**Type of Review: Annual Review**

**Project Title: Replacement of Malaria Monotherapy drugs in the private sector to support the containment of drug resistant malaria in eastern Burma (AMTR)**

**Date started: October 2011; Date review undertaken: October 2012**

## Introduction and Context

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| What support is the UK providing? |
| The UK is providing £11.3 million for a three year project to be implemented by the international non-governmental organisation Population Services International (PSI) to replace malaria drugs containing only artemisinin (monotherapy) with those containing artemisinin with other effective drugs (artemisinin combination therapies, or ACTs) in Burma. This project (Artemisinin Monotherapy Replacement project (AMTR) is co-funded with the Bill and Melinda Gates Foundation (Gates Foundation). A philanthropic organisation, Good Ventures, is also supporting this project. DFID is providing £10.7 million to PSI for project implementation. Up to £600,000 is allocated to independent evaluation and annual monitoring of the programme to track results and ensure lesson learning. |

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| **What are the expected results?** |
| AMTR is expected to contribute to the containment of artemisinin resistance in Burma. Artemisinin is the most important drug compound which, in combination with a second drug, forms artemisinin combination therapies (ACTs) which are first line drugs for the treatment of malaria globally.  Containment of resistance is important to prevent or at minimum significantly delay the spread of artemisinin resistant malaria parasites within Burma and beyond its borders. This is in turn important to safeguard the effectiveness of artemisinin for treatment of malaria in the region and globally.  This intervention is necessary but not on its own sufficient for drug resistance containment. It is complementary to the additional funding that DFID has provided to the Three Diseases Fund for HIV, TB and Malaria (3DF) and forthcoming DFID support to its successor, the Three Millennium Development Goal Fund (3MDGF) to scale up free malaria diagnosis and treatment in the public sector and through NGOs. AMTR is an important component of the national Myanmar (Burma) Artemisinin Resistance Containment (MARC) strategy.  The AMTR programme is intended to achieve a rapid switch from the widespread availability and use of artemisinin monotherapies in the private sector to the recommended ACTs. Experts agree that this will have the biggest and quickest impact on preventing the development and spread of artemisinin resistance in Burma.  The specific outcomes of this project expected by the end of 2014 include:   * 73% of suspected malaria cases will complete a full course of a nationally approved, quality assured artemisinin combination therapy within 24 hours of onset of fever * The proportion of malaria cases in the target areas that are treated with artemisinin monotherapies will reduce to less than 10% by year 2 * 161 000 Disability Adjusted Life Years gained in Burma over the three years (of which 80,500 attributable to DFID)[[1]](#footnote-2)   In addition the outputs delivered by this project include:   * The increased opportunity, ability and motivation of private sector providers to effectively prescribe and dispense nationally approved, quality assured ACTs. * Increased opportunity, ability and motivation of the target population in eastern Burma to promptly and effectively treat suspected malaria with a nationally approved and quality assured ACT * 1.8 million treatment courses of ACTs received, packaged and sold by end of Year 1, 3.6 million in Year 2 and 3.4 million in Year 3 (of which 0.9m; 1.8m and 1.7m are attributable to DFID) * 1,900 providers are trained in use of Rapid Diagnostic Tests (RDTs) in Year 2 and 7,000 by the end of the project (of which 950 and 3500 respectively attributable to DFID) * 250,000 Rapid Diagnostic Tests are correctly used and reported in Year 2, 950,000 in Year 3 (of which 125,000 and 475,000 respectively attributable to DFID)   The project is recognised as high risk given the difficult and rapidly changing political and epidemiological operating environment. Two factors in particular will affect these expected outputs first decreases in transmission risk and disease burden and second the rate of scale up of RDTs in the private sector (which affects demand for ACTs). Several milestone reviews have been scheduled to ensure that the project strategy adapts to changing circumstances and to check project progress at regular intervals. |

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| What is the context in which UK support is provided? |
| The new generation of malaria drugs, artemisinin combination therapies (ACTs), provide a highly effective cure for the most dangerous form of malaria *(P.Falciparum)* in most malaria endemic countries.  This has helped reduce the global burden of malaria by more than half in 43 countries over the past 10 years, saving an estimated 730,000 lives in Africa[[2]](#endnote-2). This global progress is now threatened by the emergence of malaria parasites that are resistant to artemisinin. There is strong evidence that artemisinin resistant malaria, first detected on the Thai-Cambodia border and then Vietnam, now also occurs in eastern Burma. Burma is critical to global efforts to contain resistance: the malaria burden is far higher than in any other country in South East Asia due to its large population at risk; extensive migration in high transmission areas; a history of 60 years of civil conflict along some border areas; inadequate investment in malaria control over several decades and high usage of artemisinin monotherapies (AMTs). This overlap of transmission risk (associated with forest cover and mosquito vector abundance) with geopolitical sensitivity along border areas makes Burma one of the most challenging operational contexts in the world for malaria control.  Responding to emerging malaria drug resistance in Burma is time critical. History of the spread of resistance to previous malaria drugs suggests that spread from Burma to India is a pathway to Africa. No other malaria drugs are currently available that offer the same levels of effectiveness as ACT and no new drugs will be available for five years at the very least. Every year of delaying the spread of resistance westwards may save many thousands of lives and buy time to develop and deploy new antimalarial compounds.  In response to this issue Burma has developed the Myanmar Artemisinin Resistance Containment Framework (referred to as MARC), led by the Ministry of Health with support from key non-governmental implementing partners involved in malaria control. This strategy is in line with the World Health Organization’s Global Plan for Artemisinin Resistance Containment and Burma is in its Tier One and Tier Two areas. Tier One areas are those for which there is credible evidence of artemisinin resistance and Tier Two areas area those with significant inflows of mobile and migrant populations from Tier One areas or who share borders with Tier One areas. However, access to some of the high risk geographical areas is limited due to conflict, security concerns and limitations of access for non-governmental organisations through restrictions within Memoranda of Understanding (MOUs). The UK has already funded some of the components of the MARC. In April 2011 the UK approved an additional £4 million for the Three Diseases Fund for HIV, TB and Malaria (3DF) which, until end December 2012, is the main channel for DFID support to health in Burma. Together with additional funds from Australia this funding is primarily supporting the scale up of free diagnosis and treatment of malaria at the community level. From January 1st 2013 the successor to the Three Diseases Fund, known as the 3MDG Fund, will fund critical gaps in the country’s response to drug resistant malaria, not covered by the Global Fund for AIDS, TB and malaria (the Global Fund).  This scaling up is important and necessary, but takes time. In Burma health services are limited by low levels of government investment and the problems caused by long term conflict in some areas. Typically health care coverage is lowest in the more remote border areas with high levels of malaria. As a consequence most people do not seek treatment in a public health clinic but instead go to their local drug seller, pharmacy or shop. Here they purchase treatment, without being tested for malaria. People tend to purchase cheaper, and more readily available, artemisinin monotherapy (and even then, typically purchase partial doses, as individuals often cannot afford the more expensive complete course of drugs). Many countries have banned the import and sale of these drugs. Burma’s Food & Drug Administration has recently banned any new importation of artemisinin monotherapy although they can still be purchased in Burma while existing stocks are used up. The main artemisinin monotherapies in Burma are artesunate and artemether, and they were banned in December 2011 and August 2012 respectively.  This project is focused on the most pressing objective of the MARC; the replacement of artemisinin monotherapy with quality assured ACTs in the private sector where the majority of people currently seek malaria treatment. PSI, in the first instance, is working through a single major drug distributor in Burma (AA Medical Products Ltd.) that at the time of project conception was providing drugs to the majority of the private sector in Burma (accounting for approximately 70% of the market share).  Working with them, PSI aims to rapidly replace the current supply of AMT with a subsidised ACT across the country. This effort is being supported with a national ban on the importation and sale of oral artemisinin monotherapies. In the project this action will be supplemented by national communication campaigns to encourage the public to demand a QA ACT from drug sellers as well as training private drug sellers to use rapid diagnostic tests (RDT) (when available) so that it can be determined whether or not the person has malaria and treat them correctly. While private sector coverage is national there will be particular emphasis on 92 townships in eastern Burma where there are identified areas which show artemisinin resistance or are vulnerable to resistance. Working with the private sector is one of the few ways to reach (at scale) the most remote and conflict affected people who have limited access to formal health services.  There have been a number of challenges and changes in the operating context since the project was designed and approved in July 2011.  First, at the start of the project in October 2011, PSI did not have a valid MOU with government and so was not able to initiate some key project activities. In particular it was not possible to obtain permission for survey research or for importation of ACT drugs although some activities were able to go ahead (for example recruitment of project staff). A new two-year MOU was signed in March 2012. As a result there has been a delay of about 4 – 6 months compared to the work programme envisaged for Year One of this project.  Secondly, in 2011 as part of government restructuring, new local state and division level governments have been established. In some instances this restructuring has led to some delays in receiving the necessary approvals for project activities at the local level (for example, the three baseline surveys: of the supply chain, private sector outlets and of households). Permission to undertake the household survey required particularly focused advocacy with government authorities.  Thirdly under MARC, with financial support from the 3DF, there has been a concerted effort by the Government, donors, technical agencies and NGOs to scale up access to quality assured ACTs in the public sector in priority areas. Village health volunteers (who are not part of the formal public sector but work at the periphery of the formal health system) have been supplied with RDTs and ACTs and trained in their use, making these more widely available in some areas than before.  Fourthly, the regulations on the import and sale of AMT in Burma have changed. In December 2011, the government’s Food and Drug Administration banned ‘artesunate’ an AMT. This led to rapid reductions in the availability of this AMT in the retail supply chain. In August 2012, the government banned ‘artemether’ another AMT which had to a large extent taken the place of artesunate in the retail supply chain. The banning of both these AMTs is very important in supporting the aims of this project. |

## Section A: Detailed Output Scoring

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| Output 1: Increased opportunity, ability and motivation of private sector providers to effectively prescribe and dispense nationally approved, quality assured ACT (QAACT) | |
| **Output 1 score and performance description: C (Output substantially did not meet expectation)**  Under this output, PSI is expected to:   1. measure the availability of AMT and QAACT in the private sector through an **Outlet Survey** at the start of the project, 2. work along side the Government of Burma over the **banning of AMTs**, 3. **procure QAACTs** on the global market 4. **agree a distribution contract** with a national pharmaceutical distributor to distribute QAACTs through relevant private sector channels for sale at a price less than or equal to the cost of a typical dose of the most common AMT 5. **deliver QAACTs to the pharmaceutical distributor** and monitor their availability, marketing and price to consumers annually through further Outlet Surveys 6. **sell 1.8m doses of QAACT** to the pharmaceutical distributor in Year One   **Progress against expected results:**  **In summary**: Items 1 to 5 have been achieved by the end of year 1 but all (except 2) were delayed by between 4 or 6 months because PSI did not have an MOU with the government. Once PSI signed the MOU with the Government in March 2012, PSI accelerated progress on all fronts but was not able to achieve all the milestones for Year 1 in the time available. Critically for the success of this project, QAACT was only supplied to the private sector distributor in September which is late in the malaria transmission season. At the time of the review in October, the pharmaceutical distributor had placed orders of 200,000 adult equivalent treatment dose (AETD) against a Year One sales target of 1.8m.  PSI undertook the nationally representative **Outlet Survey** (2012) between March and May. The headline results of the survey have informed the project’s strategy for AMT replacement in the private sector. The survey showed that there are five types of private sector outlets that sell/ provide AMT and other non-QAACT antimalarial drugs of which three are particular priorities under this project: **pharmacies/ drug sellers, itinerant drug vendors (IDV) and general retailers** (these are ‘priority outlets’). A further important finding was that full AMT doses were often divided to make them affordable.  In June, **PSI concluded a sales and distribution services agreement** with the pharmaceutical distributor (AA Medical Products Limited (AA)) who was the dominant market distributor of AMT in eastern Burma at the time of the project design in 2011. The agreement sets out the terms and conditions under which PSI will provide quality assured ACT to AA for onward distribution through its network of wholesalers and retailers. The agreement contains the assurances requested in the DFID Business Case and MOU with PSI. These include the distributor agreeing to sell the ACTs at a price not exceeding the priced nominated by PSI; the distributor agreeing to adhere to the national ban on AMTs; that PSI has the right to supply ACTs to other organisations, including other private distributors; and that the distributor will adhere to appropriate standards of transparency and accountability.  **PSI procured QAACT** from IPCA (an Indian firm) under an indefinite quantity contract (IQC) and the first shipment arrived in July. The price of the QAACT is fixed for two years.  A visit to Thanintharyi Division in southern Burma (a Tier One area, which is high priority for MARC), confirmed that wholesalers, retailers, private doctors and itinerant drug vendors have stock of the QA ACT provided by PSI to AA and are now selling QA ACT**.** The field visitalso confirmed that although artemether (the artemisinin monotherapy which was banned in August 2012) is still available at retail and wholesale levels, availability is declining as stock is not being replenished. The retail price of the full adult dose of up to K500 (K 350 to K500 per AETD was reported in Myeik and surrounding areas) is equivalent to the retail price of a split dose of an unsubsidised AMT. This ensures that the quality assured ACT is affordable to the main target group (mostly adult men). This price to consumers incorporates profit margins along the supply chain which are in line with pharmaceutical industry norms.  The logframe milestones under this output were to be measured through annual outlet surveys, but since the outlet survey for Year 1 was delayed, the outlet survey is a measure of the situation following the artesunate ban (the artemisinin monotherapy which was banned in December 2011) before the artemether ban and acts as a baseline for the project.  For all outlets the baseline/ Year 1 indicators are:   * 1. % target outlets\* with nationally approved and QA-first line ACT in stock at time of survey - **26.4%**   2. % of target outlets\* (that currently stock QA ACT) with no reported stock out of nationally approved and QA first line ACT lasting more that 1 week within the past 3 months – **98.34%**   3. % target outlets\* selling nationally approved QAACT at a price less than or equal to the cost of a typical dose of the common AMT at baseline – not applicable at baseline   4. % target outlets\* providers that correctly state the recommended first line ACT treatment for uncomplicated malaria – **22.1%**   5. Relative market share\* of antimalarials sold/ distributed to consumers in the past 7 days (disaggregated by): First line QAACTs – **20.1%**; Non-QAACTs – **5.7%**; Oral AMTs – **42.8%**; Non-artemisinin monotherapies – **25.4%**   1.6 % of target outlet providers who treat a ‘mystery client’ with suspected malaria using a full course of ACT and providing instructions for correct use **–** not applicable at baseline  \* Note that the figure shown here is for all outlets including private providers and health workers. Figures for priority outlets will be available after the final analysis of the Outlet Survey, which is underway. |
| **Recommendations:**   * The indicator descriptions in the log frame should be brought into line with the findings in the outlet survey (DFID and PSI) * PSI to consider disaggregating the results in the next Outlet Survey by containment zones (Tier One, Tier Two etc.) (PSI)   **Impact Weighting (%): 25%**  **Revised since last Annual Review? *N***  **Risk: High**  **Revised since last Annual Review? *N*** |

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| Output 2: Increased opportunity, ability and motivation of the target population in eastern Burma to promptly and effectively treat suspected malaria with a nationally approved and quality assured ACT |
| **Output 2 score and performance description: B (Output moderately did not meet expectation)**  Under this output PSI is expected to increase the awareness of and demand for QAACT in the private sector among the target population. This is to be done by:   1. Developing a **quality seal for QAACTs** which is recognised by people seeking treatment for uncomplicated malaria 2. Developing, testing and delivering **mass media messages** to promote QAACTs 3. Measure **changes in consumer knowledge and practice** through successive household surveys |
| **Progress against expected results:**  **In summary:** There was good progress on Items 1 and 2. However the delivery of mass media messages did not start until August which is late in the malaria transmission season. A household survey was conducted to set the baseline for consumer knowledge and practice.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  PSI worked with other development organisations to develop and test the ‘Padonmar’ (lotus) **quality seal for QA ACTs.** This seal has been adopted by government for all QAACTs. The QA ACT packaging was designed to provide point of use information on correct usage and minimise the possibility of dividing doses.  **Mass media communications** have been developed, tested and displayed or broadcast using a variety of different media channels (television, radio and billboards).  PSI have **set the baseline for knowledge and practice** by conducting a household survey which was conducted in August and whose results are still being analysed. There is not yet any evidence of consumer behaviour since the intervention started.  **Recommendations:**   * Annual household surveys should be conducted to provide evidence of changes in knowledge and practice following the behaviour change campaign and supply side efforts.(PSI) * A further indicator(s) is (are) added in this output which track trends in ACT demand and use more frequently than annually. (PSI and DFID)   **Impact Weighting (%): 70%**  **Revised since last Annual Review? N**  **Risk: High**  **Revised since last Annual Review? N** |

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| Output 3: Increased opportunity, ability and motivation of private sector providers to conduct a rapid diagnostic test (RDT) prior to the appropriate prescription and dispensing of nationally approved, quality assured ACT. |
| **Output 3 score and performance description: B (Output moderately did not meet expectation)**  Under this output, PSI is expected to **increase the availability and correct use of RDTs** in the private sector. This would include ensuring that there is a positive test for malaria before purchasing a QAACT in the private sector. This will help to avoid inappropriate treatment and unnecessary use of ACTs. In this project there is an end of project coverage and correct usage target of 18% (among target outlets), with no distribution expected until Year 2 of the project.  **Progress against expected results:**  In Burma RDTs are being routinely used in public sector facilities (and some private sector facilities) before ACTs are given. However there are questions over the motivation and skills of private providers in pharmacies, retailers and among itinerant drug vendors to use RDTs appropriately (that is to provide ACTs on the basis of a positive RDT test only) and concerns about implementation. There is little documented experience on this globally to draw upon. As a result of these concerns and rather than move straight to the procurement and distribution of RDTs at a large scale in priority outlets, **PSI is proposing a limited study in six townships to test three different approaches** to demand creation among private providers. PSI is in the process of concluding a collaborative agreement for this research which will be a mixture of supply side operational research and demand side quantitative research with households. Theresults will be available in January 2014 at which point a decision can be taken (with the Ministry of Health) about how best to scale up the provision and use of RDTs in the project. DFID and the Gates Foundation concur with this approach given the paucity of existing evidence. |
| **Recommendations:**   * To continue to engage with Government and the Technical Strategy Group (for malaria) to ensure that other stakeholders are kept informed about the project’s approach to RDT deployment. (PSI)   **Impact Weighting (%): 5%**  **Revised since last Annual Review? N**  **Risk: High**  **Revised since last Annual Review? N** |

## Section B: Results and Value for Money.

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| 1. Progress and results |
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| * 1. **Has the logframe been updated since last review?**   No. The log frame will be updated as a result of this review. This includes some revision of the narrative for the indicators to align with the findings of the outlet review for Output Indicators 1.2 and 1.3.  In addition Output indicator 2.2 (% target population (disaggregated by age and gender) who can correctly state the treatment regimen for a nationally approved and quality assured ACT) will be removed in line with global best practice and the recent recognition by the Roll Back Malaria Monitoring and Evaluation Reference Group that this indicator is unreliable and unrealistic to measure.  Output indicator 2.3 (% target population (disaggregated by age and gender) who can name a source where a nationally approved and quality assured first-line ACT can be purchased) will be changed to % target population (disaggregated by age and gender) who can identify a local outlet where nationally approved and quality assured first-line ACT can be purchased.  PSI will also propose a routine monitoring indicator for Output 2 which tracks trends in ACT demand and use (more frequently than is available under the household survey).  Output indicator 3.1 (% target outlets with nationally approved and quality assured RDTs in stock at time of survey) will not change. For indicator 3.2 (% target outlet providers who have RDTs in stock at the time of the survey correctly state the 5 key steps in conducting a rapid diagnostic test for malaria), the baseline will be identified as: ‘less than [indicator 3.1]’ (above). This will be measured only after RDTs are deployed first in the pilot study and then scaled up.  **1.2 Overall Output Score and Description: B** (outputs moderately did not meet expectation)  While there has been good progress by PSI to make up for time lost through the delayed start of the project, it has not been possible fully to catch up to achieve the Year 1 milestones.  **1.3 Direct feedback from beneficiaries.**  The field visit undertaken for this annual review demonstrated that the Padonmar-sealed quality assured ACT procured and distributed through this project is available in a range of private sector outlets in and beyond urban areas in a Tier One region of Burma. These quality assured ACTs are being effectively marketed at the point of sale and being purchased by beneficiaries at a price comparable to a partial dose of AMT.  Beneficiary feedback is reflected in the baseline outlet and household surveys (see Outputs 1 and 2 above) which captures consumer knowledge and practice before the intervention. Subsequent surveys will gather further feedback from beneficiaries. |
| * 1. **Summary of overall progress**   This project is intended to achieve a rapid switch from the widespread availability and use of artemisinin monotherapies in the private sector to the recommended quality assured ACTs.  There was an unforeseen delay to the start of the project of between 4 to 6 months as the implementing organisation, PSI finalised its agreement for a Memorandum of Understanding with the Government of Burma. As a result of this delay the project did not make as rapid progress as planned in the first year. In particular, the project sold only 200,000 doses of treatment in its first year compared to a target of 1.8m doses. However AMTR made significant progress in putting all the elements in place to replace AMT in the private sector with a QAACT including: procuring the product on the international market, securing an agreement with a distributor, developing and marketing the quality seal and developing an approach to researching the most effective strategy for deployment of RDTs, putting in place robust monitoring and evaluation arrangements.  The Annual Review field visit to a Tier One area of south-eastern Burma confirmed that the quality assured ACT are now available for sale in the private sector, and these are supported by behaviour change campaigns and information to front line outlets. |
| * 1. **Key challenges** * To manage the impact the project has on competition in the malaria drugs market in Burma, building on work done to date. Currently PSI are only working with one distributor, however they are actively seeking to work with others. The need to monitor competition risk was raised in the Business Case appraisal. Specific measures have been instituted to mitigate this including for example: non exclusivity clauses in the contract with the quality assured ACT distributor; use of the overall quality seal, and exploratory discussions with other pharmaceutical distributors. In addition, regular discussions are held between the DFID Burma Economic Advisor and PSI to review competition. * To maintain and further develop a constructive relationship with the Government of Burma especially the Ministry of Health (MOH) and National Malaria Control Programme (NMCP) at all levels to facilitate a consistent evidence based strategy for ACT provision across the public and private sectors (PSI). There is also the need to raise awareness of this issue among other stakeholders including Parliament. * To ensure secure supplies of quality assured ACT through the private sector in conflict affected border and non Tier One areas (PSI); * To consider the issue of sustainable market supply of quality assured ACTs once subsidies end in this project in 2014. Now that the Global Fund has absorbed the Affordable Medicines Facility for Malaria (AMFm) into its normal grant making process, there is an opportunity for Burma to opt for an ACT drug subsidy within its overall proposal for support. (PSI, DFID and other donors and stakeholders) |
| * 1. **Annual Outcome Assessment**   Due to the 4 - 6 months delay AMTR is behind schedule in making progress towards the outcome although progress has been rapid in the past seven months. Continuing close monitoring of the project’s progress will demonstrate the extent to which the project is delivering its key outputs and is on track to achieve the outcome by the end of Year 3 in 2014.  The role of RDTs in priority outlets (which is intended to help reduce unnecessary use of artemisinin based in the private sector) is still uncertain and will require the outcome of the field testing of different approaches to the use of RDTs. |

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| 2. Costs and timescale |
| **2.1 Is the project on-track against financial forecasts:**  No. Due to implementation delays, financial forecasting in the project has been a challenge and the project has underspent against budget at the end of the first year. With QAACTs now procured and starting to be ‘pulled through’ the private sector distribution system by retail sales, PSI expects forecasting in the project to improve in Year Two.  **2.2 Key cost drivers**  The main cost driver for the project is the purchase by PSI of QA ACT. These costs have been fixed in the project through the negotiation by PSI of an Indefinite Quantity Contract with the assistance of PSI’s procurement group in the USA (see Value for Money section 5.2 below).  **2.3 Is the project on-track against original timescale:**  No: see ‘Context’ section above for reasons for delays in project implementation. These include a highly complex operating environment and the innovative nature of the project which requires careful monitoring. Monthly project meetings have been instituted between PSI and DFID to monitor project implementation risks, including financial costs and implementation delays. |

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| 3. Evidence and Evaluation |
| **3.1 Assess any changes in evidence and implications for the project**  There have been a number of new studies and assessments on malaria in Burma and the problem of artemisinin resistance since the project was designed and approved in 2011 (see list of key documents in Section 8 below, including the regional Strategic Assessment). They provide additional evidence on a) the scale of the problem of artemisinin resistance and b) the importance of this intervention to address that problem in Burma.  **3.2 Where an evaluation is planned what progress has been made?**  An independent evaluation is planned to start in 2013 and is under procurement through DFID’s framework contract for evaluations. The evaluation will:   * assess the effectiveness of what was done (for example, (i) the replacement of monotherapy (ii) the introduction of diagnosis and testing in the informal private sector and (iii) behaviour change strategies), whether and to what level the outcome targets have been achieved; * assess the value for money of the programme in delivering its outputs and outcomes; and * identify, document and disseminate lessons learnt for wider interest where results have or have not been achieved.   A reference group drawn from BMGF and DFID will steer the evaluation. The Evaluation Department of DFID will quality assure the evaluation final report. |

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| 4. Risk |
| **4.1 Output Risk Rating:**  High.  **4.2 Assessment of the risk level**  The risk level for this project remains ‘high’. This reflects the difficult and rapidly changing political and epidemiological operating environment. The risk register for the project is updated monthly and discussed in progress monitoring meetings with DFID. In addition to external factors to be managed, PSI will also include on the register internal implementation and management risks.  Several milestone reviews have been scheduled to ensure that the project strategy adapts to changing circumstances and to check project progress at regular intervals. |
| * 1. **Risk of funds not being used as intended**   There is low risk of the funds not being used as intended. Project finances are managed by PSI which has a good track record of project financial management. PSI has reported on funds from a number of donors and demonstrated that these have been used as intended. PSI has robust internal policies and procedures in place for reporting and managing fraud that have been tested in practice.  **4.4 Climate and Environment Risk**  There is limited evidence and low risk of climate and environment risk from this intervention. With the introduction of RDTs (which on current plans will not happen until 2014 at any scale) there is a risk of used tests being discharged into the environment. Appropriate disposal mechanisms will need to be in place and these can be tested during the research phase on use of RDTs in the private sector. |

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| 5. Value for Money |
| **5.1 Performance on VfM measures**  The VFM for this proposal was elaborated in the appraisal section of the Business Case which still stands. Project delays mean that there are some limits to assessing VFM at this stage.  Economy: As stated in section 2.2, the main cost driver is the purchase of QA ACT. See the next section (5.2) for evidence on how the procurement of QA ACT has delivered good VFM.  Efficiency: Because of the reasons set out in the output scoring, the project has not yet met expected outputs so we are unable to conclude that the project is delivering efficiency at this point. Delivering on these outputs is the main area preventing the project being good VFM. Ensuring delivery of outputs is now the focus of PSI and DFID.  Effectiveness: As the Business Case laid out, there is a very strong VFM case for preventing the spread of artemisinin resistance. This is further backed up by additional evidence outlined in section 5.4 below. This project is an important part of fighting the spread of resistance in Burma and beyond.  Equity: It is too early to assess the impact this project has had on vulnerable groups.  **5.2 Commercial Improvement and Value for Money**  Commercial improvement within the project has focused on the VFM in procurement of the quality assured ACT (Artemeter Lumafantrine (AL)). PSI received and assessed two bids for the supply of this ACT and sought DFID agreement on the price and VFM of this procurement in February 2012 as required in the Business Case. PSI made the case to DFID for an Indefinite Quantity Contract (IQC) at a price fixed for 2 years which allowed tertiary packaging and overbranding. The features of the supply contract allow PSI significant flexibility in purchasing the required amount of AL (which is somewhat unpredictable) while meeting the project requirements for marketing and promoting the ‘Padonmar’ quality seal    **5.3 Role of project partners**  PSI’s own procurement practices in this project are important for realising VFM at the level of economy. PSI has procured more products worldwide than any other private entity engaged in social marketing. For example, in 2010, PSI procured more than 10 million courses of ACT worldwide, and its large operation benefits from economies of scale to ensure value for money.  PSI’s Procurement and Logistics Department is based in its headquarters office in Washington, DC, to facilitate the international procurement of products. PSI follows stringent procedures and controls, following international procurement guidelines. PSI has used its procurement mechanisms to purchase ACT at the best price, ensure quality through formal lot sampling and testing, and maintain an uninterrupted supply.  See 5.1 and 5.2.**5.4 Does the project still represent Value for Money:**  Yes, a paper prepared for the October 2012 Malaria Summit in Australia[[3]](#footnote-3) reiterated the importance of the issue of artemisinin resistance spread and estimated that if unchecked, global malaria mortality could rise by 25% with an economic cost of $4billion annually. The project is expected to contribute significantly to containing that spread, despite the delays that have occurred at the beginning of the project |

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| 6. Conditionality |
| **6.1 Update on specific conditions**  Not applicable |

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| 7. Conclusions and actions |
| **Recommendations** (in addition to the output and log frame-specific recommendations above):   1. PSI and DFID Burma to continue to meet monthly with DFID to monitor project implementation including for an update on: sales, negotiations with distributors, work with Government, any new survey results, any new risks, the RDT research, budget execution and forecasts. Action: DFID and PSI on-going 2. To improve the impact of the outlet and household surveys:    * Monitor all five private outlet types but with a focus on a subset of three – pharmacies and Itinerant drug vendors and general retailers given their importance for AMT. Action: PSI ongoing    * Institute annual household surveys to monitor programme progress under Output 2, Action: PSI    * Explicitly link timing of annual reviews to the availability of survey results in order to have the most up to date data to inform reviews.. Action: PSI and DFID/ Gates Foundation.    * Disseminate widely findings of the Outlet Survey as basis for project strategy both nationally and beyond Burma to contribute to global learning. Action: PSI asap    * Lock in dedicated technical support from PSI for timely analysis and dissemination of surveys findings esp. the Outlet Survey in order use information effectively for the project. Action: PSI by end 2012    * Consider disaggregating the results of the outlet survey by containment zone (Tier One, Tier Two etc) to assess usage of ACTs according to the Tiers and take appropriate steps and inputs as necessary. Action: PSI by end 2012 3. DFID to continue to provide support to PSI on competition assessment and PSI to negotiate towards agreements with two additional distributors. Action: DFID and PSI by end May 2013 4. PSI to monitor the wider epidemiological situation in real time by accessing MOH/ NMCP service data if possible. Action: PSI through TSG (malaria) 5. PSI to explore whether further communication of artemether ban by government and/or others is needed. Action: PSI by end 2012 6. Consider the financial sustainability of the quality assured ACT market in absence of subsidy at next milestone review (mid term) in February 2013. Action: PSI and PSI/ Malaria team and DFID/ Gates Foundation. 7. DFID Burma and PSI to agree a methodology to measure the DFID indicator ‘Number of women and men who receive appropriate treatment to contain the spread of drug-resistant malaria’ and incorporate this within the log frame (at the outcome level).Action: PSI and the Gates Foundation by Feb 2013 8. PSI to seek guidance from the Ministry of Health on the treatment of *P.Vivax* cases which are likely to increase as a proportion of all malaria and fever cases as *P.Falciparum* declines with expanding access to QAACTs. Action: PSI 9. DFID and PSI to seek to work with Parliament, including appropriate committees, and wider stakeholders in order to engage more widely on malaria resistance containment. Action: DFID/ PSI by mid 2013. |

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| 8. Review Process |
| A DFID Senior Regional Health Adviser conducted the review between 22 and 26 October 2012. The draft review was consulted with Economic Adviser and the Results and Evaluation Adviser for DFID, PSI and the Gates Foundation  The review process consisted of:   * Document review (see below) * PSI presentations to DFID * A meeting with AA Medical Products Ltd * A visit to the PSI warehouse/ packaging operation in Yangon * A 3 day field visit to Tier One MARC area (Thanintharyi Division) with PSI and Ministry of Health National Malaria Control Programme (NMCP) staff including visits to and discussions with: the AA office and warehouse, a drug wholesaler and pharmacies in urban areas of Myeik; a Government rural health centre, retailers, a private doctor, an itinerant drug vendor and a health worker in rural areas along main road south of Myiek towards Thanintharyi town * A concluding meeting between meeting PSI and DFID for the presentation of findings from the review and discussion of recommendations   Principal documents used in this review:  Sales and Distribution Services Agreement between PSI and AA Medical Products Ltd signed 18th June 2012 (3761626, 3761632)  Outlet Survey 2012 Survey Report (3761634)  Price Structure for AMTR project (PSI) (3844344)  Antimalarial market competition in Myanmar in the context of drug resistance containment (PSI) (3706025)  Letter to DFID and BMGF on Decision on the procurement of ACTs dated 7th February 2012 (3761863)  Behavioural Change Communication Campaign/ Activities under AMTR (3761975)  PowerPoint presentation (3763460) : Preliminary Findings from Supply Chain Survey, Outlet Survey and Household Survey, PSI 22nd October 2012.  Joint Assessment of the Response to Artemisinin Resistance in the Greater Mekong Sub-region) (2012) (3762396)  Report of the First Annual Meeting: Myanmar Artemisinin Resistance Containment (MARC) (3762238)  Improving malaria treatment practices in Myanmar’s private sector: an evaluation of incentives for driving demand for diagnostic tools.  Risk and Risk Management for Annual Joint Donor Review (18th October 2012) (3761689) |
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1. One DALY represents one lost year of "healthy" life. The sum of these DALYs across the population, or the burden of disease, can be thought of as a measurement of the gap between current health status and an ideal health situation where the entire population lives to an advanced age, free of disease and disability. (WHO definition) [↑](#footnote-ref-2)
2. [↑](#endnote-ref-2)
3. White LJ; Lubell Y; Meek S; White NJ; Day NPJ; Nosten FH; Ashley E; Socheat D; Nguon C; Dondorp AM; Malaria in the Asia-Pacific: Modelling the current and potential impact of artemesinin resistance and its containment. Issue Paper Number 4 Malaria 2012. http://malaria2012conference.com/materials.php [↑](#footnote-ref-3)