

Intervention Area	Current Year (2010)	Planned (within next 5 years)
<b>Case Management</b>		
<u>Diagnosis</u>		
National diagnosis policy (confirmed, clinical)	Confirmation of all suspected malaria cases by microscopy or RDTs in remote areas where microscopy not available; goal for 2010 100% of endemic municipalities in Category A&B provinces (see "Stratification" section below) to be using RDTs according to NMCP guidelines to diagnose where microscopy is not accessible	Microscopy centers and/or RDT sites are sustained and are functional to provide effective diagnosis and ensuring treatment facilities with continuous supply of anti-malarial drugs;  Diagnostic and treatment facilities in each locality are linked into a functional referral network to ensure continuous care and quality services to clients, from their initial point of entry, during the course of diagnosis and treatment up to blood film follow-up; the referral network may need to expand to private facilities if needed;  Curriculum for integrated microscopy services for TB, malaria and other parasitic diseases is in place
Tools (microscopy, RDT, PCR, parasite genotype, algorithm for clinical diagnosis)	Microscopy, Combination Rapid Diagnostic Tests (RDTs) to replace single strain RDTs for Pf used in some endemic provinces; 6 zonal giemsa stain preparatory centers are established	Develop financing mechanism to sustain operations of 4 zonal giemsa centers; roll out of combination RDTs by 2011
Monitoring/QA	Research Institute for Tropical Medicine (RITM) and Department of Health perform monitoring for RDTs; regular inventories to ensure adequacy of drug supplies and ensure optimum storage conditions and to correlate stock levels with drug utilization trends	QA in place
<u>Treatment</u>		
<i>P. vivax</i> – 1 <sup>st</sup> line treatment protocol (radical cure, type, unit, dose); contraindicated populations (type, unit dose)	All confirmed cases to be treated with 3 days chloroquine (CQ) 150 mg base/tablet administered according to body weight at 10 mg base/kg body weight on Days 1 and 2; 5 mg base/kg body weight on Day 3 + 14 days of primaquine (PQ) 15 mg base/tablet administered accdg to body weight at 0.5 mg base/kg body wt/day; PQ contraindicated in infants < 1 yo, pregnant women, patients with G6PD	Aim for appropriate treatment initiation within 24 hours of all confirmed cases

<i>P. vivax</i> – 2 <sup>nd</sup> line treatment protocol	Artemether + lumefantrine (AL)	
<i>P. falciparum</i> – National treatment protocol/policy (type, unit dose)	<p>All confirmed cases to receive artemether + lumefantrine (AL) administered according to body weight:</p> <ul style="list-style-type: none"> <li>• Body weight (wt) 5-14 kg: (20+120 mg) total dose of 6 tabs</li> <li>• Body wt 15-24 kg: (20+120 mg) total dose of 12 tabs</li> <li>• Body wt 25-34 kg:(20+120 mg) total dose of 18 tabs</li> <li>• Body wt 35 kg &amp; above (20+120 mg) total dose of 24 tabs</li> </ul> <p>Plus single dose of primaquine (PQ) 15 mg base/tablet starting on day 4 of treatment administered according to body weight at 0.75 mgbase/kg body weight single dose (day 4)</p> <p>PQ contraindicated in infants &lt; 1yo and pregnant women; AL contraindicated in 1<sup>st</sup> trimester of pregnancy</p> <p>Treatment failure due to AL:</p> <ul style="list-style-type: none"> <li>• Quinine (QN) tablet (300 or 600 mg/tablet) 10 mg/kg body wt every 8 hrs for 7 days PLUS any of the following antibiotics:</li> <li>• Doxycycline (3mg/kg body wt daily for 7 days)</li> <li>• Tetracycline (250 mg 4X a day for 7 days)</li> <li>• Clindamycin (10 mg/kg body wt twice a day for 7 days)</li> </ul>	Will aim for appropriate treatment initiation within 24 hours of all confirmed cases
<i>P. falciparum</i> – Complicated Malaria	Quinine dihydrochloride ampules + either tetracycline (T), clindamycin, or doxycycline; Pre-referral treatment with quinine or artensunate suppository	100% of patients with severe malaria to receive correct treatment at health facilities
Mixed infections – National treatment protocol/policy (type, unit dose)	<ul style="list-style-type: none"> <li>• Pf and Pv: AL for 3 days and PQ for 14 days to start on Day 4</li> </ul>	100% of patients appropriately treated

	<ul style="list-style-type: none"> <li>• Pf and Pm: AL for 3 days and PQ as single dose on Day 4</li> <li>• Pv and Pm: CQ for 3 days and PQ for 14 days to start on Day 4</li> </ul>	
Directly Observed Therapy (DOT) and Case Follow-up (drug adherence)	Usage of Directly Observed Therapy via community health workers is utilized when possible; first dose treatment is supervised immediately upon diagnosis; caregivers of patient given appropriate instructions to complete treatment; follow-up cases, including blood smears	All laboratory-confirmed malaria has to adhere to malaria-DOTs and follow-up blood films (D3, D7, D14, D21 and D28) especially in sporadic and malaria-free areas
G6PD screening	Confirmatory tests of a positive G6PD screening are only run in about 50% of positive cases; newborn screening implemented in 1996, available in all participating health facilities (hospitals, lying-ins, rural health units, health centers); if delivered at home, may be brought to nearest institution offering newborn screening	Newborn Screening Reference Center will prepare defined testing protocols and to begin overseeing quality assurance of the G6PD confirmatory test; G6PD test for adults in place
G6PD prevalence survey	Two preliminary studies (1964 & 2003) (males only) found prevalence from 5.7-6.6%; since inception of newborn screening, G6PD deficiency present at a rate of 1:55 out of over 60,000 babies screened	RITM to finalize G6PD studies in malarious areas
Mass screening & treatment/Focal screening		Allied medical professional programs to be encouraged to develop modules for their students to survey communities, read smears and report cases to enhance detection and provide fieldwork training
Focused Mass Drug Administration (MDA)		
Monitoring/QA	Drug quality monitoring in sentinel sites	<p>Therapeutic Efficacy Surveillance monitoring of currently used anti malaria drugs in sentinel sites.</p> <p>To ensure a functioning quality assurance system for malaria operations: Strengthen QAS or diagnostic and treatment service facilities:</p> <ol style="list-style-type: none"> <li>1. All malaria diagnostic service facilities are covered and participating in the QAS for diagnostic services</li> <li>2. All facilities using DOH recommended anti-</li> </ol>

		<p>malarial drugs and supplies. Improve quality of vector control measures.</p> <p>3. Quality of ITN/LLIN and house spraying in stable and unstable risk areas tracked.</p> <p>4. Susceptibility tests using WHO standard test kit conducted every 2 years in all designated sentinel sites</p> <p>Will use sound management to improve inventory disbursement so that first and second-line drugs are available at all health facilities and third-line drugs are available at hospitals</p>
<b>Chemoprophylaxis</b>		
Prophylaxis - travellers	<p>Doxycycline 100 mg daily for 2 – 3 days before going to an endemic area, continue while in the endemic area and continue for 4 more weeks after leaving the endemic area; contraindicated in children &lt; 8 yrs or pregnant women</p> <p>General advisory to all consultations; pre-exposure prophylaxis is in the guidelines but the program does not procure malaria prophylaxis drugs</p>	
Prophylaxis – high risk populations	Not used	None planned
Prophylaxis – pregnant women	Sulfadoxine/Pyrimethamine 3 tabs each on 2 <sup>nd</sup> & 3 <sup>rd</sup> trimester; advice is given to pregnant women residing in stable transmission area to take prophylaxis	None planned
Intermittent Preventive Treatment – infants (IPTi), Children (IPTc) or in Pregnancy (IPTp)	Not used	None planned
<b>Prevention</b>		
<b>Vector Control</b>		
IRS Strategy (e.g., spatial or temporal rotation)	IRS used as a supplemental vector control strategy to LLINs in areas of stable transmission areas that have no improvement in the reduction of malaria incidence despite a 100% ITN coverage over a 1-year period; and as the primary vector control strategy in areas where bednet use is not culturally acceptable, or in displaced populations and outbreak situations	QA vector activities (see monitoring/QA above); develop integrated inventory tool of malaria commodities/supplies/equipment; continue use in outbreaks and as supplementary control strategy
Insecticides	Main vector <i>An. flavirostris</i> still susceptible to following	QA vector activities (see monitoring/QA above)

	compounds: alphacypermethrin, cyfluthrin, deltamethrin, etofenprox, lambdacyhalothrin, and permethrin	
LLIN	Main vector control strategy is LLIN; distribution focused on endemic municipalities and villages contributing top 80% of cases with goal of 2-3 nets per family; provided free of charge to all	Scale-up ITN coverage (LLIN) of 100% in stable and unstable transmission areas; conduct operations research on LLIN durability specifications; design tracking system of LLIN, replacement and disposal
Expired LLIN collection & replacement	ITNs to be replaced every 2 years; LLINs to be replaced every 3 years	Operations research on disposal options of LLINs; will encourage timely replacement and retreatment
ITN (and insecticides used)	In the past, one ITN per family was provided, but retreatment rate was poor at 14%; current switch to LLINs	Retreatment campaign will occur through encouraging school children to bring existing nets to school to be examined and retreated every 6 months or thereabout; replacement of ITNs to LLINs is ongoing.
Larval control & environmental modification	Stream seeding for biological control by local communities; the “Four o’clock habit,” also known as Operation kaya–kulub (upside down), a government initiative which encourages people to dump their water containers and clean their surroundings to get rid of potential breeding sites	Pilot test environmental modification measures; continue encouragement of environmental and biological control measures as appropriate to complement chemical control (use of larvicide) measures
Prevention of reintroduction	In Category D provinces (malaria-free), maintain surveillance to prevent recurrence through an intensified entomological, clinical surveillance system which specifically uses planned, active case-finding techniques	Category B & C provinces (low endemicity) will focus on delimitation of foci transmission, early outbreak response, radical treatment, case investigation and follow-up, elimination of breeding sites, and continued vector surveillance; IRS spraying once a year in select villages of highly endemic areas with history of high morbidity from outbreaks.  Planning for the incorporation of a serological surveillance system particularly in areas which have reached pre-elimination and elimination phases.
QA	QA of chemicals for mosquito control and other pesticides done by Fertilizer and Pesticide Authority (FPA)	QA vector activities (see monitoring/QA above)  Formulation and development of policies and standard operating procedures on the rational use of insecticides.

Other	Primary vector is <i>An. flavirostris</i> , secondary vectors include <i>An. balabacensis</i> , and <i>An. Litoris</i> ; midwives and community leaders are very involved in the program specifically for vector control (bed nets and IRS)	Pilot test environmental modification measures
<u>Advocacy &amp; Education</u>		
		<p>Objectives include:</p> <p>Increase demand for anti-malaria prevention, diagnosis and treatment services; formulate overall Malaria Program Communication Plan to improve health seeking behaviour of targeted clients according to stratified areas; advocate adaption of Malaria Communication Plan among LGUs; develop capability of identified priority LGUs in the adaption/localization of malaria communication plan; provide TA to LGUs in implementing health promotion activities; develop proto-type IEC materials (e.g. briefers for interpersonal communication); design innovative communication schemes (e.g. community-based and/or school-based promotion, vulnerable groups-focused, etc.); advocacy to LGUs for counterparts and sustainability; develop instructional materials in actual delivery of interventions (e.g. LLIN distribution, IRS, treatment protocol, follow-up smear, etc.); incorporate key messages in the existing diagnosis, case management and treatment and vector control training; evaluate and health promotion activities and outcome</p>
Mass media	Extensive tri-media IEC campaign through orientation of medical personnel, TV & print campaigns with goal of reaching 30% of population; evaluation of procedure and materials of local radio pilot program Malaria School-On-Air in one province	Based on the innovative communication schemes - see above; plan to expand Malaria School-On-Air to other provinces in phased manner; continue radio ads, plug-ins, and special events and campaigns like "Malaria Awareness Day"
IEC/BCC campaigns	Knowledge, attitude, & practices (KAP) surveys given to establish baseline data of target populations in endemic areas in order to develop appropriate IEC materials and	<p>Key messages:</p> <ul style="list-style-type: none"> <li>● Sleep under the nets each night</li> <li>● Blood smear at the start of fever</li> </ul>

	<p>strategies; usage of flipcharts and illustrations for populations with low adult literacy rates; Shell Corporation retail distribution outlets and other corporate partners used for marketing of nets and IEC by ads and posters; community-based NGOs, teachers, volunteers, and health personnel trained on BCC to improve malaria prevention and improve treatment-seeking behavior</p>	<ul style="list-style-type: none"> <li>• Complete the treatment dose</li> </ul> <p>Promotion of social mobilization focusing on core messages of early diagnosis, treatment compliance, and LLIN use through culturally and linguistically appropriate IEC materials developed from KAP survey data; activities will be school-based malaria education activities, village assemblies, and mother's classes for health promotion; &gt;90% of household heads or representatives surveyed to know basic facts about malaria and its prevention through community outreach by 2011</p> <p>Focus messages in malaria-free provinces</p>
Community-based interventions	<p>Training Malaria Advocates/Educators in endemic provinces; strengthen local health capacity to plan and undertake health promotion activities</p>	<p>Working to gain community appreciation and financial support for village microscopy services by integration of malaria microscopy services with TB and other parasitic diseases; mapping out target areas for community-based IEC activities by Malaria Advocates</p>
Other		
<b>Surveillance</b>		
<b>Case detection and reporting</b>		
Case reporting system	<p>DOH National Epidemiology Center has a Health Information System with 2 components: Field Health Services Information System (FHSIS) which is divided to include basic disease program accomplishment reporting and the notifiable disease surveillance system now known as the PIDSR which monitors 22 disease entities at all levels, malaria included) and hospital-based National Epidemic Sentinel Surveillance System (NESSS); village health stations submit data to rural</p>	<p>Malaria program status tracked through routine malaria information system at the national level and in all regions and malaria-endemic provinces and chartered cities</p> <p>Harmonize malaria surveillance &amp; response activities with the Philippine Integrated Disease Surveillance &amp; Response guidelines; incorporate malaria into hospital-based National Epidemic Sentinel</p>

	health units monthly for consolidation; regional Surveillance units submit reports to National Epidemiology Center biannually for FHSIS (currently very slow, a year behind in report generation); Philippine Malaria Information System (PhilMIS) new computerized information system piloted in several endemic districts	Surveillance System (NESSS) to enhance M&E plans; expand adoption of PhilMIS in support to malaria surveillance
Active case detection (ACD)		
Passive case detection (PCD)	Established village (barangay) microscopy centers with provision of microscopes in remote areas where access to healthcare is difficult	Continue training of barangay health workers to maintain surveillance
Case investigation or “re-active surveillance”	Management of malaria foci to include case investigation and immediate notification of cases, >80% IRS coverage, and full coverage with LLINs	
Other surveillance (e.g., surveys)		Train military on combo-RDT is ongoing; set up outposts in military camps to screen military personnel and displaced families
<b>Outbreak (Epidemic) detection and response</b>		
Outbreak/Epidemic Prediction & Response	All outbreaks to be detected within two weeks and managed properly; development of rapid response teams to investigate and coordinate proper control of outbreaks in every region; strengthen four zonal epidemic stockpile centers (insecticides, RDTs, spray cans, PPEs, anti-malarial drugs, reporting forms); PhilMIS to be used as early warning system for possible epidemic outbreaks by detecting increase in number of febrile patients	Aiming for 80% early outbreak detection rate; expansion of 4 zonal stockpiles to 10 regions for epidemic management; explore use of corporate transport channels for supply transfer in epidemic management
<b>Entomological Surveillance</b>		
Surveillance vector species, behaviour, or densities		
<b>Resistance monitoring</b>		
Insecticide and drug resistance activities	Insecticide resistance monitoring through bioassay and susceptibility testing in five geographically diverse sentinel sites; drug resistance testing of first and second-line testing through bioassay & susceptibility testing at six sentinel sites	Continue yearly monitoring of insecticide effectiveness within five most endemic provinces through bioassays

Drug efficacy	Therapeutic efficacy surveillance studies of first and second-line anti-malarial drugs in six sentinel sites performed every two years	Monitor ongoing studies in sentinel sites
<u>Prevention of reintroduction</u>		
		<p>Appropriate key messages and services to sustain their status and prevent the re-introduction of the disease</p> <p>Establish a malaria elimination hub in each province (provinces nearing elimination and malaria-free provinces) to provide diagnostic services, case management services as needed and technical assistance to municipalities (ex: mapping out breeding sites, vector surveillance intensify health promotion to prevent complacency against the disease, active surveillance and immediate response, etc)</p> <p>Develop protocol and guide in the establishment of malaria elimination hub</p>
High risk populations	Pregnant women & children; Internally Displaced Persons (IDPs) affected by armed conflict in Mindanao island chain; large nomadic population moving in between islands and abroad; the socially and economically disadvantaged sector includes those living in remote areas, indigenous peoples, subsistence upland farmers, settlers in frontier areas and workers in the forest industry in the covered provinces where malaria is endemic	<p>Conduct special studies on specific vulnerable groups:</p> <ul style="list-style-type: none"> <li>● displaced populations due to natural disasters and armed conflicts</li> <li>● IP communities</li> <li>● military</li> <li>● forest workers</li> <li>● tourist areas endemic for malaria</li> <li>● Filipino expats going/working in malarious countries</li> </ul> <p>Draft guidelines and package of intervention for each vulnerable group; establish and implement malaria program interventions among identified high risk groups (pilot-test); enhance package and guide based on pilot-test results and experience</p>
Border screening	Consolidation and expansion of early diagnostic and	RDT/Microscopy to be deployed to screen and treat

	treatment services through partnership with faith-based organizations and non-governmental organizations in border areas that are prone to epidemics	cross-border travellers
Cross border collaborations		Strengthen regional cross border collaboration (inter-provincial; inter/intra-municipal borders) for enhanced control of cases and prevent onward transmission
Vector-control specific POR activities		
<b>Program management and health systems</b>		
<b>Program Finance</b>		
National elimination goal (by province, district)	<p>National Objectives for Health 2005-2010</p> <ul style="list-style-type: none"> <li>• At least 70% reduction of malaria morbidity in the Cat. A provinces by 2010 (from 50/100,000 pop. to 15/100,000 pop)</li> <li>• At least 50% reduction of malaria deaths in the 26 Cat. A provinces by 2010 (from 0.11/100,000 to 0.05/100,000 pop)</li> <li>• At least 50% reduction of morbidity &amp; mortality in Cat. B &amp; C provinces by 2010 (from 5.1/100,000 to 2.6/100,000 and 0.07/100,000 to 0.04/100,000 respectively)</li> <li>• To prevent the recurrence of malaria in the malaria-free provinces</li> <li>• To reduce the transmission of malaria in the general population</li> </ul>	<p>The 2011-2016 malaria program medium term development plan is geared towards the vision of a malaria-free Philippines by 2030, with the overall policy direction towards sustained malaria disease elimination in every locality and zones in the country.</p> <ul style="list-style-type: none"> <li>• Review and enhance protocol and guide in assessing and declaring elimination areas</li> <li>• Design and implement an incentive/reward program for provinces and chartered cities declared as malaria-free areas and malaria eliminated zones</li> <li>• Establish validation team to undertake assessment and validation of candidate localities and zones</li> <li>• Disseminate/orient provinces and chartered cities on the criteria and guide in assessing and declaring malaria-free and confirmed malaria-eliminated zones</li> <li>• Undertake validation of malaria-free candidate localities as well as confirmed malaria-eliminated areas and document results</li> <li>• Provide corresponding incentive/rewards</li> </ul>

		<ul style="list-style-type: none"> <li>Monitor malaria situation in declared malaria-free areas and confirmed malaria-eliminated zones on a regular basis</li> </ul>
Funding sources and funding budget from each source	<p>National Government: current \$3,840,909USD/year</p> <p>LGUs: \$100,000 USD/year for all endemic provinces</p> <p>Pilipinas Shell Foundation: \$1,651,592 USD 2006-2010</p> <p>Private sector &amp; other public sector non-health agencies: \$985,000 USD estimated in 2010</p> <p>Global Fund: \$81M USD pledged to date</p>	<p>To sustain financing of anti-malaria efforts at all levels of operations</p> <p>Design and implement clearly-defined cost-sharing mechanism to support malaria elimination and sustain malaria-free status of province and chartered cities</p> <p>Secure non-government financial assistance for stable and unstable risk provinces and chartered cities</p> <p>Build up internal funding to sustain malaria-free status in epidemic-risk and malaria-free provinces</p>
<b>Stratification</b>		
Stratification strategies for defining risk areas, to allocate resources & activities based on the characteristic of disease transmission, trends of occurrence, number of cases and patterns of distribution.	<p>Out of 80 provinces, 22 are malaria-free, and 58 are considered endemic with higher incidence in rainy season (June-December); overall endemicity is considered low with pockets of high endemicity in provincial and regional borders, frontier areas, and areas of socio-political conflict; risk stratification based on 5-year average of cases from 2001-2008 of malaria among provinces as follows:</p> <ul style="list-style-type: none"> <li>Category A Provinces: average of &gt;1000 cases currently at 5 provinces</li> <li>Category B Provinces: average of 100-1000 cases (27 provinces)</li> <li>Category C Provinces: average of &lt;100 cases (26 provinces)</li> <li>Category D Provinces: absence of indigenous</li> </ul>	<p>Scale-up of micro-stratification to village level with transmission patterns defined as:</p> <ol style="list-style-type: none"> <li><u>stable</u> (continuous presence of at least one indigenous malaria case for 6 months or more at any time during the past 3 years);</li> <li><u>unstable</u> (continuous presence of at least one indigenous malaria case for 2–6 months at any time during the past 3 years);</li> <li><u>sporadic</u> (Intermittent presence of at least one indigenous malaria case at any time in the past 5 years); or</li> <li><u>malaria-prone</u>, (Absence of indigenous malaria case for the past 5 years even in the presence of the malaria vector) with allocation of resources to be determined by transmission category;</li> </ol>

	malaria cases (22 provinces)	Focus will be on strengthening all resources for stable transmission zones, for enhancing QA and surveillance for unstable zones, 100% microscopy confirmation and case follow-up for sporadic zones, and event-based surveillance in malaria-free zones
<b>Program structure and organization management</b>		
Program management	<p>Decentralized and run by the Department of Health with public-private initiative; program activities planned and directed by Department of Health under Infectious Disease Office (DOH-IDO); activities cascaded to and carried out by field implementers at Provincial Health Offices and Rural Health Units with technical assistance from the DOH-Center for Health Development and CHD-Provincial Health Team Office. Local Government Units (LGUs) are responsible for delivery of public healthcare services through municipal Rural Health Units (RHUs) and for leading public-private partnerships</p> <p>Currently, local health systems strengthening aimed at strengthening local structures and systems are prioritized as a sustainability mechanism, which involves local capacities to establish inter-sectoral, inter-agency and inter-office collaborations</p>	To capacitate the LGUs to own, manage and sustain the malaria program in their respective localities; stratify and cluster malaria endemic areas into zones as unit for disease elimination measures; enhance malaria surveillance and response, monitoring and evaluation system; strengthen organizational support and coordination mechanism for malaria operations at all levels; strengthen organizational support and coordination mechanism for malaria operations at all levels; local Government Units to take more ownership of Malaria Control Program in agenda-setting and policy making through emphasis of increased socio-economic benefits of malaria control to enhance sustainability and assimilation of village microscopists and technologists into Local Government Units staff
Procurement & supply management	<p>The National Malaria Program distribute program commodities to non Global Fund areas such as drugs, LLIN, insecticides and laboratory supplies and maintain stockpiles in areas declared as malaria free; distribution is done through its existing Logistic Management Systems from the Centers for Health Development, Provincial Health Offices and finally the Municipal and Village levels</p> <p>Pilipinas Shell Foundation (PSFI, see “Partners” category</p>	Improvement of six existing storage facilities & supply chain for better distribution of anti-malarial drugs and commodities with aim for 90% of malaria diagnostic and treatment facilities to not report a stock-out lasting more than a week of anti-malarial drugs, distribution channels of Shell Inc. to be utilized in epidemic management; for the private health facilities, they could access anti-malarial drugs through the designated public or government health facilities for the drugs requirements

	<p>below) responsible for ensuring that sufficient buffer stock is maintained in national and provincial stores, in forecasting drug and commodity requirements, and initiation of procurement process through WHO supply office; distribution from national to provincial levels through Pilipinas Shell Foundation, Local Government Units responsible for distribution to municipal levels; training of logistics staff on drug forecasting, storage &amp; inventory, and procurement from central stores as well as distribution of drugs and supplies from municipal storage to households using innovative strategies such as through school children, NGOs, the Philippine Army, and distribution in congregate settings such as markets or places of worship</p>	
Financial management	<p>The National Program provides financial support of local anti-malaria activities through sub-allotments to the Centers for Health Development throughout the country; Pilipinas Shell Foundation to maintain transparency of Global Fund grants through internal and external audits; Department of Health to train healthcare workers on program planning, budgeting, and management; Department of Health grant assistance to provinces based on performance; lack of funds for Rural Health Units operation is a challenge</p>	<p>Establishment of local and/or community-based health financing schemes to ensure malaria control program sustainability; stewardship and empowerment of Local Government Units to analyse their community's health needs and spending patterns with the eventual goal of tapping local fund sources such as tax revenues &amp; service fees to augment funds for health services</p>
<b>Program integration</b>		
Level of integration of malaria elimination into public health	<p>Integrating malaria into microscopy and treatment services of other public health programs such as TB diagnostic &amp; treatment programs in remote areas; integrating drug procurement, distribution, monitoring, and informatics of malaria programs with other public health initiatives; targeting program activities towards indigenous population via Community Health Initiatives for Indigenous Peoples (CHIIP) that builds on non-health projects such as adult literacy and livelihood programs to deliver holistic intervention packages containing RDTs, ITNs, drugs, and community health education materials</p>	<p>Integration of the malaria control program into local health programs manifested by Local Government Unit budget allocations and community participation in malaria control; Integrate PhilMIS into Field Health Services Information System (FHSIS) of Department of Health to generate FHSIS reports</p>

Personnel		
Reorientation, retraining, or restaffing & capacity development	High turnover of health personnel and mass exodus of health professionals to developed countries; training and refresher courses on malaria diagnosis (microscopy and RDT), clinical management, quality assurance, case management and continuing education for health care givers in all levels of public and private facilities, supported by GF grants; training and capacity building for Local Government Units and local executives through multi-stakeholder workshops on development planning with emphasis on incorporating health concerns in overall development agenda; refresher course for Rural Health Units staff to re-orient workers on malaria case management, as well as increased training for resident physicians in the public health system	Staff development & retention program with appropriate incentives to combat serious problem of “brain drain;” explore option for distance learning education and university stepladder program to provide motivation for health personnel to stay and work in country; increase local capacity to collect, analyze, disseminate, & utilize surveillance data for the prevention, control & elimination
Legal Framework		
Frameworks/policies/regulation/strategic plans	Roll Back Malaria 5 year Strategic Plan 2006-2010; Passage of legal mandates that define Local Government Unit (LGU) action through the Local Health Code, including guidelines on health implementation (provisions on health financing and sustainable local malaria prevention and response activities); there is weak enforcement of laws on development projects in endemic areas; Malaria Program Monitoring and Evaluation Framework, Guide and Tool developed and disseminated	Implementing guidelines for Formula One for Health (F1) as framework for health reforms under areas of financing, regulation, service delivery, and governance; will undertake “disease-free zone initiatives” by targeting areas for intensive campaigns for disease control and detection; DOH to initiate legal framework in form of executive order to ensure funds earmarked for malaria control at local level
Standard Operating Procedures (SOP) – list subject	Treatment: ACTs free of charge in the public sector. Management: The operations manual of the NMCP, based on the policies of GF grants, is currently being finalized. Surveillance: PhilMIS (Philippine Malaria Information System) used in the 25 highly endemic provinces for management decisions through analysis and consolidation of information from all Local Government Units Operational Guidelines of the Technical Working Group	Need to ensure quality assurance of SOPs; establishment referral system between community-based microscopy centers and RDT sites to referral-level hospitals in both public and private health sectors; by 2011, all 25 endemic provinces to use PhilMIS for planning and decision-making; harmonize malaria surveillance & response activities with the disease Surveillance & Response guidelines

	of GFATM: guidelines for field implementation, technical assistance for upgrading capacities, supporting M&E activities, and enhancing overall scientific knowledge to improve NMCP	
<b>Private sector – Providers</b>		
Engagement with formal providers (case management, reporting, other)	Training & technical support for malaria management available for all private practitioners by the DOH	Strengthen collaboration with private sector health facilities, Non-governmental organizations and Faith-based organizations in development of national malaria policy and formation of public-private partnerships (PPPs) to achieve standardization of malaria diagnosis & treatment
Engagement with informal providers (case management, reporting, other)	Barangay microscopists (community volunteers including rural health midwives, teachers) and health workers provide diagnosis, ITN provision, and treatment of rural poor and indigenous mountain populations	Increase advocacy of incentive provision to barangay health workers through LGUs to enhance retention
Training	Training on malaria microscopy and treatment conducted by the pool of trainers in the DOH for all medical technologists and volunteer microscopists; training of hospital physicians in public and private sector on severe malaria case management	Establishment of Public-Private Partnerships in remote areas to reach the population most in need; additional training of microscopists in livelihood skills (e.g., candle-making) as an income supplement to health services via corporate-sponsored microcredit scheme; collaborate with academic institutions of allied medical professions to incorporate courses for fieldwork laboratory experience
Other		Increase funding for community health insurance programs
Monitoring and QA		Integrate private practitioners into private-public partnerships to increase adherence to national diagnosis and treatment guidelines; establish referral network of microscopy centers in public and private sector; private sector to organize community to assure participation of target groups implementation and M&E control & prevention initiatives
<b>Private sector – Companies/Businesses</b>		
Employee or community programs (e.g., medical services, bed net campaigns)	Establishment of private-public-corporate partnership Philippines Movement Against Malaria (KLM) - see	Multi-sectoral partners with non-health public sector agencies and private stakeholders (e.g., logging

	<p>“Partners” below - to support malaria elimination; frame malaria control as a development strategy to gain greater support from the local political leadership</p> <p>Established the Philippine Malaria Network</p>	<p>companies) will strengthen community responsiveness and preparedness for malaria control; expand Movement Against Malaria advocacy to Local Government Units in other provinces to provide increased funding and support for barangay health workers. Increase impact of business retail outlets for bednet social marketing and IEC</p> <p>Expansion and replication of PMN at the Center for Health Development</p>
<b>Partners</b>		
<p>Funding</p>	<p>GFATM: R2-\$51M, R6-\$16M (Tropical Disease Foundation); R5 + consolidated grant : USD36.2M (Pilipinas Shell Foundation)</p> <p>Roll Back Malaria Project (AusAID-WHO)</p>	<p>Advocate for further support from civil society through the Philippine Malaria Network; GF R6 grant consolidation of previous rounds to last through 2011</p>
<p>Implementation (list partners and type of collaboration)</p>	<p><u>Regional Partners:</u></p> <ol style="list-style-type: none"> <li>1. Philippine Malaria Network: information exchange platform, allows corporations to provide logistical contributions</li> <li>2. Asian Collaborative Training Network for Malaria (ACTMalaria)</li> <li>3. PSFI (Pilipinas Shell Foundation, Inc.): currently manages and implements three Global Fund malaria grants</li> </ol> <p><u>Implementing Organizations:</u></p> <ol style="list-style-type: none"> <li>1. Departmental Agencies: Vector-Borne Collaborating Center, Collaborating Center for Disease Prevention and Control</li> <li>2. Universities: Association of Philippine Medical Colleges</li> <li>3. UN: WHO/RBM, UNICEF</li> <li>4. NGOs: Philippine Rural Reconstruction Movement (PRRM), PLAN Philippines, Medical Ambassadors of</li> </ol>	<p>Pilipinas Shell Foundation’s initiatives will spur interest and commitment from other corporations to support malaria control</p>

	<p>the Philippines (MAP), Kisanggo Mo ang Langit Foundation</p> <p>5. Faith-based organizations: include Gawa-Kalinga (clinic-based health activities) and the Salvation Army</p> <p>6. Bilateral development partners included in the GFATM-Malaria proposal are the European Council, GTZ, JICA, CIDA, USAID, AusAID, and US-NAMRU2</p> <p>7. Private or Public/Private: Movement Against Malaria (KLM) in the Palawan Province is a partnership between Shell Philippines Exploration (SPEX) and the RBM Task Force, also partners with DOH-MCP and WHO-RBM, World Vision Development Foundation</p>	
<b>M&amp;E</b>		
M&E Elimination Plan, indicator development	<p>Three-tiered monitoring system (national, regional, provincial); indicators reported to National Malaria Control Programme (NMCP) (diagnostic, treatment, vector control, social mobilization, and program management); regular monitoring through supervisory visits of personnel by the Provincial Health Team Leader and NMCP Coordinator; NMCP also to begin supervising Municipal Health Officers to ensure coordination; Technical Support Groups to be established under National Infectious Diseases Advisory Council under the Department of Health; one at national level, and six at regional level</p>	<p>Continue systematic collection and utilization of data for evidence-based actions as lowest implementing units; PhilMIS to become web-based reporting system for program planning, management, budgeting, and evaluation at all levels; regular field monitoring of MIS system using checklist</p>
QA/QC (diagnosis, supply chain, etc)	<p>Verification of activities and targets through field visits; additional random site selections for verification; long-term technical assistance (LTTA) for QA of diagnostic &amp; management interventions; importation of drugs through WHO assures quality</p>	<p>Improve completion and validity of reported data through PhilMIS; continue development and customization of this system to make more user-friendly; scale-up use to all endemic provinces</p>
<b>Other</b>		

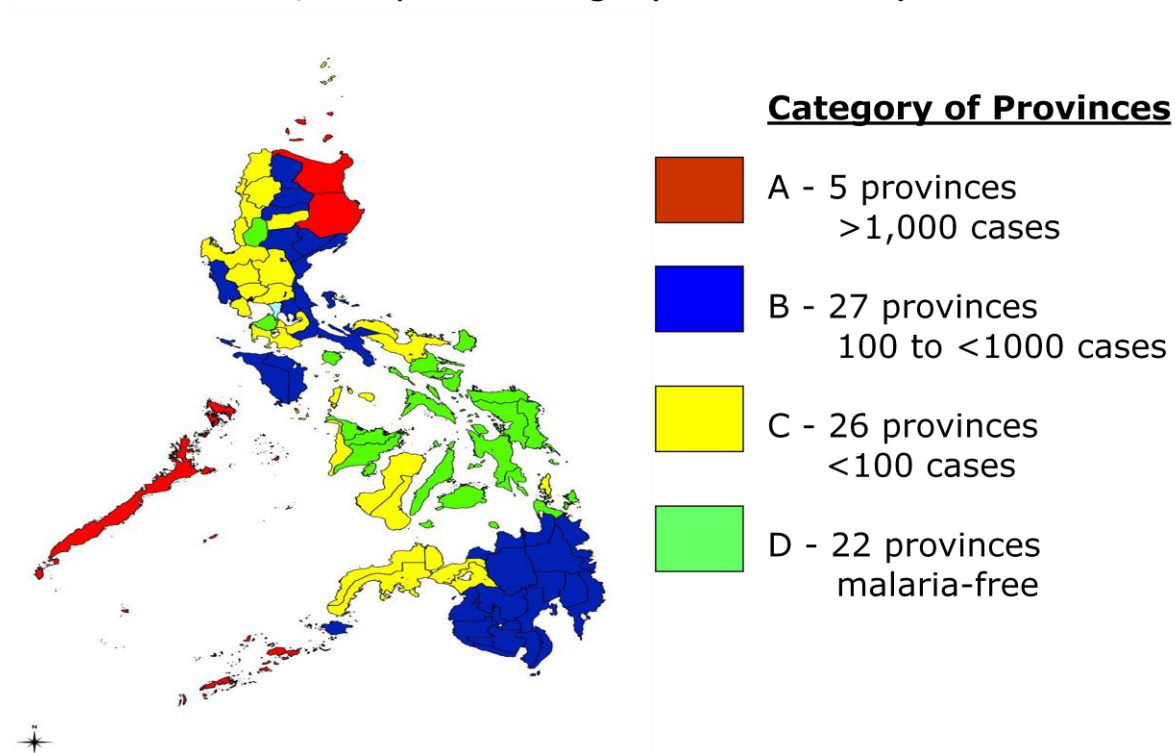
<b>Operational Research</b>	<b>Research in Past 5-10 years</b>	<b>Present Research Projects</b>	<b>Planned Research Projects</b>
Parasitological research projects, in particular for <i>P. vivax</i> ; list major outcomes and please cite publications when relevant			Operate sentinel sites for drug resistance
Entomological research projects; list major outcomes and please cite publications when relevant			Operate sentinel sites for insecticide resistance
Behavioural research projects; list major outcomes and please cite publications when relevant			
Other research projects; list major outcomes and please cite publications when relevant			Operational research to encourage Local Government Units to proactively review and adapt NMCP policies into local ordinances for malaria control, development, and health systems strengthening; collaborating center on malaria and vector-borne diseases established (with grants in Mindanao and Cordillera) to conduct one operational research project every two years
Research Partners (national, regional and international) in operational research projects			

<b>Quantitative Data</b>			
<b>Variable</b>	<b>Data</b>	<b>Source</b>	<b>Notes (include year if not 2010)</b>
Total population	91,983,099	World Health Organization, World Malaria Report 2010	2009
Population at risk (PAR): Low Medium High	66,788,428 NA 6,598,788  All at risk: 12% or 11 million people	World Health Organization, World Malaria Report 2010  RBM Philippines	2009  Definition of PAR: population of endemic provinces, indigenous and impoverished citizens
Total malaria deaths, Total estimated deaths	20	13th ACTMalaria EB & Partners Meeting	2009

Total malaria cases	19,198	World Health Organization, World Malaria Report 2010	2009
Total positive slides – <i>P. vivax</i>	4,951	World Health Organization, World Malaria Report 2010	2009
Total positive slides – <i>P. falciparum</i>	13,933	World Health Organization, World Malaria Report 2010	2009
Total suspected cases	370,802	World Health Organization, World Malaria Report 2010	2009
G6PD deficiency % population	1.8%	DOH Administrative Order 2009-0028	2009
# imported malaria cases (national)			
Slide positivity rate (SPR)			
Annual blood examination rate (ABER)	4%	WHO World Malaria Report	2000-2008 estimates
Annual parasite index (API)	0.28	GF R6	2009
Parasite prevalence rate			

Main Sources
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2. Galang, Cristina. "Updates on Malaria Elimination in Philippines." Presentation at APMEN I Meeting, Brisbane, Australia on 8-11 February 2009
3. Eliminating Country Briefing: Philippines (draft, unpublished); to be posted on www.malariaeliminationgroup.org.
4. Philippines National Malaria Control Programme. Global Fund Round 6 Grant Proposal, Annex 12: Roll Back Malaria, Philippines Five Year Strategic Plan, 2006-2010.
5. Philippines National Malaria Control Programme. Global Fund Round 2 Grant Proposal
6. Philippines National Malaria Control Programme. Global Fund Round 5 Grant Proposal
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8. Padilla, C.D. Newborn Screening in the Philippines. <i>Southeast Asian J Trop Med. Public Health</i> 34 (Suppl 3) (2003) 87-88.
9. DOH Administrative Order 2009-0028: Designation of NSRC, NIH to oversee QA of confirmatory G6PD newborn screening tests
10. 13 <sup>th</sup> ACTMalaria EB & Partners Meeting. 16-18 March 2009. Vientiane, Lao PDR.
11. World Health Organization. World Malaria Report 2010.

**GEOGRAPHICAL DISTRIBUTION OF MALARIA CASES,  
PHILIPPINES, 6 – year average (2003 – 2008)**



Malaria distribution in the Philippines, 2008