



AFRICAN MALARIA NETWORK TRUST (AMANET)

Strategic Plan

2007-2011

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FOREWORD

The African Malaria Network Trust (AMANET) now enters its second level hierarchy in development by the evolution and presentation of this ambitious five-year strategic plan that will run from 2007-2011. I remember with fond memories when we inaugurated the first strategic plan in 2004 and I wrote the first foreword filled with much humility and hope. AMANET was born in 2002, and can now walk and run. From mainly organizing training workshops in research ethics to include GCP and GLP, now AMANET can sponsor vaccine trials. The present strategic plan uniquely introduces more complex sets of proposed actions that of necessity are both desirable and contemporary with what is expected of an initiative with great expectation like AMANET.

This new strategic plan will enhance promotion of regional and global awareness of the burden of malaria in Africa and provide possibilities for positive disease impact resulting from relevant research that evaluates prospective interventions with the greatest potential to impact more favourably on malaria. AMANET will apply novel approaches of collaboration with stakeholders and support capacity building to strategic institutional structures to provide the basis for well conceived and executed clinical and field interventions.

I am pleased that this plan draws much orientation from a thorough analysis of the experiences and lessons learned during the last planning period. The plan is up to date and is cognisant of current challenges faced by research institutions in Africa which include sustaining research activities in concert with infrastructural and human resource development for meaningful operations. The development, for example, of Afro immunoassay gold standards for evaluating malaria vaccines will provide far reaching opportunities for institutions to network on validating outcomes from vaccine clinical trials.

Finally, I wish to commend our international development partners that have made it possible for such a plan to be conceived and developed. I will appeal to their continued collaboration in order to ensure that the good work AMANET has embarked on continues to receive appropriate technical and financial support. AMANET on its part will be required to strengthen its secretariat to support coordination of these increasingly more complex programmes. Let me also take this opportunity to ensure our networked institutions and partners of our determination to see that this strategic plan is wholly implemented on schedule.

Prof Francis K. Nkrumah
Chairman, AMANET Board of Trustees

LIST OF ABBREVIATIONS

| | |
|----------|--|
| ACP | African Caribbean Pacific |
| ACP-EP | African Caribbean Pacific – European Parliament |
| ADCI | Antibody Dependent Cytotoxic Inhibition Assay |
| AMA-1 | Apical Membrane Antigen-1 |
| AMANET | African Malaria Network Trust |
| AMVTN | African Malaria Vaccine Testing Network |
| BoT | Board of Trustees, of AMANET |
| CISM | Centro de Investigacao em Saude da Manhica |
| CNRFP | Centre National de Recherche et de Formation sur le Paludisme |
| CRA | Contract Research Associate |
| CRO | Contracting Research Organization |
| DANIDA | Danish International Development Agency |
| DG-Dev | Directorate General – Development |
| DGIS | Netherlands Ministry of International Cooperation |
| DSMB | Data Safety Monitoring Board |
| EC | Expert Committee |
| EDCTP | European and Developing Countries Clinical Trials Partnership |
| ELISA | Enzyme-Linked Immunosorbent Assay |
| EMVI | European Malaria Vaccine Initiative |
| EPI-INFO | Epidemiology Computer Software Program |
| EU | European Union |
| FIC/NIH | Fogarty International Center / National Institutes of Health |
| GA | General Assembly |
| GCP | Good Clinical Practice |
| GHF | Global Health Fund |
| GIA | Growth Inhibition Assay |
| GLP | Good Laboratory Practice |
| GLURP | Glutamate-Rich Protein |
| GNP | Gross National Product |
| ICH | International Conference on Harmonisation |
| IgG | Immunoglobulin G |
| IMF | International Monetary Fund |
| INDEPTH | International Network of Field Sites with Continuous Demographic Evaluation of Population and their Health in Developing Countries |
| KAPS | Knowledge Attitude Practice Survey |
| MARA | Mapping Malaria Risk in Africa |
| MCTA | Malaria Clinical Trials Alliance |
| MIM | Multilateral Initiative on Malaria |
| MMV | Medicines for Malaria Venture |

| | |
|----------|--|
| MoH | Ministry of Health |
| MSP3 | Merozoite Surface Protein 3 |
| MTRC | Malaria Training and Research Centre, Mali |
| MVI | Malaria Vaccine Initiative |
| NIH | National Institutes of Health |
| PID | Primary Immune Deficiency |
| ODA | Overseas Development Aid |
| OECD | Organization for Economic Cooperation and Development |
| R&D | Research and Development |
| RBM | Roll Back Malaria |
| RDTs | Rapid diagnostic tests |
| SAP | Scientific Advisory Panel |
| SCC | Scientific Coordinating Committee, of AMANET |
| SIDA | Swedish International Development Agency |
| SOP | Standard Operating Procedures |
| SWOT | Strengths Weaknesses Opportunities Threats |
| TDR | The UNDP-WHO-World Bank Special Programme for Research and Training in Tropical Diseases |
| TSDC | Trial Sites Development Committee, of AMANET |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| US | United States |
| US-NIH | United States National Institutes of Health |
| WHO | World Health Organization |
| WHO/AFRO | World Health Organization/African Regional Office |

1. AMANET PHILOSOPHY

1.1 ESTABLISHMENT OF AMANET

In 1995 at a conference held in Arusha, Tanzania, 81 malaria researchers from Africa, Europe and North America established the African Malaria Vaccine Testing Network (AMVTN) in order to prepare Africa for planning, undertaking and coordinating malaria vaccine trials. The major achievements made by AMVTN were outlined in the first AMANET Strategic Plan (2004-2006). AMANET, which was incorporated in Tanzania on 14 March 2002, is the legal successor to AMVTN. During the 2 004-2006 Planning period, AMANET consolidated its achievements building upon the foundation made by AMVTN, its predecessor generally by:

- Increased support to capacity development through short and long term training opportunities through workshops and at the masters and PhD levels;
- supporting characterization of vaccine trial sites, strengthening of their product development and review committees, and at least one clinical trial of malaria vaccine candidate and;
- an expanded secretariat for better promotion and coordination of AMANET activities including hosting of the Multilateral Initiative on Malaria (MIM)

1.2 VISION OF AMANET

To further strengthen African malaria R&D institutional capabilities in developing a wider range of appropriate and efficacious malaria control tools.

1.3 MISSION OF AMANET

To promote capacity strengthening and networking of malaria R&D in Africa.

1.4 GUIDING PRINCIPLE OF AMANET

AMANET is committed to the creation of an environment for enabling the development of African centres of excellence in malaria research through capacity strengthening of African scientists and institutions. Given the widened scope inherent in the AMANET mandate, AMANET will continue paying particular attention to the development of appropriate malaria vaccines, and also to address the development of neglected yet necessary malaria interventions including rapid diagnostics and indigenous African medicines.

1.5 VALUES OF AMANET

In line with this guiding principle, the following are AMANET's deeply held values:

- 1.5.1 Close working relationships with the formal health systems in Africa, particularly at the research-control interphase;
- 1.5.2 Promotion and fostering of internationally recognized intervention R&D in Africa;
- 1.5.3 Development of excellence, relevance and sustainability in malaria R&D programmes using national expertise and experience;
- 1.5.4 Securing the highest compliance in health research ethics and offering a forum for addressing ethical dilemmas;
- 1.5.5 Promotion of high quality performance and the establishment of good governance in African malaria R&D and training institutions.

During the Strategic Plan period AMANET fulfilled the above values by organizing short-term training activities in areas essential for undertaking intervention trials for national researchers and associated personnel from public owned institutions across Africa; strengthening overall capacities and filling gaps at four governmental R&D institutions in eastern, southern and west Africa ; sponsoring GCP compliant, international standard health research, meeting the needs of malaria intervention trials for Africa. All AMANET

sponsored research projects and trials, aim at attaining high ethical and good governance standards.

1.6 BROAD OBJECTIVE

To continue developing self-sustainable centres in Africa that meet international requirements for conducting malaria intervention trials.

1.7 SPECIFIC OBJECTIVES

1.7.1 To develop and support implementation of standards for the expertise and infrastructure required to perform and to evaluate intervention trials;

To achieve this, an all-inclusive list of key elements needed to undertake and evaluate intervention trials at internationally accepted standards will be prepared by involving experts in selected fields. The standards will be defined at levels of the International Conference on Harmonisation (ICH) of GCP, good laboratory practice (GLP), and standard operating procedure (SOP) protocols adapted to malaria-specific activities.

1.7.2 To promote and coordinate capacity strengthening activities of African malaria R&D institutions

The AMANET Secretariat will acquire or lease essential equipment and employ or otherwise engage necessary personnel for promotion and coordination of research capacity strengthening of AMANET beneficiary institutions in order to eventually attain sustainability in key areas. Personnel will be required mainly to cover clinical and field trial monitoring, health research ethics and site auditing.

1.7.3 To further develop previously selected centres for clinical trials so as to attain sustainability

Centres previously selected for AMANET funding will be further developed in preparation for future malaria intervention trials. A further two sites will be added for sponsorship.

Attempts will be made in filling gaps recognized during the needs assessment exercise, particularly those pertaining to long- and short-term training, essential equipment, and site characterization.

1.7.4 To select more centres for future strengthening for more clinical trials

Two more trial sites will be selected for future AMANET site strengthening.

1.7.5 To support long-term training of research personnel

Based on needs assessment of the AMANET-supported sites, the identified gaps in the training of research personnel will be filled.

1.7.6 To develop suitable training programmes in accordance with international standards

These will be in the form of a series of interactive workshops and on-site practical training based on the review of the selected centres. Personnel from AMANET sponsored centres/sites will receive first priority in all AMANET training activities. Furthermore the AMANET Secretariat will organize special GCP workshops (including a session on accounting and procurement) at the launch of new capacity strengthening projects. An expert pre-audit will be undertaken at each centre before the launch of any clinical testing, and any gaps identified will be filled. A special GCP workshop will be organized for all staff earmarked for participation in the development of a particular AMANET product.

1.7.7 To fill gaps in infrastructure of the selected centres

Criteria for funding will include an assessment of maintenance possibilities. Following needs assessment gaps in essential infrastructure will be identified, and these may include provision and maintenance of equipment, transport, and repair and/or refurbishment of buildings.

1.7.8 To disseminate information of AMANET activities

This includes the dissemination of information on AMANET activities and achievements to the general public, policy and decision makers and scientists in African and international forums as well as the collection of feedback from all these groups. AMANET will continue publishing and improving its newsletter, annual report, and hosting its web-site. Other publishing possibilities will be sought, taking advantage of hosting the MIM Secretariat.

1.7.9 To facilitate and promote the conducting of intervention trials

AMANET and its collaborating partners will make themselves available to be contracted by sponsors to facilitate conduction of intervention trials. Given the knowledge, skills and experience gained within the AMANET network, and requests being received, AMANET would be engaged as a Clinical Research Organization (CRO) in providing the pertinent instructions in e.g. HRE, GCP, GLP, data management, and other areas pertinent to the development of intervention tools. Furthermore AMANET should be able to mobilize the network, so as to undertake clinical trials upon request.

1.7.10 To sponsor clinical and field trials

AMANET will identify potential orphaned malaria vaccines, indigenous medicines, and diagnostics, and source funds for their further development.

1.7.11 To promote development of African indigenous antimalaria medicines.

AMANET will mobilize new funding for sponsorship of institutions and networks for the development of African traditional medicines and strategies for treatment and prevention of malaria

1.7.12 To promote development of appropriate malaria diagnostics

AMANET will mobilize new funding for sponsorship of development of appropriate rapid diagnostics and evaluation of their effectiveness in peripheral rural settings of Africa.

1.7.13 To establish a data management centres for AMANET funded trials

Data management has emerged as a weakness in AMANET sponsored activities, and this deficit could increase as AMANET sponsors more trials. AMANET will therefore mobilize new funding for data management for AMANET funded trials.

1.7.14 To review AMANET constitution, and elect members of different AMANET governing bodies.

The AMANET constitution was developed during 2001/2002, before the founding of AMANET. With experience some short-comings have been observed and these and others will be identified and reviewed.

2. STAKEHOLDERS AND PARTNERS

2.1 Stakeholders

- All Malaria Research and Development Institutions in Africa;
- AMANET-selected trial sites;
- Policy and decision-makers, especially in national government machinery such as ministries of health and local governments; but also trade, industry, judiciary, higher education, science and technology, etc;
- Local and international research sponsoring institutions such as, the Medicines for Malaria Venture (MMV), the Malaria Vaccine Initiative (MVI), the European Malaria Vaccine Initiative (EMVI), the Global Health Fund (GHF), the European-Developing Countries Clinical Trials Partnership (EDCTP), European Malaria Vaccine Development Association (EMVDA) Consortium and the Malaria Clinical Trials Alliance (MCTA). Also WHO/TDR, WHO/AFRO, US-National Institutes of Health (NIH);
- Research Collaborating Institutions – Research Institutions;
- Universities and Non-Governmental organizations and communities;
- Ministries of Development Cooperation, Official Development Agencies;

- Collaborating non-African malaria institutions;
- Pharmaceutical industry and SMEs (small to medium enterprises);
- Philanthropic organizations;
- Public - Private Partnerships (PPP).

2.2 Financial partners

Previous and current major financial partners of AMANET include the Netherlands Government, the Danish Government and the European Commission. The Bill and Melinda Gates Foundation is a new philanthropic financial partner.

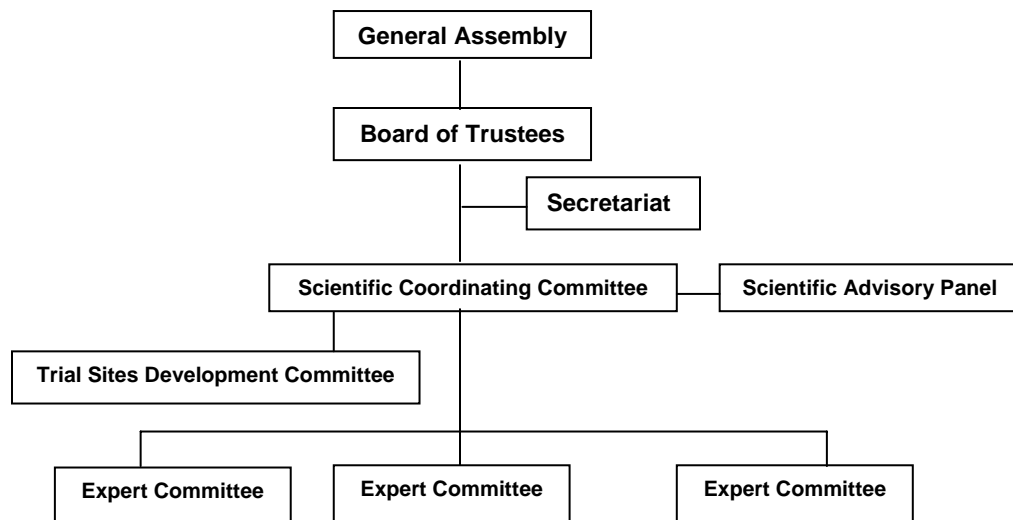
3. ORGANISATION AND MANAGEMENT

3.1 Legal status

AMANET is a non-profit international organization registered in Tanzania under the Trustees Incorporation Ordinance Cap 375.

3.2 Organization

The organization structure of AMANET comprises the General Assembly (GA), Board of Trustees (BoT), the Secretariat, Scientific Coordinating Committee (SCC), Scientific Advisory Panel (SAP), Trial Sites Development Committee (TSDC) and Expert Committees.



The General Assembly comprising representatives of malaria R&D institutions in Africa and allied institutions outside Africa is the topmost organ. It generally meets every two years and is responsible for electing the Board of Trustees and the Scientific Coordinating Committee.

The BoT is the ultimate authority in matters of policy and investment. It oversees the general governance, regulation and control of AMANET.

The current members of the Board are as follows:

1. Chandiwana Steven (Zimbabwe)
2. Greenwood Brian (UK)
3. Guiguemde Robert, (Burkina Faso)
4. Kilama Wen L (Tanzania), Managing Trustee.
5. Kohi Yadon (Tanzania)
6. Lange Peter (Germany)
7. Leke Rose (Cameroon)
8. Nkrumah, Francis (Ghana) Chairman
9. Rabinovich Regina (USA)
10. Tanner Marcel (Switzerland)

The Scientific Coordinating Committee is constituted of senior research scientists elected by the General Assembly. It is responsible for receiving and reviewing reports from the Secretariat and from the Expert Committees. The SCC advises the BoT on scientific matters. Its functions also include the reviewing of research proposals and letters of expression of interest and the monitoring and evaluation of ongoing and completed research projects.

The current members of the SCC (2002 -2006) are as follows: (to include or not to include)

1. Akumu Achidi (Cameroon)
2. Diggs Carter / Hall Lee (USA)
3. Druilhe, Pierre (France)
4. Elhassan, Ahmed (Sudan)*
5. Jepsen, Søren (Denmark)*
6. Kilama, W (Tanzania) – Secretary/Non-voting member
7. Kironde, Fred (Uganda) – Vice-Chairman
8. Kremsner, Peter (Germany)
9. Lemnge Martha (Tanzania)
10. Malenga, Grace (Malawi)
11. Marsh Kevin (UK)
12. Mshinda, Hassan (Tanzania)*
13. Ntoumi Francine (Gabon)*
14. Penali Louis (Ivory Coast)
15. Sauerwein, Robert (Netherlands) – Chairman
16. Sirima, Sodiomon Bienvenu (Burkina Faso)*
17. Sukwa Thomas (WHO/AFRO)
18. Vincent Robert (France)
19. Tesfaye Mengesha (Ethiopia)
20. Thor Theander (Denmark)

Trial Sites Development Committee is drawn from the SCC and is appointed by the BoT. Members of SCC who comprise the TSDC are shown with asterisks in the list above. TSDC advises AMANET on all matters concerning malaria intervention trial sites.

The Secretariat is the executive organ of the Trust, serving the Board of Trustees and all the committees. Currently it comprises the following:

1. Managing Trustee: Prof. W. L. Kilama
2. Network Director: Prof. J.A. Oloo
3. Clinical Trials Coordinator: Dr R. Chilengi
4. MIM Secretariat Coordinator: Prof. J. B. Rugemalila
5. Finance & Administration Manager: Mr B. B. Amri
6. Communications Officer: Dr. C.L. Wanga
7. Information Technology Officer: Mr. S.W. Ramadhani
8. Personal Secretary: Ms S. N. Mandawa
9. Projects and Sites Manager: Dr R. Noor
10. Health Research Ethics Coordinator: Dr A. Nyika
11. Accounts and Procurement Officer: Mr B. Majila

The procedures for election and appointment of various AMANET organs, their structure, function and tenure are specified in the AMANET Constitution, Rules and By-Laws, which can be downloaded from the AMANET website: www.amanet-trust.org.

3.3 Reporting

The Secretariat manages all AMANET affairs, prepares annual plans of operations, progress and financial reports and submits them to the Board of Trustees as stipulated in the Trust Deed.

3.4 Finance

The Board of Trustees appoints auditors as provided in the Trust Rules. The audited financial statements are prepared and submitted to the Board of Trustees annually within

six months of expiry of the financial year. All beneficiaries of AMANET grants are required to submit annual and end-of-project audited accounts.

3.5 Monitoring and evaluation

Every three years, the Board of Trustees will appoint external evaluators to examine the working program in terms of relevance, significance, accountability and quality assurance, within the context of international standards. Additionally, major financial supporters will from time to time conduct external auditing of AMANET activities and finances. During the three-year period 2004-2006, KPMG (Amstelveen) conducted an institutional appraisal of AMANET between February and July 2004. The primary objective of the appraisal was to review AMANET in view of similar networks, so as to advise the Trust and its leading stakeholders on the future developments regarding new opportunities and threats. The secondary objective was to appraise progress made so far by AMANET in achieving the set objectives since its establishment as AMVTN in 1995. The major conclusion of the review was that AMANET was on track, with regard to its set objectives.

During the strategic plan, a midterm review was undertaken in April - June 2006, on behalf of AIDCO; the largest funder of AMANET. The review found AMANET performance to be good across the board, except in delayed malaria vaccine testing, and conflict of interest among some SCC members.

Also during the period KPMG LLP, the US member firm of KPMG was retained by the Bill and Melinda Gates Foundation to review AMANET documents and financial records; and on the basis of their report AMANET was approved for funding by the Gates Foundation.

The findings and recommendations by the three consulting firms will be made use of in the preparation of the current strategic plan.

Furthermore the 9th meeting of the AMANET BOT in light of the above international reviews did not consider it necessary to have another review, as stipulated in the AMANET Constitution.

4. ENVIRONMENTAL ANALYSIS: Strengths, Weaknesses, Opportunities and Threats (SWOT)

4.1 INTERNAL ENVIRONMENT

4.1.1 STRENGTHS

(a) Staffing

AMANET Secretariat establishment grew from two to eight staff members; a further three will soon be added so that it will be better enabled to cope with capacity strengthening and trial sites development. The new positions at the MIM Secretariat, the recruitment of a Communications Officer, an Information Technology Officer, a Health Research Ethics Coordinator, an Accounts and Procurement Officer and a Project and Sites Manager (to assist the Clinical Trials Coordinator) are further strengthening of the AMANET Secretariat, and will improve and increase AMANET performance and visibility, especially in its monitoring, advocacy and oversight roles. During the planning period as more trials enter the AMANET portfolio, there will be need for recruitment of Clinical Research Associates (CRAs).

(b) Networking

The AMANET Secretariat has established close working relationships with experts across Africa and elsewhere who constitute networks that facilitate AMANET training workshops, carry out reviews, and undertake site strengthening activities and audits. AMANET has also strengthened management, leadership and accounting for research funds at networked institutions.

The AMANET funded Afro-immuno-assay network is a unique AMANET invention, undertaking similar immuno-epidemiological studies in the evaluation of malaria vaccines in six African countries, which will soon grow to eight. Furthermore AMANET has

sponsored postgraduate training of researchers at beneficiary centres; these are likely to constitute future nodes for further collaboration including south-south mentorship. AMANET efforts on capacity strengthening in health research ethics review in Africa has been highly productive and is likely to grow even further given AMANET's recent entry in web-based training, and the receipt of the Gates Foundation Grant in strengthening health research ethics in Africa. Under the latter grant the AMANET Secretariat in Dar-es-Salaam will constitute the hub, with a sub-hub in Yaoundé, Cameroon; the grant will also provide sub-grants to a network of 20 institutions, all of which are also involved in malaria intervention trials.

In recognition of AMANET's role in capacity strengthening and networking of malaria research and development institutions across sub-Saharan Africa, AMANET was in 2005 elected by global malaria leaders to host the Secretariat of the Multilateral Initiative on Malaria (MIM) from 2006-2010; previous secretariats have been hosted by well known developed country institutions. This is a unique opportunity, which is likely to benefit AMANET in many ways during this planning period.

(c) Training

Since the founding of AMVTN in 1995, considerable expertise has been created among African malaria researchers through AMANET short-term training workshops. Over 900 African scientists and associated personnel have been trained in aspects relevant to intervention trials such as health research ethics, Good Laboratory Practice (GLP), Good Clinical Practice (GCP), study design, data management, molecular biology and immunology, and leadership and management of research institutions etc.

(d) Information resource

AMANET has improved information resources and increased visibility of malaria among policy makers and African governments through various means including:

- Publishing reports and proceedings of conferences, seminars and workshops
- Publishing a directory of potential institutions for testing malaria vaccines in Africa
- Training activities
- Newsletter production and website hosting for both AMANET and MIM Secretariat
- Production of AMANET Annual Report
- Publishing *African Malaria Research and Control Forum* in collaboration with collaborators and the MIM Secretariat.

These resources will continue to be used effectively for the dissemination of information, policies, knowledge, malaria advocacy, training and networking of African malaria researchers and institutions. The hosting of the MIM Secretariat will strengthen and broaden AMANET's information contribution.

(e) Leadership role of AMANET

Established in 2002 to address the worsening malaria burden as acknowledged by the Abuja Summit and Roll Back Malaria initiative, AMANET has over her first four years contributed immensely in strengthening African institutional capacities in R&D, especially at institutions intending to undertake malaria product development, particularly malaria vaccines. It is in recognition of this unique contribution and its make up as an African owned and led initiative, that led world leaders in malaria to elect AMANET to host the Secretariat of the Multilateral Initiative on Malaria (MIM) which was previously hosted by very highly regarded developed country institutions. Indeed in their mid-term review the international consultancy firm KPMG concluded that AMANET leadership in training, setting standards, norms and leadership and in capacity strengthening are highly appreciated.

During the ending Strategic Plan AMANET invested in capacity strengthening of prospective African malaria vaccine trial sites in Burkina Faso, Tanzania and Zambia, whereby capacity strengthening grants were awarded to develop human resource and

infrastructure capacity to carryout essential epidemiological studies and to initiate malaria vaccine trials.

During this granting period the CNRFP in Burkina Faso, through AMANET funding made history by undertaking a satisfactory phase one trial of a malaria vaccine, relying on an all African team of scientists. It is in recognition of these strengths that AMANET cooperation is extending beyond its fruitful relationship with EMVI within and beyond Europe by inviting candidate malaria intervention products for further development under AMANET Sponsorship.

(f) Trust

It is again in recognition of the above strengths that AMANET has entered agreements with various external collaborators and stakeholders. AMANET and EMVI have created a seamless relationship that sees European developed malaria vaccine candidates being transferred from the EMVI into the AMANET portfolio. It is also through similar recognition that large capacity strengthening grants from both sides of the Atlantic Ocean .are channelled through AMANET in order to benefit researchers and research institutions across sub-Saharan Africa.

4.1.2 WEAKNESSES

(a) Operational activities

Although AMANET has had some success in resource mobilisation for capacity strengthening and for the development of malaria intervention tools, it still relies too heavily on project funds to meet most costs for human resources and secretariat running costs; the need to have larger assured core funding is obvious. Moreover, its Secretariat is very small and has to depend on the voluntary services of expert members of the Trust organs for many of its activities such as SCC and Board membership, training and planning. In some instances this cooperation cannot be expected to continue and flourish for ages to come. To date the extent of collaboration with other groups such as MCTA, GSK/MVI and in country institutions such as IHRC and CEEMI has been generally weak.

The secretariat will continue to engage CRAs for lengthy assignments and so will monitors and other consultants. Moreover the Secretariat in collaboration with other Trust organs will continue to seek for more funds and strengthen collaboration with partners and institutions with common objectives. It is very gratifying to note that AMANET expert committee members continue to spare their valuable time to engage in AMANET activities at merely nominal fees.

(b) Lack of industrial involvement, national and international coordination

There is generally very little interest or involvement by the private sector and industry in malaria vaccine development and clinical trials. This weakness is made more acute in Africa by the lack of international coordination in the utilization of the few available vaccine trial sites and absence of national policies to develop more sites. The recent formation of the Malaria Clinical Trials Alliance and the establishment of “drug” regulatory agencies in a number of African countries will contribute to the alleviation of this problem.

(c) Shortage of personnel at the Secretariat and Beneficiary Centres

For a year the position of AMANET Network Director has remained vacant; Secretariat already overburdened had to carry even heavier duties. Moreover centre staff identified for postgraduate training could not leave station for lack of substitutes.

Weak management and leadership are still hampering collaboration with beneficiary centres. A grant to one centre had to be terminated; another could not be extended.

(d) Limited success in fund mobilization

An anticipated major funding (NACCAP) failed, the DGIS funding ended, as did the INCO program. Fortunately other funding sources are becoming available. There is need for AMANET to strengthen relations to assure new funding and renewals.

4.2 EXTERNAL ENVIRONMENT

4.2.1 OPPORTUNITIES

(a) Awareness of the malaria problem

Public health workers, researchers, decision and policy-makers recognize malaria as a leading public health problem in sub-Saharan Africa. In Africa it is estimated that there are 500 million cases of malaria per annum (90% of the world total) resulting in 1-3 million deaths (80% of the global total) each year. Moreover, malaria is responsible for direct and indirect costs amounting to over US\$12 billion, and that in some African countries it accounts for an annual loss equivalent to 6% of the Gross National Product (GNP). Malaria is therefore a major determinant of the poverty in Africa. The malaria situation continues to deteriorate, as evidenced by increasing drug resistance leading to change of standard treatment in many African countries.

It was in recognition of these facts that African Heads of States met on 25 April 2000 in Abuja, Nigeria and resolved to mount an all-out war on the disease.

The donor community has also highlighted the important role of malaria in Africa's underdevelopment and made decisions in support of developing new intervention tools to address this very important health problem as contained in:

- i. The Declaration of the ACP-EP Joint Assembly meeting in Abuja, Nigeria 20-23 March 2000.
- ii. The European Parliament Resolution on the EU-Africa Heads of State Summit held in Cairo, Egypt 3-4 April 2000.
- iii. The US-EU summit: Joint Efforts on HIV/AIDS, Malaria, Tuberculosis, and other Infectious Diseases, 31 May 2000.
- iv. The Bill and Mellinda Gates Foundation Funding Commitment to Accelerate Malaria Research, 21 September 2003, Bill and Mellinda Gates Foundation
- v. The G8 Leaders Summit Resolutions: Fight Against Infectious Diseases, 16 July 2006, St Petersburg, Russia. .

The United Nations and other international bodies such as the World Bank, International Monetary Fund (IMF) and Organization for Economic Development Cooperation (OECD) have also recognized the problem of malaria such that the disease has been included in the Millennium Development Goals. The goals have found a new expression in the Millennium Declaration of the United Nations, which was adopted by the General Assembly in September 2000.

(b) Interest and investment in the malaria problem

Considerable new investments have gone into malaria research, training and control. Currently there are other potential funding entities such as the Medicines for Malaria Venture (MMV), Malaria Vaccine Initiative (MVI), European Malaria Vaccine Initiative (EMVI), Global Health Fund (GHF), European-Developing Countries Clinical Trials Partnership (EDCTP), Bill and Melinda Gates Foundation, Roll Back Malaria (RBM) Partnership, the US President's Malaria Initiative, and the Malaria Clinical Trials Alliance to

mention only a few. Therefore, unlike in the past there is now considerable investment in malaria research and control from bilateral, multilateral and from philanthropic organizations as well as public-private partnerships.

Furthermore, there is increasing interest among scientists in malaria research in such areas as molecular biology, immunology, genomics, informatics, combinatorial chemistry and vaccinology. Similarly, there is growing interest in malaria research and control in downstream areas such as economics, anthropology, sociology, biostatistics and the like.

(c) Availability of candidate vaccines, indigenous medicines, and rapid diagnostics

Over the last four decades considerable investment has been made in malaria vaccine research and development and numerous potential candidate vaccines or molecules have been identified. Some of these have already progressed considerably through process development, current good manufacturing practice and formulation and few undergone Phase Ia testing for safety and immunogenicity. These can therefore be considered for clinical and field-testing by AMANET-sponsored research institutions. Unfortunately the development of these products is characterized by many delays, before they can enter the AMANET portfolio.

The worsening malaria situation, and the lack of interest from the pharmaceutical industry, has spurred new investments in the development of new antimalarial drugs, especially through the Medicines for Malaria Venture (MMV) which currently has close to 20 products in its portfolio. There are several other products under development.

There have over the years been reports of promising **indigenous antimalarial medicines**, most of which deserve testing for safety and efficacy in collaboration with indigenous communities, but still observing good scientific standards, ethical norms and good clinical practice. It is not rare at scientific meetings in Africa to receive reports of

experiences with extracts from such medicines, which unfortunately lack planned follow up and funding.

The use of rapid diagnostic tests has been necessitated by the need to use expensive antimalarial treatments even at very peripheral levels of the health care delivery system. The tests that are available have major setbacks such as variable specificity, variable stability due to storage temperatures, high cost per unit test, and other inherent problems such as interpretation in highly endemic areas where occurs high mortality amongst the most vulnerable groups among whom fever alone is equivalent to malaria case. The available rapid tests will still therefore require further validation exercise and piloting their use among categories of health care delivery personnel including the informal CHWs and mothers to children under five years old.

Vector control is currently relying on Insecticide Treated Nets (ITNs), although very recently DDT has been exonerated and may soon return to wide use. The problem however is that insecticide resistance in both pyrethroids and DDT are related; resistance to one may lead to cross resistance to the other. Pyrethroid resistance would constitute a major blow to malaria vector control programmes across Africa, since so far these are the only vector control tools being actively promoted across sub-Saharan Africa. Cognisant of this dilemma, there are new efforts (e.g. at the Liverpool School of Tropical Medicine through a major grant from the Gates Foundation) in the development of entirely new insecticides. Besides, there is potential for bio prospecting in the abundant flora in Africa for effective anti vector control under the efforts to evaluation of traditional methods of mosquito control.

(d) Availability of potential malaria vaccine trial sites

A survey undertaken by AMVTN in 1997 showed that there were approximately 30 African institutions that were involved in malaria research. Among these, two-thirds had no strong

working links with malaria research institutions in the North and required capacity strengthening. Most of these were national institutions belonging to ministries of health or national universities and can therefore be fully integrated in national policies of anti-malaria trials and development. Although the centres differed widely in their research capacity and preparedness in undertaking malaria vaccine and other intervention trials, they can be supported and utilized to establish an excellent partnership for multicentre Phase III trials.

(e) Partnerships

Two partnerships present unique opportunities:

AMANET bringing together African, European and American malaria researchers and institutions creating opportunities for collaboration. There is a great awareness for possible areas of collaboration, setting the stage for testing products, training and funding opportunities. Unfortunately this opportunity has not been sufficiently exploited.

The close working links between AMANET and EMVI also present unique opportunities for a seamless transfer of EMVI-funded c-GMP products directly to AMANET-sponsored trial institutions.

On the other hand the recent entry of new players such as EDCTP, MCTA, FIND and others such as PMI and MFI may constitute new partners and opportunities, with whom to build new alliances. MTRC in Mali is one other site for which an MOU for collaboration is under review between the two institutions.

4.2.2 THREATS

(a) Ignorance, poverty and lack of commitment

Lack of awareness, particularly in Africa, that by utilizing the available malaria-control tools one can considerably reduce malaria, hampers control measures. This is compounded by failure in translating and applying research findings into action. This may in turn be caused

by failure to convey the message to decision makers or lack of action in using the information on their part. Furthermore, in Africa there is generally very little investment committed to malaria control, although the situation is changing.

(b) Sustainability of donor funding

Although donor funding in malaria research has recently increased, the situation is still uncertain. It is for instance not clear for how long this momentum will be sustained and whether the funding will be equitable. This threat on funding is considerable, particularly among institutions that do not have strong research collaboration with northern centres.

(c) New Networks

The enthusiasm generated by the founding of the EDCTP translated into a threat, as it diluted AMANET perception among African and European researchers, and enticed staff and members from AMANET. The Malaria Clinical Trials Alliance (MCTA) with considerable financial outlays made its debut recently, building a formidable network that includes centres previously closely allied with AMANET.

5. STRATEGIC PLAN OBJECTIVES AND STRATEGIES

5.1 INTRODUCTION

The strategic plan objectives and strategies to be pursued during the period of 2007-2011 broadly fall under the following categories:

- 5.1.1 Creation and fostering of global awareness of the African malaria burden
- 5.1.2 Promotion of collaboration and cooperation with all stakeholders
- 5.1.3 Capacity strengthening of research and development in malaria intervention tools
 - To update the inventory of potential trial sites

- To apply the already developed AMANET standards at AMANET intervention trial sites
- To determine needs of additional potential malaria intervention testing sites
- To characterize potential malaria intervention sites
- To increase the number of AMANET supported trial sites
- To expand and improve course contents of training workshops, particularly on practical aspects and epidemiology
- To train personnel from the potential trial sites
- To develop AMANET site-specific development plans
- To strengthen infrastructure and provide equipment to prospective trial sites
- To assist AMANET supported institutions develop their own strategic and business plans

5.1.4 Promotion and facilitation of clinical and field intervention trials of:

- Malaria Vaccines;
- Traditional African medicines;
- Diagnostics;
- Malaria prevention and/or control devices.

5.1.5 Development of the Afro-immunoassay gold standard for evaluating malaria vaccines

- To optimise and standardize laboratory methods of the Afro-immunoassay project
- To establish and put into operation the Afro-immunoassay laboratory standard operating procedures

5.1.5 Strengthening of AMANET institutions and network.

The main overall assumptions underlying this plan are:

- Sufficient financial support for AMANET activities will continue

- Vaccine and other control/prevention candidate tools will be made available to AMANET
- In places where AMANET is supporting intervention trials there will be continued cooperation from the participating research institutions, governments and the concerned communities.

5.2 STRATEGIES FOR ACHIEVING OBJECTIVES

This section outlines strategies to be adopted for realization of the strategic plan.

5.2.1 Creation and fostering of global awareness of the African malaria burden

AMANET in collaboration with MIM as Pan-African networks will harness their joint resources so as to jointly address this common objective of creating awareness of the malaria burden across Africa. MIM will in particular take on the advocacy role by publishing the *African Malaria Research and Control Forum*. Both institutions will continue publishing their respective newsletters, maintaining their separate websites, and publicizing their annual reports. Further efforts will be invested in creating more visibility for AMANET, including publications in both peer reviewed journals of AMANET sponsored activities, and in the popular press.

Given its limited resources including human resources, and taking into account the widespread needs across Africa, AMANET will also rely on the networked malaria research and training institutions to attain this goal. As an international network AMANET in collaboration with MIM will promote global awareness of the African malaria problem beyond the national and regional aspirations of national organizations, which normally act only locally in translating research results into action and in influencing policies, operations and behaviours. Furthermore, AMANET will aim to reach all stakeholders through its website, newsletters and conferences. Links of the AMANET website to other sites will be important in this regard.

The crucial role to be played by the *African Malaria Research and Control Forum* arises from the fact that there is urgent need to bridge the research-control gap and translate scientific publications on malaria, into non-technical format so as to promote the flow of this important information to the non-scientific research clients to inform and influence policies and operations.

5.2.2 Promotion of collaboration and cooperation with stakeholders

AMANET stakeholders include policy and decision makers, donor community, researchers, operational health personnel, health educators, national governments (particularly ministries of health), local governments, local leaders, participating communities and agents of change. All these must be brought on board through the collaboration between AMANET and national research institutions that will repackage the research – control information to specifically target each end user. AMANET will make all out efforts to inform its stakeholders of AMANET activities by making policy briefs, making presentations at meetings of policy and decision makers, the donor community, and national leadership. AMANET will also build additional stakeholders and initiate collaboration with new institutions for the pursuit of strengthening and evaluating traditional medicines for malaria prevention and treatment. Newer alliances with WHO/WPRO through WHO/AFRO on capacity strengthening evaluation of the newer diagnostics (RDTs) and training of users at most peripheral levels will also be established.

5.2.3 Capacity strengthening of research and development in malaria intervention tools

Short-term training

During the first Strategic Planning period, AMANET supported and organized several training workshops which benefited over 900 African malaria researchers and associated personnel. In the process a comprehensive repository of expertise essential for the

evaluation of malaria interventions, is being built up. Some of the former AMANET trainees have become experts in these areas. During this strategic plan period, AMANET will draw upon this vast expertise to constitute teams of trainers that facilitate short term training for AMANET beneficiary institutions, and for others upon request. The training will be in such areas as:

- Health research ethics review in Africa
- Development of Standard Operating Procedures for Ethical Review Committees
- Health Research Ethics for Investigators
- Good Laboratory Practice and Standard Operating Procedures
- Good Clinical Practice
- Good Clinical Practice for African clinical monitors
- Design, methodology and data management in intervention trials
- Roles and operations of Data Safety Monitoring Boards (DSMB)
- Training workshops pertaining to such new areas as evaluation of diagnostics and indigenous medicines will be developed and will constitute part of new project/programme fund raising.

Given the ever rising demands for AMANET short-term training, alternative teaching methods will be identified, and utilized.

- Web-based training which was successfully implemented during the end of the last plan will be consolidated.
- Additional web-based courses will be developed.
- Furthermore, attempts will be made to provide practical training in most of the training, especially at the launching of prospective trial sites, or of new intervention trials. Institutions across sub-Saharan Africa will upon request be assisted in the identification of research problems, planning research undertakings, preparation of trial protocols,

data analysis, and writing of scientific reports for various stakeholders, and on peer review of proposals.

AMANET will also consider (if resources are available) supporting at least two workshops during this planning period that will address methodologies for evaluating medicinal plants for treatment of malaria (preclinical and clinical) and for malaria vector control (entomological methods).

Long-term Professional Training

In order to meet more advanced demands, AMANET will sponsor professional training to masters and doctoral levels, in specialties such as public health, molecular biology, immunology, epidemiology, biostatistics, parasitology, medical entomology, medical sociology, health economics, and the like. The training will be aimed at meeting the human resource needs of the current and future AMANET beneficiary institutions. This training will create future research leaders, enable the institutions to carry out advanced research, earn competitive awards including consultancies and in the process enable them to become self-reliant in attracting funds to attain sustainability.

Determination of the needs and characterization of potential sites for testing malaria interventions

Before any centre embarks on a trial, a detailed expert audit will be carried out to ensure that the centre is ready to undertake a trial. Since prospective study sites are at different levels of development, they will also enter AMANET sponsorship at different levels. Those that meet all trial prerequisites will directly embark on the projects. Others will undergo site preparation which will include a needs assessment survey, and carry out intensive epidemiological and demographic investigations including assessment of transmission intensity. The expert audit will among other

things reveal gaps in personnel training, equipment, and refurbishment. Awards to the identified institutions will aim at filling these gaps.

These expert audits will also during this planning period evaluate the centres preparedness and development status to allow evaluation of medicinal plants (botanical products) for malaria treatment and mosquito vector control and capacities to evaluate new diagnostic tools.

Strengthening of infrastructure and provision of equipment to the prospective trial sites

The needs assessment exercise, undertaken for four centres, identified needed equipment, including repair or servicing needs. The same exercise will apply to transport and infrastructure needs, and repairs, renovation and refurbishing. The supplies needed are then contained in the proposals from each site.

The number of centres selected for initial participation in vaccine and other malaria intervention trials will be increased in phases to five, funds permitting. Personnel and facilities at the initial participating centres will be engaged to train and mentor others and serve as reference points. This strategy will ensure south-south collaboration and interaction, delivery of projected objectives and self-sustainability. Selection of more participating centres will be based on agreed minimal criteria based on the infrastructure, personnel, management, relationship with national institutions (particularly ministries of health), sustainability and existing institutional plans in relation to AMANET objectives. Malaria transmission intensity will constitute a major consideration during site selection. In collaboration with the MIM Secretariat it is envisaged to develop networks of excellence in malaria research; the end result is to develop regional centres to a level of producing specific deliverables, be self-sustainable and able to support other centres in the sub-regional networks of excellence. Regional coherence and close linkages to northern stakeholders and

partners in all phases of capacity development of the intervention tools (vaccine trials, drugs, diagnostics, etc.) will help to enhance this sustainability.

Strengthening of institutional ethics review capacities

A survey of ethics review committees at malaria research institutions that will undertake malaria intervention trials will reveal their needs that will later be addressed through sub-grants; 20 institutions will be granted.

5.2.4 Promotion and facilitation of clinical and field intervention trials

The Afro-immunoassay initiative, the various workshops organized by AMANET, human resource capacity development activities and the upgraded infrastructure will all form the basis and pre-requisite for the actual testing and evaluation of the interventions, such as malaria vaccines, traditional medicines, and diagnostics as they become available.

Evaluation of vaccines will follow the standard processes as defined by the International Conference on Harmonisation in Good Clinical Practice (ICH-GCP) guidelines. Based on the immunogenicity data available an African Phase I trial may be restricted to a few African adults. Phase IIa trials for erythrocytic malaria vaccines targeting the childhood population in endemic areas are controversial and therefore not included in the critical assessment of whether to continue with vaccine evaluation in Africa. A few combined Phases I/ II trials will be conducted on a few African children after results from African adults are available.. Although AMANET has not submitted any proposals to donors for a multicentre vaccine efficacy evaluation it will follow the example of GSK/MVI that has established an extensive network to support a multicentre vaccine trial of RTS,S.

Essential Documents for Vaccine Trials

AMANET, in collaboration with EMVI, vaccine developers, PIs in the field and other groups will coordinate the vaccine trials, including the development of the site-specific trial protocols, investigators' brochures, informed consent forms and the submission of applications to the national regulatory authorities, institutional review boards, and/or national ethics committees. AMANET funded trials will adhere to the approved AMANET Standard Operating Procedures (SOPs). The trials will be conducted in accordance with GCP as outlined in the ICH guidelines for GCP, which harmonize EU, USA, Japanese, Canadian, Nordic and WHO guidelines. All AMANET-coordinated or sponsored trials will take place only after clearances have been obtained from the relevant ethics review committees, institutional review boards or national ethics committees, national regulatory authorities, and will adhere to the spirit of the Helsinki Declaration.

Trials of other intervention products;

These activities will follow similar pathways as for vaccines with their specific variations taken into consideration. Fortunately several of the AMANET SCC members, and members of the Scientific Advisory Panel among whom expert committees will be drawn from, have experience in clinical evaluation of drugs, vaccines and other tools; they will act as resource persons, but at the same time avoiding conflict of interest. During this planning period it is intended to include on the AMANET SCC more expertise in product development and other areas essential for attainment of these set goals. Expert Committee members will examine protocols, published results, clinical development plans and other essential documents before making recommendations to the SCC. Specific trial protocols based on the already developed generic protocol will include specific go-no-go criteria for continuation of evaluation. Protocols form an integral part of a larger clinical development plan encompassing all phases of malaria vaccine (and other products) development, from c-GMP production via Phases I, II, III evaluation to licensure.

Supporting development of African traditional medicines and traditional strategies for malaria control:

AMANET will respond to the regional Strategy for strengthening traditional medicine through

- to promote a forum for stakeholders who have interest to support the search and evaluation of traditional medicines and medicinal plants for malaria treatment and mosquito vector control.
- to support the establishment of an African network of institutions with varying capacities to capture their varying comparative advantages in evaluation of traditional medicines
- Promote and support systematic preclinical evaluation of traditional medicines, ethnomedical surveys, observational studies and later randomized clinical studies for safety and efficacy.
- If the evaluation of the traditional medicine is promising, AMANET should support and promote interphasing of research and industry for further development which will examine safety, efficacy and quality.

Linking of capacity building with vaccine and other trials

Before embarking on any trial it is essential to fully characterize the sites. This requires the gathering of very detailed baseline data in many areas of health sciences such as demography, epidemiology, biostatistics, parasitology, transmission, immunology, and molecular biology. AMANET in collaboration with the supported institutions will train and retrain appropriate personnel.

Protection of vaccine trials participants

In all the centres, ethical procedures will be emphasized at all stages. The AMANET Secretariat will make sure that before undertaking a trial each trial centre has in place a properly constituted and operational ethics review committee. This will involve the training of members of the ethics committee, preparation of centre specific SOPs for the ethics committee, provision of essential office equipment and furniture, and the training of institutional investigators in HRE. Besides ensuring that each protocol is approved by a properly constituted and operated institutional or national ethics review committee, there will be a Data Safety Monitoring Board (DSMB) selected in accordance with established guidelines.

Given the likely increase in the number of AMANET sponsored malaria intervention trials, there will be a greater need for monitors. AMANET will engage properly qualified Clinical Trial Monitors failing which Clinical Research Associates, as previously approved by the AMANET Board and SCC, who will work with the AMANET Clinical Trials Coordinator. Ideally at each prospective trial centre there will be a local clinical monitor who will have attended the appropriate AMANET or other short-term training... The wide networking established will ensure dissemination of the concept and procedures for conducting vaccine and other field trials as well as the distribution of the trial results

For each trial, the AMANET Secretariat either alone or in collaboration with other trial sponsors, will have to make appropriate insurance arrangements. Such an undertaking may not be easy for coverage in Africa.

Protection of investigators

Investigators will be appropriately insured to cover for injuries and illnesses incurred while performing their duties and related to their duty. This will also cover for litigations

likely to arise from their work. Proper protective equipment and safety protection will also be provided to prevent infections and injuries that may be acquired while handling specimens. Furthermore these aspects will be covered in the course on *HRE for Investigators*.

Establishment of an African Data Management Centre

Data management in both the MSP3 trial and the Afro-immuno-assay has been problematic; this has also been voiced at AMANET data management training workshops. It is proposed that during this planning period, centres will be identified and strengthened to handle data, particularly from AMANET sponsored trials and where appropriate consultancy will be sought from these centres for other trial sites as they develop their own capacities for data management.

5.2.5 Development of Afro-immunoassay gold standard for evaluating malaria vaccines

The Afro-immunoassay initiative aims at developing a uniform “gold standard” for the evaluation of promising malaria vaccines. The network that comprises six African founding institutions, will soon add two more. Due to shortage of funds, this activity has been dormant, but will soon be revived under the European Malaria Vaccine Development Association (EMVDA) consortium, where AMANET is the African partner.

5.2.6 Promotion of good governance of malaria training institutions

Governance of African health R&D institutions and of training institutions can be problematic and a hindrance in the good performance of researchers and associated personnel. It is the realization of this that AMANET organized two workshops on

leadership and management during 2002 and 2006. In case need arises, and funding is available, similar training will be repeated by AMANET. A mentorship period should also be considered.

Since 1997 AMVTN/AMANET has organized many other training workshops and similar activities across Africa. In line with the founding conference, AMVTN/AMANET has emphasized networking mainly through training workshops, the AMVTN/AMANET Newsletter and the website. These activities will continue receiving the high priority they rightly deserve.

5.2.7 Strengthening AMANET Secretariat and Networking

The AMANET Secretariat will spearhead all the above activities. To facilitate this, wherever possible grants from donors will include a line item dedicated to operational costs of the Secretariat. These costs include staff remunerations, travel, equipment and supplies, office rent and maintenance, management, publications and promotion of the network. The lack of assured funding for support of AMANET core activities is a matter of grave concern; as not infrequently, some projects allow minimal if any core support. To minimize associated anxieties, attempts will be made to develop funding for core support, which should preferably be long-term. AMANET FUNDING ALONE CANNOT ASSURE INSTITUTIONAL SUSTAINABILITY. AMANET WILL THEREFORE HAVE TO EMPHASIZE THIS TO ALL INSTITUTIONS RECEIVING AMANET CAPACITY STRENGTHENING GRANTS. THIS WILL ALSO FEATURE PROMINENTLY IN AMANET TRAINING.

5.3 EXPECTED OUTPUTS FOR REALISING THE STRATEGIC OBJECTIVES

The following will be considered as outputs and products for achieving the AMANET objectives:

- The AMANET newsletters, and website development and Annual reports and reports from training workshops
- The MIM Newsletter and website
- The *Malaria Research and Control Forum as publication*
- The Organization of successful AMANET biennial conference, and, meetings of AMANET governance bodies, especially GA, BOT, SCC, and Expert Committees.
- Availability of capacity strengthening proposals from trials sites and SOPs for each AMANET strengthened institution, Afro-immunoassay network proposal, complete with its SOPs
- Number of vaccine and non vaccine (other intervention tools) trials sponsored / undertaken
- Number of Ethics Review Committees supported and their SOPs developed
- Number of institutions engaged on the initiative to evaluate traditional medicines and methods for malaria treatment and prevention
- Number of sites, centres, programmes engaged on evaluation of newer malaria diagnostics

5.4 PLANS FOR THE FUTURE

This strategic plan covers a five-year period from 2007 to 2011. Plans are underway to ensure continuing success and sustainability beyond this five-year period. These include maintenance of assistance and capacity building especially of new centres/sites, expansion of activities, development of new sites, continuing education of African malariologists and research scientists and continuing collaboration with partners and all stakeholders

6. ACTION PLAN

6.1 INTRODUCTION

The action plan is for guiding the implementation of the strategic plan. It follows the logical framework used in the preceding sections in terms of objectives, strategies and activities. The timeframe and responsibilities are also indicated. The result-based (output and outcome) performance indicators are indicated for each activity.

6.2 ACTION PLAN

For each activity, the responsible centre is required to prepare a more detailed plan that may be based on monthly or quarterly basis.

This action plan will also form the basis for budget estimates, monitoring and evaluation. The performance measurement framework outlined and discussed later follows this action plan and focuses on the outputs, outcomes and performance indicators.

The activities are arranged according to the objectives they contribute to their achievements. The output indicators are tangible deliverables that will be used to verify the physical accomplishment of activities. The outcome indicators measure the achievement of the strategic objectives.

6.3 WORK PLANS

The proposed work plans in broad format for the entire five year period January 2007 December 2011 are presented for each respective year at the end of this section. The activities are presented without regard of their contribution towards achieving the strategic objectives.

6.4 ACTION PLAN FOR 2007-2011

| Strategic Objective 1: To create and advocate global awareness of the African malaria burden | | | | |
|---|--------------------|--------------------------|--|---|
| Strategy: Newsletter and website | | | | |
| Activity | Responsible | Schedule | Performance indicators | |
| | | | Output | Outcome |
| Publishing of the AMANET Newsletter | AMANET Secretariat | June and December @ year | Number of issues and copies per year | Quality and timeliness of the newsletter rated by SCC |
| Publishing MIM Newsletter | MIM Secretariat | May and December @ yr | No of issues and copies disseminated | Extent of inclusivity among MIM partners |
| Updating of the AMANET website | AMANET Secretariat | Regularly | Amount of updated and new information | Updated and new information |
| Updating MIM website | MIM Secretariat | Regularly | Amount of updated information | Updated and new information |
| Publishing African Malaria Research and Control Forum | MIM Secretariat | April and October @ year | No. issues @ yr. and copies disseminated | Quality and timeliness of the issues as rated by SCC |
| Publishing AMANET Annual Report | AMANET Secretariat | March @ year | Annual report published yearly | Quality, Timeliness and accuracy as rated by BoT |
| Visibility | AMANET Secretariat | Regularly | No. & Diversity of Presentations | Level of awareness created |

| Strategic Objective 2: Promote cooperation and collaboration with stakeholders | | | | |
|---|---------------------|---------------------------------|--|--|
| Strategy: Meetings, newsletter, website, training and reports | | | | |
| Activity | Responsible | Schedule | Performance indicators | |
| | | | Output | Outcome |
| Biennial Conference | AMANET Secretariat | February 2007, 2009, 2011 | Papers presented and discussed | Reports/proceedings |
| General Assembly | AMANET Secretariat | February 2007 | Number of assemblies/2 years | Reports/minutes |
| BoT Meeting | AMANET Secretariat | February & October @ Year | Number of meetings/year | Reports/minutes |
| SCC Meeting | AMANET Secretariat | February and October @ Year | Number of meetings/year | Reports/minutes |
| TSDC Meeting | AMANET Secretariat | February and September @ Year | Number of meetings/year | Reports |
| Expert Committee Meeting | AMANET Secretariat | As needed | Number of meetings/ year | Expert Committee meeting reports |
| AMANET Newsletter | AMANET Secretariat | See under Objective No. 1 | Number of issues and copies per year | Quality and timeliness of the newsletter |
| Updating of AMANET website | AMANET Secretariat | Regularly | Amount of updated and new information | Updated and new information |
| Training workshops | AMANET Secretariat | Frequently | Number of workshops conducted per year Number of participants per workshop Number of topics covered in the workshops | Availability of adequate and qualified personnel for R & D Percentage of increased professionals Impact on participants and their institutions |
| African Malaria Research and Control Forum published | AMANET and partners | Twice yearly | Number of issues and number of copies disseminated | Evidence of improved interphase research and control activities in Africa |
| Annual Report | AMANET Secretariat | March @ Year | Annual Report published | Annual report and timeliness |
| Establish network for traditional medicines for malaria | AMANET | 3 rd Quarter of 2007 | Number of stakeholders / institutions engaged | Inventory of status of institutions for traditional I medicine |

| Strategic Objective 3: Advance essential human capacity for research and development of malaria interventions | | | | |
|--|---|--|--|--|
| Strategy: Short- and long-term training | | | | |
| Activity | Responsible | Schedule | Performance indicators | |
| | | | Output | Outcome |
| Training workshops | AMANET Secretariat | Frequently | Number of workshops conducted per year Number of participants per workshop Number of topics covered in the workshops | Availability of adequate and qualified personnel for R&D Leadership positions occupied by nationals Percentage of increased capacity |
| Web-based training | AMANET Secretariat | Occasionally or continuous as appropriate | New Training Courses and No. Participants | |
| Long-term training | AMANET Secretariat in collaboration with beneficiary institutions | January-December @ Year | Number of professional training beneficiaries by level of training and specialty | Availability of adequate and qualified personnel for R & D Leadership positions occupied by nationals Percentage of increased capacity |
| Practical Training | AMANET Secretariat | At site initiation and product launch | Reports | |
| Invited/Requested Training | AMANET Secretariat | Training workshop, trial protocol, data analysis etc | Report | |

| Strategic Objective 4: Determine the needs and characterize potential sites for testing malaria interventions | | | | |
|--|---|-------------------------|--|--|
| Strategy: Needs assessment, characterization of potential sites, population survey and vital statistics | | | | |
| Activity | Responsible | Schedule | Performance indicators | |
| | | | Output | Outcome |
| Needs assessment | AMANET Secretariat Respective trial sites TSDC | Regularly | Needs assessment report | Cost and type of needs of potential sites Site needs determined Gaps observed filled |
| Site characterization (vaccine studies) | AMANET Secretariat Respective trial sites TSDC | January-December @ Year | Number of characterization studies made Number of population surveys conducted. Amount of vital statistics collected | Characteristics of potential sites Epidemiology and sociodemography delineated |
| Site characterization (other interventions) | AMANET secretariat With WHO Respective institutions | Jan - Dec each year | No of institutions characterized | Institutions comparative advantage documented |

| Strategic Objective 5: Develop a uniform gold standard for the evaluation of promising malaria vaccines (Afro-immunoassay) | | | | |
|---|---|------------------------------|--|--|
| Strategy: Standardized ELISA, correlation and regression analysis, standardized ADCI and proper data management | | | | |
| Activity | Responsible | Schedule | Performance indicators | |
| | | | Output | Outcome |
| Afro-immunoassay surveys | AMANET Secretariat Expert Committee EMVDA Noguchi Memorial Institute for Medical Research (NMIMR) Participating institutions | January-December | Reliability of the standardized ELISA Correlation coefficients of ELISA variable among African populations. Robustness of the regression analysis Reliability of the ADCI assay Quality of data at the participating centres | Reliability of the Gold Standard Reports and publications |
| Afro-immunoassay workshops | AMANET Secretariat NMIMR EMVDA Participating institutions | | Workshops reports | No of products presented at the workshops |
| Professional Training | AMANET Secretariat Noguchi MIMR EMVDA Participating Institutions | Masters and PhD graduates | No of Masters and PhDs supported | Increased research output |

| Strategic Objective 6: Strengthen infrastructure and provide equipment to prospective trial sites | | | | |
|--|---|------------------|---|--|
| Strategy: Based on needs assessment, sites characterization and proposals | | | | |
| Activity | Responsible | Schedule | Performance indicators | |
| | | | Output | Outcome |
| Furnishing and equipment | AMANET Secretariat and Prospective Trial Centre | January-December | Type and cost of transport and infrastructure items purchased and rehabilitated Type and cost of equipment purchased Type and cost of equipment renovated | Adequacy of infrastructure and equipment at the prospective trial site before any trials starts as determined by expert audits |
| Site capacity strengthening | AMANET Secretariat and Prospective trial sites | January-December | Type and cost of supplied items for capacity strengthening | Adequacy of capacity at the prospective trial site before any trials starts as determined by expert audits |

| Strategic Objective 7: Sponsor intervention trials | | | | |
|---|--|----------------------------|--|---|
| Strategy: Trials in phases, develop protocols, link capacity building and trials | | | | |
| Activity | Responsible | Schedule | Performance indicators | |
| | | | Output | Outcome |
| Malaria vaccine trials | AMANET Secretariat, CNRFP, NIMR-Tanga, MRTC- Mali, ASH-Gabon, Makerere-Uganda, TDRC-Ndola, Zambia, TSDC, Expert Committee and SCC, EMVI, Other malaria test product sources. | January to December @ Year | <p>Reports on safety and tolerability among vaccinated volunteers</p> <p>Reports on the levels of safety and tolerability of malaria vaccines for children</p> <p>Number of clinical trials protocols and other essential documents developed</p> <p>Number of African scientists participated in Phase I and II trials</p> <p>Number of African clinical trial monitors, and DSMB membership,</p> | Number of clinical and field trials sponsored, conducted and completed. |
| Other intervention products | See above | January-December @ Year | Reports on safety and limited efficacy data, number of products tested, | No of other interventional trials conducted and completed. |

| Strategic Objective 8: Promote good governance and networking of malaria R & D and training institutions | | | | |
|---|------------------------------------|------------------------|---|---|
| Strategy: Leadership/management workshops, reports and networking through workshops, newsletter and website. | | | | |
| Activity | Responsible | Schedule | Performance indicators | |
| | | | Output | Outcome |
| Training workshops | AMANET Secretariat | On demand | Number of leadership workshops conducted Number of participants for each leadership workshop | Timeliness in submitting activity and financial reports Improved personnel and financial management at centres |
| Mentorship | AMANET Secretariat and trial sites | Regularly | Number of workshop participants mentored | Improved institutional management |
| Networking | AMANET Secretariat | Regularly | Level of networking through the workshops, newsletter and website | Level of networking between malaria R & D and training institutions |
| General Assembly | AMANET Secretariat | March 2007, March 2009 | Number of assemblies biannually | Assembly reports and minutes |
| Board of Trustees Meeting | AMANET Secretariat | | Meeting Reports and minutes | Number of policies and decisions made |

| Strategic Objective 9: Strengthen AMANET Secretariat | | | | |
|--|--|---|--|--|
| Strategy: Adequate resources, newsletter, website, management and administration, and monitoring and evaluation | | | | |
| Activity | Responsible | Schedule | Performance indicators | |
| | | | Output | Outcome |
| Spearheading all strategic objectives with adequate capacity | AMANET Secretariat Funding partners | Ongoing | Number of grants and amount of funds mobilised Quality and number of newsletter issues produced per year Quality of Annual Report Rate of updating of the website Level of recognition of AMANET in Africa and globally Number of publications produced Number of vacancies filled Quality of AMANET resource management. | Level of organization and coordination of various activities Rate of completion of planned activities |
| Appraisal of AMANET activities | AMANET Secretariat Funding partners | Regularly by partners, annual financial audits, Mid term review, external review 2010 | Performance report and recommendations on proficiency improvements | Improved proficiency |

AMANET APPROVED WORKPLAN JANUARY-DECEMBER 2007

| Activities | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| BoT meeting | | | | | | | | | | | | | |
| SCC meeting | | | | | | | | | | | | | |
| TSDC meeting | | | | | | | | | | | | | |
| GA meeting | | | | | | | | | | | | | |
| EC meetings (as required) | | | | | | | | | | | | | |
| Training workshops and web courses | a | | | | | | | | | | c | d | |
| Strengthening HRE review process | | 1 | | 2 | 3 | | 4 | | 5 | | 6 | 19 | |
| Afroimmunoassay activities (AIA) | | | | | | | A | | | B | B | B | |
| AMANET Newsletter and Forum | | | | | | | | | | | e | | |
| Long-term training | | | | | | | | | | | | | |
| Malaria vaccine trials: | | | | | | | | | | | | | |
| MSP3 Phase Ib (CNRFP, BF) | | | | | | | | | | | | | |
| GMZ2 Phase Ib (ASH Gabon) | | | | | | | | | | | | | |
| PfAMA-1 Phase Ib (MRTC, Mali) | | | | | | | | | | | | | |
| Sites capacity strengthening | | | | | | | X | X | | | | Y | Y |
| AMANET Annual Report writing | α | α | α | | | | | | | | | | β |
| MIM Secretariat | | | | | | | | | | | | | |
| Personnel recruitment | | | | | | A | A | | | | | A4 | A5 |

Key

| | |
|--|--|
| <p>a = Ongoing web base HRE course (EDCTP funded) b & c = GCP courses b = Workshop on training DSMB members d = New web based courses (French HRE, GCP, advanced ethics) A = AIA second generation activities begin under EMVDA B = Initiation of AIA activities at sites e= Malaria Research and Control Forum 1. Development and testing of questionnaire/tool for collecting essential baseline information; 2. Needs assessment to identify weaknesses and gaps in institutional ethics review processes</p> | <p>3. Selection of 20 ethical review committees for capacity strengthening 4. First Health research ethics (HRE) Workshop 5. Second HRE Workshop 6. Third HRE Workshop 19 Establishment of online discussion and debate on issues in bioethics in Africa</p> |
| <p>Site capacity strengthening X = New site to be awarded capacity strengthening grant Y = Needs assessment for additional sites for capacity</p> | <p>Annual report α = 2006 Annual Report β = 2007 Annual Report</p> |
| <p>Staff recruitment A1= SPM, A2= EC, APO A3= EA, MT, MIMCo, A4= MIM EA, MIM</p> | |

| | | |
|---------------|--|-------------------|
| strengthening | | Conf Coord. A5=CO |
|---------------|--|-------------------|

AMANET PROPOSED WORKPLAN JANUARY-DECEMBER 2008

| Activities | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| BoT meeting | | | | | | | | | | | | |
| SCC meeting | | | | | | | | | | | | |
| TSDC meeting | | | | | | | | | | | | |
| EC meetings (as required) | | | | | | | | | | | | |
| Training workshops and web courses | | | a | | 14 | b | | 15 | | c | | |
| Strengthening HRE review process | | | | 7 | | 8 | | 9 | | | | |
| Afroimmunoassay activities | | | | | | | P | P | | | | |
| AMANET Newsletters and MRCF | | | | | e | | | | | e | | |
| Long-term training | | | | | | | | | | | | |
| Malaria vaccine trials: | | | | | | | | | | | | |
| MSP3 Conditional phase IIb | | | | X | | | | | | | | |
| GMZ2 Phase Ib in children | | X | | | | | | | | | | |
| PfAMA-1 Phase Ib in children | X | | | | | | | | | | | |
| ^q New candidate vaccine | | | | | | | | | | | | |
| Sites capacity strengthening | | | | | | | | | | | | |
| AMANET Annual Report writing | α | α | α | | | | | | | | | β β |
| MIM Secretariat | | | | | | | | | | | | |
| Personnel recruitment | | | | | | | | | | | | |

Key

a = Training in clinical data management

b & c = GCP course

P = AIA PhD candidates enrolled

X = Start of new trial following meeting go criteria

^q new candidate vaccine(s) may enter the portfolio

e= Malaria Research and Control Forum

A1= 2nd MIM Conf Coord

7 = 4th HRE workshop

8 = 5th HRE workshop

9 = 6th HRE workshop

Annual report

α = 2007 Annual Report

β = 2008 Annual Report

14 = 1st HRE workshop for investigators

15 = 2nd HRE workshop for investigators

AMANET PROPOSED WORKPLAN JANUARY-DECEMBER 2009

| Activities | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| BoT meeting | | | | | | | | | | | | |
| SCC meeting | | | | | | | | | | | | |
| TSDC meeting | | | | | | | | | | | | |
| EC meetings (as required) | | | | | | | | | | | | |
| Training workshops & courses | | | | a | 16 | | | 17 | b | | | |
| Strengthening HRE review process | | | 20 | 10 | | | 11 | | | | | |
| Afroimmunoassay activities | | | | | | | | | | | | |
| AMANET Newsletter & MRCF | | | | | | e | | | | e | | |
| Long-term training | | | | | | | | | | | | |
| Malaria vaccine trials: | | | | | | | | | | | | |
| MSP 3 Conditional phase III | | | | | | | | | | | | |
| GMZ2 Conditional phase IIb | | | | | | | | | | | | |
| PfAMA-1 Conditional phase IIb | | | | | | | | | | | | |
| ^q New candidate vaccine | | | | | | | | | | | | |
| Sites capacity strengthening | | | | | | | | | | | | |
| AMANET Annual Report writing | α | α | α | | | | | | | | | β β |
| MIM Secretariat | | | | | | | | | | | | |
| Personnel recruitment | | | | A1 | A2 | | | | | A3 | | A2 |

Key

| | |
|---|--|
| a & b = GCP courses | A1 = ITO |
| ^q new candidate vaccine(s) may enter the portfolio | A2 = FAM |
| e= Malaria Research and Control Forum | A3 = CTC |
| 10 = 7th HRE workshop | Annual report |
| 11 = 8th HRE workshop | α = 2008 Annual Report |
| 16 = 3rd HRE workshop for investigators | β = 2009 Annual Report |
| | 17= 4th HRE workshop for investigators |
| | 20 = Mid Term Review |

AMANET PROPOSED WORKPLAN JANUARY-DECEMBER 2010

| Activities | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|--|-----|-----|--------|-----|--------|-----|--------|-----|--------|-----|-----|--------|
| BoT meeting | | | | | | | | | | | | |
| SCC meeting | | | | | | | | | | | | |
| TSDC meeting | | | | | | | | | | | | |
| EC meetings (as required) | | | | | | | | | | | | |
| Training workshops and web courses | | | | | | | 18 | | | | | |
| Strengthening HRE review process | | | | | 12 | | 13 | | | 21 | | |
| Afroimmunoassay activities | | | | P | P | | | Y | Y | Y | | |
| AMANET Newsletter & MRCF | | | | | e | | | | | e | | |
| Long-term training | | | | | | | Z | Z | Z | | | |
| ⁿ Trials of other interventions/traditional medicines | | | | | | | | | | | | |
| Malaria vaccine trials: | | | | | | | | | | | | |
| MSP 3 phase III | | | | | | | | | | | | |
| GMZ2 Conditional phase III | | | | | | | | | | | | |
| PfAMA-1 Conditional phase III | | | | | | | | | | | | |
| ^q New candidate vaccine | | | | | | | | | | | | |
| Sites capacity strengthening | | | | | | | | | | | | |
| AMANET Annual Report writing | α | α | α | | | | | | | | | β β |
| MIM Secretariat | | | | K | K | K | | | | | | |
| Personnel recruitment | | | A 1 | | A 2 | | A 3 | | A 4 | | | A 5 |

Key

| | | |
|--|---|---------------------------------|
| P = Standardised assays validated | K = Selection of next host for MIM Secretariat | |
| Y = Completing AIA MSc degrees | Staff recruitment A1= ND, A2= SPM, A3= EC, APO A4= EA, MT A5= CO | |
| Z = Completing PhD training at strengthened sites | | |
| ⁿ = Trials of other potential interventions including traditional medicines | | |
| ^q new candidate vaccine(s) may enter the portfolio | | |
| e= Malaria Research and Control Forum | | |
| 12 = Workshop to harmonize SOPs | Annual report | 21 = overall project evaluation |
| 13 = disburse small capacity grants for office facilities | α = 2009 Annual Report | |

| | |
|---|------------------------|
| 18 = 5 th HRE workshop for investigators | β = 2010 Annual Report |
|---|------------------------|

AMANET PROPOSED WORKPLAN JANUARY-DECEMBER 2011

| Activities | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| BoT meeting | | | | | | | | | | | | |
| SCC meeting | | | | | | | | | | | | |
| TSDC meeting | | | | | | | | | | | | |
| EC meetings (as required) | | | | | | | | | | | | |
| Training workshops and web courses | | | | | a | | 18 | | | | | |
| Strengthening HRE review process | | | | | 12 | | 13 | | | 21 | | |
| Afroimmunoassay activities | | | | P | P | | | | Y | Y | Y | |
| AMANET Newsletter & MRCF | | | | | | e | | | | e | | |
| Long-term training | | | | | | | Z | Z | Z | | | |
| Malaria vaccine trials: | | | | | | | | | | | | |
| MSP 3 phase III | | | | | | | | | | | | |
| GMZ2 Conditional phase III | | | | | | | | | | | | |
| PfAMA-1 Conditional phase III | | | | | | | | | | | | |
| ^q New candidate vaccine | | | | | | | | | | | | |
| Sites capacity strengthening | | | | | | | | | | | | |
| AMANET Annual Report writing | α | α | α | | | | | | | | | β β |
| MIM Secretariat | | | | | | | | | | | | |
| Personnel recruitment | | | | | | | | | | | | |

Key

a= GCP course
ⁿ = Trials of other potential interventions including traditional medicines
^q = new candidate vaccine(s) may enter the portfolio
e= Malaria Research and Control Forum

Annual report
α = 2010 Annual Report
β = 2011 Annual Report

7.0 PERFORMANCE MEASUREMENT FRAMEWORK (Annual Review)

7.1 Introduction

The framework for performance measurement will be based on the working strategic objectives and the stated strategy. The efficiency with which the activities are carried out will depend on their timeliness and on achieving the stated output / products. This affects the final assessment of the activity. The annual review will provide an opportunity for assessment on the progress of the activity. The appraisal will also be used to determine enabling and particularly, constraining factors for remedial response where possible. The final assessment is made at the end of the project but will be determined at the end of each activity. Staff performance will also be subjected to strict annual appraisals which will evaluate the position's usefulness to the strategic goals and also the position holder's efficiency. Overall job analyses will be undertaken to consider readjustment or reorganisation of the organisational structures to suit the prevailing strategic landscape.

7.2 FRAMEWORKS

| Strategic Objective 1: To create and advocate global awareness of the African malaria burden | | | | | |
|---|-------------------|-----------------|---|---|--|
| Strategy: Newsletter, website and MRCF | | | | | |
| Activity | Start date | End date | Progress in implementation (Annual Review) (1 = completed, 2 = ongoing, 3 = deferred, 4 = on schedule 5 = cancelled) | Constraints and Enabling Factor –describe here as as part of annual review) | Final Assessment by output / outcome (end of planning) 1 = Not achieved, 2 = partly achieved, 3 = fully achieved |
| Publishing of the AMANET Newsletter | 01/2007 | 12/2011 | | | |
| Publishing MIM Newsletter | 01/ 2007 | 12/ 2010 | | | |
| Updating of the AMANET website | 01/2007 | 12/2011 | | | |
| Updating MIM website | 01/2007 | 12/2010 | | | |
| Publishing African Malaria Research and Control Forum | 06/2007 | 12/2011 | | | |
| Publishing AMANET Annual Report | 01/2007 | 12/2007 | | | |
| Visibility | 01/2007 | 12/2007 | | | |

| Strategic Objective 2: Promote cooperation and collaboration with stakeholders | | | | | |
|---|-------------------|-----------------|---|--|---|
| Strategy: Meetings, newsletter, website, training and reports | | | | | |
| Activity | Start date | End date | Progress in implementation (Annual Review) <i>(1 = completed, 2 = ongoing, 3 = deferred, 4 = on schedule, 5 = cancelled)</i> | Constraints and Enabling Factor – <i>(describe here as part of annual review----</i>) | Final Assessment by output / outcome (end of planning) <i>1 = Not achieved, 2 = partly achieved, 3 = fully achieved</i> |
| Biennial Conference | 01/2007 | 12/2011 | | | |
| General Assembly | 01/2007 | 12/2011 | | | |
| BoT Meeting | 01/2007 | 12/2011 | | | |
| SCC Meeting | 01/2007 | 12/2011 | | | |
| TSDC Meeting | 01/2007 | 12/2011 | | | |
| Expert Committee Meeting | 01/2007 | 12/2011 | | | |
| AMANET Newsletter | 01/2007 | 12/2011 | | | |
| Updating of AMANET website | 01/2007 | 12/2011 | | | |
| Training workshops | 01/2007 | 12/2011 | | | |
| African Malaria Research and Control Forum published | 01/2007 | 12/2011 | | | |

| Strategic Objective 3: Advance essential human capacity for research and development of malaria interventions | | | | | |
|--|-------------------|-----------------|---|---|--|
| Strategy: Short- and long-term training | | | | | |
| Activities | Start date | End date | Progress in implementation (Annual Review) (1 = completed, 2 = ongoing, 3 = deferred, 4 = on schedule 5 = cancelled) | Constraints and Enabling Factor – (describe here ----) | Final Assessment by output / outcome (end of planning) 1 = Not achieved, 2 = partly achieved, 3 = fully achieved |
| Training workshops | 01/2007 | 12/2011 | | | |
| Web-based training | 01/2007 | 12/2011 | | | |
| Long-term training | 01/2007 | 12/2011 | | | |
| Practical Training | 01/2007 | 12/2011 | | | |
| Invited/Requested Training | 01/2007 | 12/2011 | | | |

| Strategic Objective 4: Determine the needs and characterize potential sites for testing malaria interventions | | | | | |
|--|-------------------|-----------------|---|--|---|
| Strategy: Needs assessment, characterization of potential sites, population survey and vital statistics | | | | | |
| Activity | Start date | End date | Progress in implementation (Annual Review) (1 = completed, 2 = ongoing, 3 = deferred, 4 = on schedule 5 = cancelled) | Constraints and Enabling Factor – (describe here ----) | Final Assessment by output / outcome (end of planning) 1 = Not achieved, 2 = partly achieved, 3 = fully achieved |
| Needs assessment | 01/2007 | 12/2011 | | | |
| Site characterization | 01/2007 | 12/2011 | | | |

| Strategic Objective 5: Develop a uniform gold standard for the evaluation of promising malaria vaccines (Afro-immunoassay) | | | | | |
|---|-------------------|-----------------|--|--|--|
| Strategy: Standardized ELISA, correlation and regression analysis, standardized ADCI and proper data management | | | | | |
| Activity | Start date | End date | Progress in implementation (Annual Review) <i>(1 = completed, 2 = ongoing, 3 = deferred, 4 = on schedule 5 = cancelled)</i> | Constraints and Enabling Factor <i>– (describe here as part of annual review ----)</i> | Final Assessment by output / outcome (end of planning) <i>1 = Not achieved, 2 = partly achieved, 3 = fully achieved</i> |
| Afro-immunoassay surveys | 01/2007 | 12/2011 | | | |
| Afro-immunoassay workshops | 01/2007 | 12/2011 | | | |
| Professional Training | 01/2007 | 12/2011 | | | |

| Strategic Objective 6: Strengthen infrastructure and provide equipment to prospective trial sites | | | | | |
|--|-------------------|-----------------|---|---|--|
| Strategy: Based on needs assessment, sites characterization and proposals | | | | | |
| Activity | Start date | End date | Progress in implementation (Annual Review) (1 = completed, 2 = ongoing, 3 = deferred, 4 = on schedule 5 = cancelled) | Constraints and Enabling Factor – (describe here as part of annual review----) | Final Assessment by output / outcome (end of planning) 1 = Not achieved, 2 = partly achieved, 3 = fully achieved |
| Furnishing and equipment | 01/2007 | 12/2011 | | | |
| Site capacity strengthening | 01/2007 | 12/2011 | | | |

| Strategic Objective 7: Sponsor intervention trials | | | | | |
|---|-------------------|-----------------|--|---|--|
| Strategy: Trials in phases, develop protocols, link capacity building and trials | | | | | |
| Activity | Start date | End date | Progress in implementation (Annual Review) <i>(1 = completed, 2 = ongoing, 3 = deferred, 4 = on schedule 5 = cancelled)</i> | Constraints and Enabling Factors – <i>(describe here ----)</i> | Final Assessment by output / outcome (end of planning) <i>1 = Not achieved, 2 = partly achieved, 3 = fully achieved</i> |
| Malaria vaccine trials | 01/2007 | 12/2011 | | | |
| Other intervention products | 01/2007 | 12/2011 | | | |

| Strategic Objective 8: Promote good governance and networking of malaria R & D and training institutions | | | | | |
|---|-------------------|-----------------|---|---|--|
| Strategy: Leadership/management workshops, reports and networking through workshops, newsletter and website. | | | | | |
| Activity | Start date | End date | Progress in implementation (Annual Review) <i>(1 = completed, 2 = ongoing, 3 = deferred, 4 = on schedule 5 = cancelled</i> | Constraints and Enabling Factor – <i>(describe here ----)</i> | Final Assessment by output / outcome (end of planning) <i>1 = Not achieved, 2 = partly achieved, 3 = fully achieved</i> |
| Training workshops | 01/2007 | 12/2011 | | | |
| Mentorship | 01/2007 | 12/2011 | | | |
| Networking | 01/2007 | 12/2011 | | | |
| General Assembly | 01/2007 | 12/2011 | | | |
| Board of Trustees Meeting | 01/2007 | 12/2011 | | | |

| Strategic Objective 9: Strengthen AMANET Secretariat | | | | | |
|--|-------------------|-----------------|---|--|---|
| Strategy: Adequate resources, newsletter, website, management and administration, and monitoring and evaluation | | | | | |
| Activity | Start date | End date | Progress in implementation (Annual Review) (1 = completed, 2 = ongoing, 3 = deferred, 4 = on schedule 5 = cancelled) | Constraints and Enabling Factor – (describe here as part annual review - ---) | Final Assessment by output / outcome (end of planning) 1 = Not achieved, 2 = partly achieved, 3 = fully achieved |
| Spearheading all strategic objectives with adequate capacity | 01/2007 | 12/2011 | | | |
| Appraisal of AMANET activities MTR | 01/2009 | 12/2009 | | | |
| Overall project review | 01/2011 | 12/2011 | | | |