of Disease Control, or Ministry of Finance, or non-governmental partner, or technical partner.)*	In this proposal what is the role of the organization responsible for this function? *(Identify if Principal Recipient, sub-recipient, Procurement Agent, Storage Agent, Supply Management Agent, etc.)*	Does this proposal request funding for additional staff or technical assistance
Procurement policies & systems	Ministry of Health and Family Welfare/NVBDCP	Principal Recipient/National Program for Malaria Control	☒ Yes ☐ No
Intellectual property rights	Ministry of Health and Family Welfare/	Principal Recipient	☐ Yes ☒ No
Quality assurance and quality control	UNOPS NVBDCP NIMR ROH&FW (Guwahati, Imphal, Kolkata, Shillong) State Malaria Control Departments	Procurement agent National Program for Malaria Control National Institution for Malaria Research GoI Regional Offices for Malaria Control Coordination and Monitoring Departments for Malaria Control Program under respective Provincial Governments	☒ Yes ☐ No
Management and coordination *More details required in s.4.10.3.*	Ministry of Health and Family Welfare/NVBDCP UNOPS	Principal Recipient/National Program for Malaria Control Procurement Agency	☒ Yes ☐ No
Product selection	Ministry of Health and Family Welfare (Procurement	Principal Recipient/National Program for Malaria Control	☒ Yes

	Committee)/NVBDCP		☐ No
Management Information Systems (MIS)	NVBDCP/Tata Consultancy Services	National Program for Malaria Control/MIS Agency contracted by NVBDCP	☒ Yes ☐ No
Forecasting	NVBDCP State Malaria Control Departments	National Program for Malaria Control Departments for Malaria Control Program under respective Provincial Governments	☒ Yes ☐ No
Procurement and planning	Ministry of Health and Family Welfare/NVBDCP	Principal Recipient/National Program for Malaria Control	☒ Yes ☐ No
Storage and inventory management *More details required in s.4.10.4*	NVBDCP State Malaria Control Departments District Malaria Control Departments Caritas India	National Program for Malaria Control Departments for Malaria Control Program in state (province) under respective state (provincial) Governments District level Malaria Control Program under respective state (Provincial) Governments Principal Recipient 2	☒ Yes ☐ No
Distribution to other stores and end-users *More details required in s.4.10.4*	NVBDCP Caritas India	National Program for Malaria Control Principal Recipient 2	Yes ☐ No
Ensuring rational use and patient safety (pharmacovigilance)	NVBDCP NIMR State Malaria Control Departments DCGI	National Program for Malaria Control National Institution for Malaria Research Departments for Malaria Control Program in state (province) under respective state (provincial) Governments Drug Controller General of India	☐ Yes ☒ No

4.10.3. Past management experience

What is the past experience of each organization that will manage the process of procuring, storing and overseeing distribution of pharmaceutical and health products?

Organization Name	PR, sub-recipient, or agent?	Total value procured during last financial year *(Same currency as on cover of proposal)*
NVBDCP	PR1	61.72 million US$
CARITAS	PR2	1.25 Million US$
Note: Under the Round 9 proposal, the PR2 is not procuring any health product, equipment, etc.		
[use the "Tab" key to add extra rows if more than four organizations will be involved in the management of this work]		

4.10.4. Alignment with existing systems

Describe the extent to which this proposal uses existing country systems for the management of the additional pharmaceutical and health product activities that are planned, including pharmacovigilance systems. If existing systems are not used, explain why.

To achieve the project goals and objectives, this proposal intends to procure such health and pharmaceutical products as, LLIN, RDT, ACT, injectable Artemisinin derivatives. Existing systems will be used for management of the additional products including distribution up to the end users. While PR1 will be involved in procurement and supply, PR2 along with SRs will be involved in distribution mechanism at sub-district levels in their proposed project areas.

Subsequent to procurement the products will be dispatched to the consignee—state, and where possible, districts as per NVBDCP procurement policy. The country has several storage and inventory facilities. At the national level there are 7 regional Government Medical Store depots (GMSDs). These depots store and supply drugs, products and commodities to various states. At the state-level there are government owned warehouses/stores for stocking. Based on the need of various districts in each state, drugs and products are distributed to district headquarters, which again have storage facilities. The storage facilities are available down to the sub centre. At village level, drugs and diagnostics are kept with ASHA (her home). In situations where adequate warehousing facility does not exist, provision of renting private storage space is also available. Transportation of goods is undertaken through both government-owned and private transport facilities. The NVBDCP has also developed operational guide for supply chain management including stores and inventory management. Under NRHM, infrastructural capacities are being augmented. The government has adequate personnel and logistical management systems to ensure supplies right up to the periphery.

For safe and responsible scale up of the national malaria control program, pharmacovigilance of ACT and other anti malarials is an important component. The NIMR in consultation with the All India Institute of Medical Sciences (the nodal centre for pharmacovigilance) is commencing an active pharmacovigilance (cohort event monitoring) pilot with World Bank funding that will include collection of reports of adverse drug reactions from identified sites. Following this pilot, NVBDCP will consider coordination with CDSCO under the Drug Controller General of India for establishing a robust pharmacovigilance system for anti malarials through spontaneous ADR reporting.

4.10.5. Storage and distribution systems

(a) Which organization(s) have primary responsibility to provide storage and distribution services under this proposal?

- ☉ For NVBDCP/states/districts, the primary responsibility will be of the national medical stores or equivalent--six govt. medical store depots (GMSDs) at Guwahati, Kolkata, Hyderabad, Chennai, Mumbai and Karnal; in addition to the State Drug store at the state level and District Drug store at the district level.

  The PR2 consortium has a storage and distribution system which will be utilized for LLIN distribution, etc in their project areas.

- ☉ Sub-contracted national organization(s): Currently, Strategic Alliance Management Services (with World Bank Funding) is contracted for year 2009—2010 by NVBDCP. [Hiring of an agency for logistics supply chain management in the country up to 2013 is planned with World Bank funding. This agency will cover the proposed Round 9 project states. Subsequently, alternative agencies catering for NRHM, etc will be considered]

- ☉ Sub-contracted international organization(s): UNOPS

- ☉ Other: District health care delivery system

(b) For storage partners, what is each organization's current **storage capacity** for pharmaceutical and health products? If this proposal represents a significant change in the volume of products to be stored, estimate the relative change in percent, and explain what plans are in place to ensure increased capacity.

The public sector health system comprises national medical stores or equivalent--six govt. medical store depots (GMSDs) at Guwahati, Kolkata, Hyderabad, Chennai, Mumbai and Karnal; in addition to the State Drug store at the state level and District Drug store at the district level. Storage capacities exist right up to village level. However, if necessary, there is also provision of renting storage space. Efficient inventory management is an essential element at these facilities. Further, under NRHM additional state level warehouses are also available. This storage capacity however, needs further improvement at the district/CHC/PHC/Subcentre levels in some areas. In situations where adequate warehousing/storage facility does not exist, the respective departments are entitled to rent private facilities for storing.

As the storage and distribution mechanisms are integrated within the government system, different options are thus available to NVBDCP. The procurement Agencies hired by NVBDCP has the primary responsibility to ensure that the products get distributed to the respective consignees (States/GMSDs) by the suppliers and the storage is in the above mentioned stores. Under the or Round 9, assistance has been requested for renting storage space at different levels, where the existing facilities are not adequate.

At different levels of storage and distribution, NVBDCP/states ensure quality control of health products, medicines. This will be one of the primary responsibilities of the hired logistics management agency with World Bank funding.

The PR2--Caritas India and its consortium partners also have an existing system for storage of products, in the proposed project area at the district/sub-district levels. It is proposed that the existing system will be used for health products (LLIN), etc up to the villages.

Under the Round 9 project, renting of storage space of health products are proposed.

(c) For distribution partners, what is each organization's **current distribution capacity** for pharmaceutical and health products? If this proposal represents a significant change in the volume of products to be distributed or the area(s) where distribution will occur, estimate the relative change in percent, and explain what plans are in place to ensure increased capacity.

The public sector health system has an existing distribution mechanism that includes storage space at different levels and available modes of transportation from one point to another. From the procurement agency, drugs & health products get distributed to the state drug stores/ warehouses/rented storage space and from there to the district drug stores/rented storage space. Certain amount of buffer is maintained at the Govt. medical store depots (GMSDs). The district stores in turn distribute to the block level (CHC/PHC) from where the products go out to the end point of distribution--villages. Transportation of products is undertaken through both government-owned and private transport facilities. A professional agency has been hired (2009-10) by the Directorate of NVBDCP to supervise and monitor the distribution system at the state/district/CHC and PHC levels. Under the Round 9 project, renting of storage space and hiring of vehicles for transportation of health products are proposed.

The PR2--Caritas India and its consortium partners also have an existing system for distribution, inventory management of products in the proposed project area at the district/sub-district levels. It is proposed that these organizations will take over storage and distribution of health products (LLIN) to the villages from the public sector storage at district level.

Under the Round 9 project, renting of storage space and hiring of vehicles for transportation of health products are proposed.

4.10.6. Pharmaceutical and health products for initial two years

Complete '**Attachment B-Malaria**' **to this Proposal Form**, to list all of the pharmaceutical and health products that are requested to be funded through this proposal.

Also include the expected costs per unit, and information on the existing 'Standard Treatment Guidelines ('STGs'). **However**, if the pharmaceutical products included in 'Attachment B-Malaria' are not included in the current national, institutional or World Health Organization STGs, or Essential Medicines Lists ('EMLs'), describe below the STGs that are planned to be utilized, and the rationale for their use.

The list of health products and medicines (including their unit costs) requested under the Round 9 proposal has been mentioned separately in **Attachment B** (Annexure 13).

Briefly, these include:
Pharmaceuticals products (medicines): This consists of ACT blister packs for the four pediatric age groups and one for adults. This category also consists of Artemisinin derivative injectables for managing severe malaria cases. Standard Treatment Guidelines for treating/managing malaria cases are available with the NVBDCP under the National Drug Policy 2008 (refer to Annual Report--Annexure 3)

The quantum of ACT, Artemisinin Derivative injectables and unit costs are provided in the following table:

Year	1	2	3	4	5
ACT (blister pack adult) (in millions)	0.51	0.27	0.26	0.26	0.516
Unit Cost of ACT (US$)	1.5	1.5	1.5	1.5	1.5
ACT (blister pack children) (in millions)	0.34	0.17	0.179	0.176	0.334
Unit Cost of ACT (US$)	1.26	1.26	1.26	1.26	1.26
Artemisinin Derivative injectables (in millions)	0.021	0.019	0.018	0.016	0.031

Unit Cost (US$)	1.49	1.49	1.49	1.49	1.49

Health products--Rapid Diagnostic Tests (RDTs); Long-lasting Insecticidal Nets (LLINs). The operational manual available with NVBDCP provides details on these products (Annexure 6).

The quantum of LLIN and RDT and unit costs are provided in the following table:

Year	1	2	3	4	5
LLIN (in millions)	0.5	1.5	3.2	0.9	1.6
Unit Cost per LLIN (US$)	5	5	5	5	5
RDT (in millions)	4.12	4.18	4.25	4.32	4.39
Unit Cost of RDT (US$)	0.42	0.42	0.42	0.42	0.42

4B. PROGRAM DESCRIPTION – HSS CROSS-CUTTING INTERVENTIONS

Optional section for applicants

SECTION 4B CAN ONLY BE INCLUDED IN ONE DISEASE IN ROUND 9 and only if:

- *The applicant has identified gaps and constraints in the health system that have an impact on HIV, tuberculosis and malaria outcomes;*
- *The interventions required to respond to these gaps and constraints are 'cross-cutting' and benefit more than one of the three diseases (and perhaps also benefit other health outcomes); and*
- *Section 4B is not also included in the tuberculosis or HIV proposal*

Read the Round 9 Guidelines to consider including HSS cross-cutting interventions.

'Section 4B' can be downloaded from the Global Fund's website here if the applicant intends to apply for 'Health systems strengthening cross-cutting interventions' ('HSS cross-cutting interventions').

5. FUNDING REQUEST

5.1. Financial gap analysis - Malaria

➔ *Summary Information provided in the table below should be explained further in sections 5.1.1 – 5.1.3 below.*

Financial gap analysis *(same currency as identified on proposal coversheet)* **Note ➔ Adjust headings** (as necessary) **in tables from calendar years to financial years (e.g., FY ending 2008 etc.) to align with national planning and fiscal periods**								
	Actual		**Planned**		**Estimated**			
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Malaria program funding needs to deliver comprehensive prevention, treatment and care and support services to target populations								
Line A ➔ Provide annual amounts		**143,352,905**	**201,865,556**	**193,765,506**	**249,575,341**	**251,063,411**	**170,044,325**	**201,527,158**
Line A.1 ➔ Total need over length of Round 9 Funding Request				*(combined total need over Round 9 proposal term)*				
Current and future resources to meet financial need								
Domestic source **B1**: Loans and debt relief (*provide name of source*)								
Domestic source **B2** National funding resources	55,889,459	48,436,472	55,473,913	48,078,261	63,475,000	80,276,250	149,012,688	171,364,591
Domestic source **B3** Private Sector contributions (national)								
Total of Line B entries ➔ Total current & planned DOMESTIC (including debt relief) resources:	**55,889,459**	**48,436,472**	**55,473,913**	**48,078,261**	**63,475,000**	**80,276,250**	**149,012,688**	**171,364,591**

ROUND 9 – Malaria

Financial gap analysis *(same currency as identified on proposal coversheet)* **Note ➔ Adjust headings** (as necessary) **in tables from calendar years to financial years (e.g., FY ending 2008 etc.) to align with national planning and fiscal periods**								
	Actual		**Planned**		**Estimated**			
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
External source **C 1** (*World Bank- National Vector Borne Disease Control & Polio Eradication Support*)		24,000,000	40,900,000	49,900,000	49,200,000	49,300,000		
External source **C2** (*provide source name*)								
External source **C3** Private Sector contributions (International)								
Total of Line C entries ➔ Total current & planned EXTERNAL (non-Global Fund grant) resources:		**24,000,000**	**40,900,000**	**49,900,000**	**49,200,000**	**49,300,000**		
In line D below, insert additional separate lines for each separate Global Fund grant. This will ensure that you show information on different Global Fund grants.								
Line D: Annual value of all existing Global Fund grants for same disease: Include unsigned 'Phase 2' amounts as "planned" amounts in relevant years	8904019	6520050						
Line E ➔ Total current and planned resources (i.e. Line E = Line B total + Line C total + Lind D Total)	64,793,478	78,956,522	96,373,913	97,978,261	112,675,000	129,576,250	149,012,688	171,364,591
Calculation of gap in financial resources and summary of total funding requested in Round 9 *(to be supported by detailed budget)*								
Line F ➔ Total funding gap (i.e. Line F = Line A – Line E)		**64,396,383**	**105,491,643**	**95,787,245**	**136,900,341**	**121,487,161**	**21,031,637**	**30,162,567**

ROUND 9 – Malaria

Financial gap analysis *(same currency as identified on proposal coversheet)* **Note ➔ Adjust headings** (as necessary) **in tables from calendar years to financial years (e.g., FY ending 2008 etc.) to align with national planning and fiscal periods**								
	Actual		**Planned**		**Estimated**			
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Line G = Round 9 malaria funding request *(same amount as requested in table 5.3 for this disease)*				**16,190,073**	**21,915,532**	**33,709,129**	**18,289,081**	**23,576,364**

Part H – 'Cost Sharing' calculation for Lower-middle income and Upper-middle income applicants

In Round 9, the total maximum funding request for malaria in Line G is:

*(a) For **Lower-Middle income countries**, an amount that results in the Global Fund's overall contribution (all grants) to the national program reaching not more than 65% of the national disease program funding needs over the proposal term; and*

*(b) For **Upper-Middle income countries**, an amount that results in the Global Fund overall contribution (all grants) to the national program reaching not more than 35% of the national disease program funding needs over the proposal term.*

Line H ➔ **Cost Sharing calculation as a percentage (%) of overall funding from Global Fund** **Cost sharing = (Total of Line D entries over 2010-2014 period + Line G Total) X 100** **Line A.1**	**9.15%**

5.1.1. Explanation of financial needs – LINE A in table 5.1

Explain how the annual amounts were:

- developed *(e.g., through costed national strategies, a Medium Term Expenditure Framework [MTEF], or other basis);* and
- budgeted in a way that ensures that government, non-government and community needs were included to ensure fully implementation of country's malaria program strategies.

The country has a five-year planning cycle for all sectors including the health sector. This is undertaken by the Planning Commission of India. The current planning cycle is from 2007 to 2012. The five-year plans commit the outlays for health sector including all the national health programs. The outlay for malaria (in million US$) is as follows:

	2007-08	2008-09	2009-10	2010-11	2011-12	Total
Malaria						
Total in USD (in millions)*	66.39	64.79	78.95	96.37	97.97	404.5

**Conversion Factor 1USD =46INR*

The above amount is the committed outlay and does not reflect the actual need of the country for malaria control.

NVBDCP, as the national-level lead agency has estimated the resources required for malaria control in the country. This is based on the estimated need at the national and state governments. The country has a policy for assistance (cost-sharing) between Centre and State governments, which is as follows:

Funding Pattern

Sl. No.	States/UTs	**Central Govt. (operational cost)**	**State Govt.**	**World Bank/GFATM**
1.	North Eastern States (7)	100%		
2.	Remaining rural areas	50%	50%	
3.	Hard core areas in 24 states (for malaria)	50%	50%	Additional inputs

Based on the above pattern, NVBDCP has estimated the resource needs for various personnel, commodities (including drugs, insecticides, diagnostic kits) training, BCC, monitoring and evaluation, and operational expenses.

The total expenditure for the previous years and the estimated budget for the next five years are estimated as indicated in table 5.1, Line A. This is based on the estimation of resources as per the strategic planning exercise carried out for the country. Since, the Strategic Action Plan document is yet to be vetted and approved (Annexure 2) by the GOI, the figures are only indicative. This will be final only when approved by the Expenditure and Finance Committee (EFC) of GOI.

The NVBDCP has in the past been only estimating the requirements. The approved allocations from the planning commission were being considered as the resources required. The Strategic Action Plan exercise is the first attempt to estimate the resource requirements for malaria control in the country.

The Strategic Action Plan has been discussed with the states and other stakeholders through consultations at different levels as part of the different meetings held by the NVBDCP as well as during the various meetings held with international forum including the WHO and Roll Back Malaria (RBM) forum towards scaling up for impact.

5.1.2. Domestic funding – 'LINE B' entries in table 5.1
Explain the processes used in country to:

- prioritize domestic financial contributions to the national malaria program *(including HIPC [Heavily Indebted Poor Country] and other debt relief, and grant or loan funds that are contributed through the national budget)*; and
- ensure that domestic resources are utilized efficiently, transparently and equitably, to help implement treatment, prevention, care and support strategies at the national, sub-national and community levels.

The State Implementation plans and the Annual Action Plans are prepared by each state through the health department. The states prepare annual plans based on the national strategy and submit it to NVBDCP for review and approval. NVBDCP reviews and approves the state plans and budgets. The implementation of the state plan is monitored closely by NVBDCP. Apart from the monitoring by the NVBDCP, the states also monitor the implementation of the plan through the state level structures.

The states follow a similar process at the district level and the District Collector (administrative head of the district) reviews the performance for efficient utilization of resources. The district level health societies that include NVBDCP representation also have representation from civil society and representatives from the public to ensure prioritization and transparent fund allocation and its use.

NVBDCP is monitored by the Ministry of Health and Family Welfare (MOHFW) for utilization of domestic resources and the transparency and equitable expenditures. Further the audit carried out by the Comptroller and Auditor General (CAG) also brings out the aspects of efficient utilization of domestic resources.

The plans and outlays of the program are approved by the Expenditure and Finance Committee (EFC) of the Government of India and also the Cabinet Committee of the Government of India (the highest decision making body for any program/project). These committees ensure prioritized utilization of domestic funding and also that the resources are utilized efficiently, transparently and equitably.

The Rights to Information ACT (RTI Act) of the GOI provides the public at large to seek information and analyze the same. This further ensures accountability and efficient use of resources.

5.1.3. External funding *excluding Global Fund* – 'LINE C' entries in table 5.1

Explain any changes in contributions anticipated over the proposal term (*and the reason for any identified reductions in external resources over time)*. Any current delays in accessing the external funding identified in table 5.1 should be explained (including the reason for the delay, and plans to resolve the issue(s)).

The malaria control program is currently being funded by by the world Bank (2008-13) and the ongoing R4 of GFATM grant in addition to the domestic funding. The Round 4 grant period ends in June 2010.

No significant variations from external sources are expected during the proposed project period.

5.2. Detailed Budget

Suggested steps in budget completion:

1. **Submit a detailed proposal budget *in Microsoft Excel format as a clearly numbered annex*.** Wherever possible, use the same numbering for budget line items as the program description.

   - **FOR GUIDANCE ON THE LEVEL OF DETAIL REQUIRED** *(or to use a template if there is no existing in-country detailed budgeting framework)* **refer to the budget information available at the following link:** http://www.theglobalfund.org/en/rounds/9/single/#budget.

2. Ensure the detailed budget is consistent with the detailed workplan of program activities.

3. From that detailed budget, **prepare a** '***Summary by Objective and Service Delivery Area***' (s.5.3.)

4. From the same detailed budget, **prepare a** '***Summary by Cost Category***' (s.5.4.).

5. Do not include any CCM or Sub-CCM operating costs in Round 9. This support is now available through a separate application for funding made direct to the Global Fund (and not funded through grant funds). The application is available at: http://www.theglobalfund.org/en/ccm/

5.3. Summary of detailed budget by objective and service delivery area

Objective Number	Service delivery area *(Use the same numbering as in program description in s.4.5.1.)*	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	ITN	3,167,117	9,272,894	19,536,644	5,650,295	9,876,379	47,503,329
2	Diagnosis	2,135,780	2,210,570	3,039,366	2,259,193	2,295,190	11,940,100
2	Prompt, effective treatment	1,238,006	655,699	648,767	641,453	634,991	3,818,915
3	BCC: Community outreach	2,128,943	855,087	2,092,914	856,166	1,874,868	7,807,977
3	BCC: mass media	84,609	79,569	79,569	79,579	79,579	402,905
4	HSS: Health Work Force (includes Technical Assistance , M&E assistance , Planning and administration assistance ,office infrastructure and equipment)	5,255,399	6,359,521	6,370,441	6,796,532	7,020,242	31,802,134
4	HSS : Information System	678,368	1,614,522	1,231,636	1,279,456	1,431,636	6,235,618
4	Cordination and Patnership development	220,733	325,470	273,356	266,408	220,733	1,306,701
5	HSS: Human resources Training	1,281,117	542,200	436,437	460,000	142,745	2,862,500
	[use "Add Extra Row Below" from "Table" menu in Microsoft Word menu bar to add as many additional rows as required]						
Round 9 malaria funding request:		16,190,073	21,915,532	33,709,129	18,289,081	23,576,364	113,680,179

5.4. Summary of detailed budget by cost category *(Summary information in this table should be further explained in sections 5.4.1 – 5.4.3 below.)*

Summary budget by cost category	Year 1	Year 2	Year 3	Year 4	Year 5	Total--5 years
Human Resources (HR)	1,100,490	2,150,904	2,260,060	2,373,063	2,491,716	10,376,232
Technical & Management Assistance (TMA)	437,875	459,769	482,757	506,895	532,240	2,419,536
Training (TRN)	1,208,637	511,060	394,681	460,000	111,579	2,685,957
Health Products and Health Equipment (HPE)	4,230,400	9,255,600	17,785,000	6,328,421	9,865,263	47,464,684
Pharmaceutical Products (Medicines) [MED]	1,236,729	654,730	647,885	640,723	634,328	3,814,396
Procurement and Supply Management Costs (PSM)	1,060,714	2,228,832	4,791,892	1,581,796	2,306,970	11,970,204
Infrastructure and Other Equipment (IOE)	1,108,256					1,108,256
Communication Materials (COM)	2,359,645	1,055,156	2,288,273	1,041,008	2,070,236	8,814,318
Monitoring and Evaluation (M&E)	2,152,111	3,029,012	2,918,158	3,175,878	3,283,813	14,558,972
Living Support to Clients/Target Population (LIV)						-
Planning and Administration (PA)	1,295,215	2,570,468	2,140,424	2,181,297	2,280,219	10,467,624
Overheads (OH)						-
Other						-
TOTAL	16,190,073	21,915,532	33,709,129	18,289,081	23,576,364	113,680,179

ROUND 9 – Malaria

Summary budget by Implementing Agency)	Year 1	Year 2	Year 3	Year 4	Year 5	Total--5 years
PR1 (MoH)	12,680,688	19,453,511	30,180,087	15,922,598	20,352,300	98,589,184
PR2 (FBO)	3,509,385	2,462,021	3,529,042	2,366,483	3,224,064	15,090,995
Grand Total	16,190,073	21,915,532	33,709,129	18,289,081	23,576,364	113,680,179

5.4.1. Overall budget context

Briefly explain any significant variations in cost categories by year, or significant five year totals for those categories.

There are no significant variations in the cost categories or in their totals over the five year except in year 3 where the cost category and there total increase significantly (due to procurement variations especially LLINs) project period. The first year envisages commencing with the existing facilities with gradual scale up over the next four years. The procurement lead time cycle has been taken into account in the first year and hence the overall spend in the first year is limited to 14% of the overall grant. The second, fourth and the fifth year accounts for 19%, 16% and 21% respectively of the total grant. The third year constitutes 30 % of the overall grant. The significant variations over the years occur due to the procurement pattern adopted and the first year being considered as a formative year.

Health products
Health products consisting Long Lasting Insecticidal Nets (LLIN) and Rapid Diagnostic Tests Kit (RDT) constitute a significant percentage (42%) of the total costs. This is due to the scaling up of coverage of the high risk population in the project area.

Pharmaceutical products (medicines)
This consists of the Artemisinin based Combination Therapy (ACT) that are available in blister packs for five age groups (4 pediatric and 1 adult age group) and includes the reserve inventory that needs to be maintained at different levels. This cost also includes injectable Artemisinin derivatives for treating severe malaria cases. This constitutes about 3% of the total costs.

Procurement and supply chain management
This cost consists of cost of renting of storage space for health products, transportation for moving the health products to the distribution points. The NE region of the country has considerable hilly terrain where the costs for transportation are higher than in the plains. Further, on account of topography and climatic conditions, many parts of NE states face problems of accessibility through the normal transportation modes. This includes cost of processing and handling charges paid to the procurement agency. Hence this cost constitutes 11% of the total costs.

Monitoring and Evaluation
The monitoring and evaluation costs works out to 13%. This includes personnel meant for supervision and monitoring, namely the Malaria Technical Supervisors (MTS) and other district level VBD (malaria) project officers, review meetings at different levels and field travel for follow up and supervision in addition to periodic evaluations.

Communication
For acceptance and adoption of prevention interventions, early recognition of fever and appropriate treatment seeking behavior, treatment adherence as well as mobilizing the community for malaria related issues, communication (BCC) has been considered important and has been planned in an intensified manner. This constitutes 8% of the total costs.

5.4.2. Human resources

In cases where '*human resources*' represents an important share of the budget, summarize: (i) the basis for the budget calculation over the initial two years; (ii) the method of calculating the anticipated costs over years three to five; and (iii) to what extent human resources spending will strengthen service delivery.

(Useful information to support the assumptions to be set out in the detailed budget includes: a list of the proposed positions that is consistent with assumptions on hours, salary etc included in the detailed budget; and the proportion (in percentage terms) of time that will be allocated to the work under this proposal.

➔ *Attach supporting information as a clearly named and numbered annex*

The Human resources component is not a significant category in terms of costs and constitutes only 9% of the overall grant. This consists of the program/grant management personnel for both PRs and the logistics and supply management personnel at the different levels of the health system namely National, State and District levels. These costs are in line with the existing cost structure of NVBDCP. The list of human resources is provided in Annexure 9.

5.4.3. Other large expenditure items

If other 'cost categories' represent important amounts in the summary in table 5.4, (i) explain the basis for the budget calculation of those amounts. Also explain how this contribution is important to implementation of the national malaria program.

➔ *Attach supporting information as a clearly named and numbered annex*

The cost categories that significantly contribute to the overall budget are mentioned below.

Health products: A significant cost category is the health products and health equipment consisting of LLIN and Rapid Diagnostic Test kits. The quantum of LLIN 7.7 million required is based on the estimated high risk population (registering API ≥ 2) to be covered by LLIN in the project area [as shown in section 4.4 as Round 9 priority and section 4.5.1 (Objective 1, SDA 1.1)].

The requirement of RDT is based on the estimate that 50% of the population live in areas without easy access to microscopy facilities [as shown in section 4.4 and section 4.5.1 (Objective 2, SDA 2.1)]

The quantum of LLIN and RDT and unit costs are provided in the following table:

Year	1	2	3	4	5
LLIN (in millions)	0.5	1.5	3.2	0.9	1.6
Unit Cost per LLIN (US$)	5	5	5	5	5
RDT (in millions)	4.12	4.18	4.25	4.32	4.39
Unit Cost of RDT (US$)	0.42	0.42	0.42	0.42	0.42

Pharmaceuticals products (medicines): This consists of ACT blister packs for the four pediatric age groups and one for adults. This category also consists of Injectables Artemisinin Derivative for managing severe malaria cases.

The quantum of ACT, injectables Artemisinin derivative and unit costs are provided in the following table:

Year	1	2	3	4	5
ACT (blister pack adult) (in millions)	0.51	0.27	0.26	0.26	0.52
Unit Cost of ACT (US$)	1.52	1.52	1.52	1.52	1.52
ACT (blister pack children) (in millions)	0.34	0.17	0.179	0.176	0.334
Unit Cost of ACT (US$)	1.26	1.26	1.26	1.26	1.26
Injectable	0.021	0.019	0.018	0.016	0.031

Artemisinin derivatives (in millions)					
Unit Cost (US$)	1.49	1.49	1.49	1.49	1.49

Monitoring and Evaluation
This consists of the personnel at different levels who have the responsibility for supervision and monitoring as well as the cost for their travel; review meetings; and periodic evaluations. The costs have been calculated as per the existing norms adopted for project under the World Bank funding.

Communication
This consists of Inter Personal Communication (IPC), community outreach activities like, infotainment sessions, miking, wall painting, etc as well as use of radio (mass media) with intensification during the transmission season. The costs included under this are adaptation of the materials and messages available with the national program including those developed under the World Bank funded project to the local cultural and contextual requirements as well as translation in the local languages/dialects to meet the requirements of the local area.

5.5. Funding requests in the context of a common funding mechanism

In this section, **common funding mechanism** refers to situations where all funding is contributed into a common fund for distribution to implementing partners.

Do not complete this section if the country pools, for example, procurement efforts, but all other funding is managed separately.

5.5.1. Operational status of common funding mechanism

Briefly summarize the main features of the common funding mechanism, including the fund's name, objectives, governance structure and key partners.
➔ *Attach, as clearly named and numbered annexes to your proposal**,** the memorandum of understanding, joint Monitoring and Evaluation procedures, the latest annual review, accountability procedures, list of key partners, etc**.***

Not applicable

5.5.2. Measuring performance

How often is program performance measured by the common funding mechanism? Explain whether program performance influences financial contributions to the common fund.

Not applicable

5.5.3 Additionality of Global Fund request

Explain how the funding requested in this proposal (*if approved*) will contribute to the achievement of outputs and outcomes that would not otherwise have been supported by resources currently or planned to be available to the common funding mechanism.
If the focus of the common fund is broader than the malaria program, applicants must explain the process by which they will ensure that funds requested will contribute towards achieving impact on malaria outcomes during the proposal term.

Not applicable

5B. FUNDING REQUEST – HSS CROSS-CUTTING INTERVENTIONS

Applying for funding for HSS cross-cutting interventions is optional in Round 9

SECTION 5B CAN ONLY BE INCLUDED IN ***ONE DISEASE*** *IN ROUND 9 and only if this disease includes the applicant's programmatic description of HSS cross-cutting interventions in s.4B.*

Read the Round 9 Guidelines to consider including HSS cross-cutting interventions

Download 'Section 5B' from the Global Fund website here if the applicant intends to apply for 'Health systems strengthening cross-cutting interventions' ('HSS cross-cutting interventions') ***in Round 9 and has completed section 4B and included that section in the Malaria proposal sections.***

Proposal checklist – Section 3 to 5 Malaria

Section 3 and 4: Program Description		**List Annex Name and Number**
4.1	Supporting documentation for National Strategy	
4.2.1	Map if proposal targets specific region/population group	
4.3.2	Any recent report on health system weaknesses and gaps that impact outcomes for the three diseases (and beyond if it exists).	
4.4	Document(s) that explain basis for coverage targets	
4.5.1	**A completed '*Performance Framework'* by disease** **Refer to the M&E Toolkit for help in completing this table**.	**Attachment A**
4.5.1	**A detailed component Work Plan** (quarterly information for the first two years and annual information for years 3, 4 and 5) by disease.	**Work plan**
4.5.2	**A copy of the Technical Review Panel (TRP) Review Form** for unapproved Round 7 or Round 8 proposals (only if relevant).	
4.8.1	**A recent evaluation of the 'Impact Measurement Systems'** as relevant to the proposal (if one exists)	
4.9.1	**A recent assessment of the Principal Recipient capacities** (other than Global Fund Grant Performance Report).	
4.9.1 *(for non-CCM applicants)*	**Document describing the organization such as: official registration papers, summary of recent history of organization, management team information**	
4.9.2	**List of sub-recipients already identified** (including name, sector they represent, and SDA(s) most relevant to their activities during the proposal term)	
4.10.6	**A completed 'List of Pharmaceutical and Health Products'** by disease (if applicable).	**Attachment B**
Section 4B: HSS Cross-cutting (once only in whole country proposal)		**List Annex Name and Number**
4B.2	**A completed separate HSS cross-cutting '*Performance Framework' (or add a separate "worksheet" to the disease 'Performance Framework' under which s. 4B is submitted)*** **Refer to the M&E Toolkit for help in completing this table**.	**Attachment A**
4B.2	**A detailed separate HSS cross-cutting Work Plan *(or add a separate "worksheet" to the disease Work Plan under which s. 4B is submitted)*** (quarterly information for the first two years and annual information for years 3, 4 and 5).	**Work plan**
Section 5: Financial Information		**List Annex Name and Number**
5.2	**A 'detailed budget' (quarterly information for the first two years, and annual information for years 3, 4 and 5)**	**Detailed Budget**
5.4.2	Information on basis for budget calculation and diagram and/or list of planned human resources funded by proposal (only if relevant)	
5.4.3	Information on basis of costing for 'large cost category' items	
5.5.1 *(if common funding mechanism)*	Documentation describing the functioning of the common funding mechanism	
5.5.2 *(if common*	Most recent assessment of the performance of the common funding mechanism	

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funding mechanism)		
Section 5B: HSS Cross-cutting financial information		**List Annex Name and Number**
5B.1	**A separate HSS cross-cutting 'detailed budget' *(or add a separate "worksheet" to the disease 'detailed budget' under which s. 4B is submitted).* Quarterly information for the first two years, and annual information for years 3, 4 and 5).**	**Detailed Budget**
5B.4.2	Information on basis for budget calculation and diagram and/or list of planned human resources funded by proposal (only if relevant)	
5B.4.3	Information on basis of costing for 'large cost category' items	
Other documents relevant to sections 3, 4 and 5 attached by Applicant:		**List Annex Name and Number**

Proposal checklist – Section 3 to 5 Malaria

GLOSSARY

NATIONAL RURAL HEALTH MISSION (2005-2012) is a milestone in the country's response to address local health needs in priority intervention areas. The main aim of NRHM is to provide accessible, affordable, accountable, effective and reliable primary health care facilities, especially, to the poor and vulnerable sections of the populations. It also aims at bridging the gap in Rural Health care services through creation of a cadre of female volunteers known as Accredited Social Health Activists (ASHAs) and improved hospital care, decentralization of programme to district level to improve intra and inter-sectoral convergence and effective utilization of resources. The Mission seeks to provide effective healthcare to rural population throughout the country with special focus on 18 states, which have weak public health indicators and/or weak infrastructure. These 18 States are Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Jammu & Kashmir, Manipur, Mizoram, Meghalaya, Madhya Pradesh, Nagaland, Orissa, Rajasthan, Sikkim, Tripura, Uttaranchal and Uttar Pradesh. The Mission is an articulation of the commitment of the Government to raise public spending on Health from 0.9% of GDP to 2-3% of GDP. The NRHM seeks to:

- Undertake architectural correction of the health system to enable it to effectively handle increased allocations as promised under the National Common Minimum Program and promote policies that strengthen public health management and service delivery in the country.
- Provision of a female health activist in each village (ASHA)
- A village health plan prepared through a local team headed by the Health & Sanitation
- Committee of the Panchayat
- Strengthen rural hospitals for effective curative care and made measurable and accountable to the community through Indian Public Health Standards (IPHS)
- Integration of vertical Health & Family Welfare Programmes and Funds for optimal utilisation of funds and infrastructure and strengthening delivery of primary healthcare
- Revitalize local health traditions and mainstream AYUSH into the public health system.
- Integrate health concerns with determinants of health like sanitation & hygiene, nutrition, and safe drinking water through a District Plan for Health.
- Decentralize programs for district management of health.
- Address the inter-State and inter-district disparities, especially among the 18 high focus States, including unmet needs for public health infrastructure.
- Define time-bound goals and report publicly on their progress.
- Improve access of rural people, especially poor women and children, to equitable, affordable, accountable and effective primary healthcare.

ASHA (Accredited Social Health Activist)/Community health volunteer. ASHA is a village level, honourary, female volunteer under the NRHM. ASHA is chosen by and accountable to the Panchayat to act as interface between the community and the public health system. She receives performance-based compensation for promoting re-impregnation of bed-nets, malaria case management, universal immunization, referral and escort services for RCH, construction of household toilets, and other healthcare delivery programs.

VILLAGE HEALTH AND SANITATION COMMITTEES are being established under NRHM at village level consisting of Panchayat Representative/s, ANM/MPW, Anganwadi worker, teacher, ASHA, community health volunteers. The committees are being empowered to involve in planning, management and monitoring of programmes; and promote greater community participation in healthcare.

LOCAL SELF GOVERNMENT (PANCHAYAT RAJ) is the administrative body at the village level called as the "Gram Panchayat". Each Gram Panchayat covers a large village or a cluster of smaller villages with a combined population exceeding 500.

Proposal checklist – Section 3 to 5 Malaria

VILLAGE is the smallest geo-political/administrative division in India. The population of a village is typically 1000 inhabitants.

DISTRICT is geo-political unit--an administrative division within an Indian state (province) or territory. There are over 600 districts in 28 States and 7 Union Territories in India. The population of a district is typically between 1 and 1.5 million.

RURAL PUBLIC HEALTH CARE SYSTEM--This Indian public health system consists of network of sub-centres, primary health centres, community health centres and district hospitals, as per the following population norms:

Centre	Population Norms	
	Plain Area	Hilly/Tribal/Difficult Area
Sub-Centre	5000	3000
Primary Health Centre	30,000	20,000
Community Health Centre	1,20,000	80,000

- The **Sub-Centre (SC)** is the first contact point between the government primary health care service delivery system and the community. Each Sub-Centre is manned by one Auxiliary Nurse Midwife (ANM) and one Male Health Worker/ MPW (M). One Lady Health Worker (LHV) is entrusted with the task of supervision of six Sub-Centres. Sub-Centres are assigned tasks relating to interpersonal communication in order to bring about behavioral change and provide services in relation to maternal and child health, family welfare, nutrition, immunisation, diarrhea control and control of communicable diseases programmes. The Sub-Centres are provided with basic drugs for minor ailments needed for taking care of essential health needs of men, women and children.
- The **Primary Health Centre (PHC)** is the first contact point of the village community with a Medical Officer. The PHCs provide integrated curative and preventive health care to the rural population with emphasis on preventive and promotive aspects of health care. The PHCs are established and maintained by the State Governments under the Minimum Needs Programme (MNP)/ Basic Minimum Services Programme (BMS). At present, a PHC is manned by a Medical Officer supported by 14 paramedical and other staff. It acts as a referral unit for 6 Sub Centres. It has 4 - 6 beds for patients. The activities of PHC involve curative, preventive, primitive and Family Welfare Services.
- The **Community Health Centre (CHC)** is established and maintained by the State Government under MNP/BMS programme. It is manned by four medical specialists i.e. Surgeon, Physician, Gynecologist and Pediatrician supported by 21 paramedical and other staff. It has 30 in-door beds with one OT, X-ray, Labour Room and Laboratory facilities. It serves as a referral centre for 4 PHCs and also provides facilities for obstetric care and specialist consultations.

INTEGRATED VECTOR MANAGEMENT (IVM)—The key features of IVM include:

- Selection of methods based on knowledge of local vector biology, disease transmission and morbidity;
- utilization of a range of interventions, often in combination and synergistically;
- collaboration within the health sector and with other public and private sectors that impact on vector breeding;
- engagement with local communities and other stakeholders;
- a public health regulatory and legislative framework;
- rational use of insecticides;
- good management practices.

The IVM approach takes into account the available health infrastructure and resources and integrates all available and effective measures, whether chemical, biological, or environmental. IVM also encourages an integrated approach to disease control.