Papua New Guinea

National Strategic Plan to Eliminate Lymphatic Filariasis 2004-2020 (PNGELF)

Department of Health

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1. Background

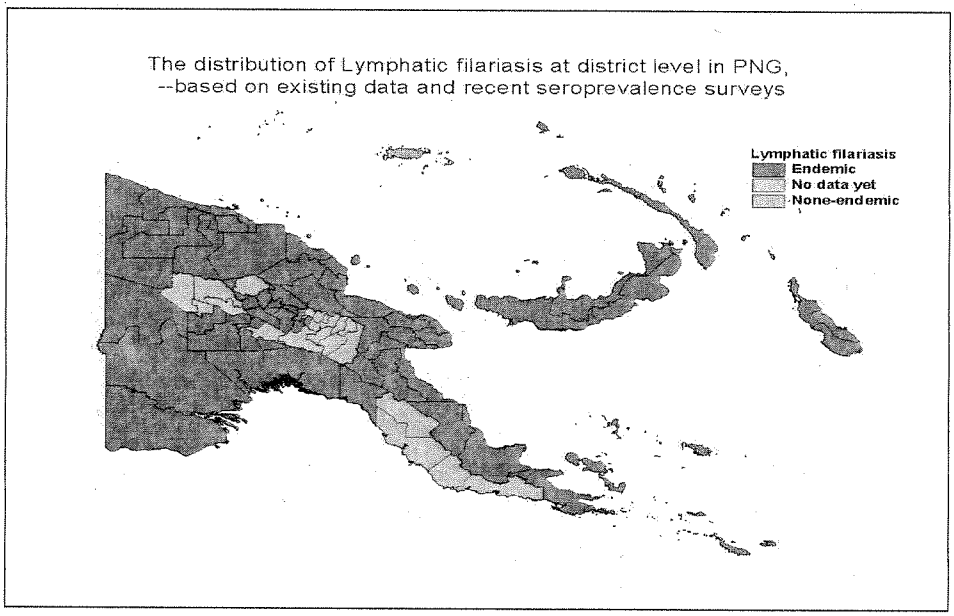
Lymphatic Filariasis (LF) is a disease which is caused by parasitic infection with a nematode worm that lives in human lymphatic system and is transmitted from one person to another by mosquitoes. LF causes enormous physical, social, psychological and economic suffering to millions of people who are affected in the world. LF is endemic in at least 80 countries with more than 120 million people at risk.

LF is endemic in many parts of Papua New Guinea. It is caused by the parasite, *Wuchereria bancrofti*, nocturnal periodic type and is transmitted by the same Anopheles vectors that transmit malaria,(*Anopheles punctulatus, An. Farauti*, and *An.kolinensis*)

In Papua New Guinea, sero-prevalence surveys conducted by the Department of Health in 5 years from 2000 to 2004 showed that over 4.4 million people in 71 out of 85 districts, 16 out of 20 provinces, are at risk. The infection is endemic in the coastal areas, the lowlands, the highlands and several offshore islands (Figure 1). It is highly prevalent in many coastal and lowland provinces in the country. Local prevalence of microfilaria infection varies from 10% to 92%. Prevalence of infection as high as 98.2% have been reported in East Sepik Province when filarial antigenemia was tested by ICT test kits.

At a national level, the proportion of persons with LF in PNG is among the highest in the Pacific Region. According to Papua New Guinea Institute of Medical Research, over one million residents are infected with *W. bancrofti*. There is widespread infection among children and most people seem to be infected and re-infected during childhood. However, only a small proportion of people have frank pathology.

Figure 1: Distribution of Lymphatic filariasis in PNG



Back in 1993 the international task Force for disease eradication predicted that LF is eradicable. The World Health Assembly resolution 50.29 (May 1997)

"Urges member states...to strengthen activities toward eliminating lymphatic filariasis as a public health problem...." And "Requests the Director- General....to mobilize support for global and national elimination activities."

The Pacific ministerial meeting in Palau in March 1999 and in Madang in March 2001 also called for the Pacific countries to mobilize resources to eliminate LF from the Pacific countries.

The Pacific program to Eliminate Lymphatic Filariasis known as PacELF began in 2000 under the auspices of the World Health Organization (WHO). The 22 Pacific Island countries, Areas and Territories are involved in these efforts to eliminate LF from the Pacific.

Some PacELF countries reacted quickly to start their elimination programmes and have already achieved good progress.

The Papua New Guinea national policy states very clearly that "Mass drug administration (MDA) for filariasis control shall be adapted and focused on endemic areas" (National Health plan 2001 – 2010). Papua New Guinea has now finally decided to join the rest of the Pacific countries by initiating its program to eliminate lymphatic filariasis. This has been prompted by other developments such as,

(1) the availability of funding from GFATM (Global fund against AIDS/HIV, Tuberculosis and Malaria) for its mosquito net program for malaria control in the whole country;
(2) the field operational mechanism set up by Supplementary Immunization Activities (SIA);
(3) the achievements of the LF elimination program in some of the other Pacific island (PacElf) countries.

Therefore, the government has come up with this Strategic plan (2004 – 2020) for the Elimination of Lymphatic Filariasis in the Papua New Guinea. That plan has again been revised and updated during the First National Workshop of the PNG Programme to Eliminate LF held in Port Moresby from 2 to 3 April 2007.

2. Population covered by programme

The target population for this program will be 80 % of total population, or more than 4 million people living in endemic areas and have been confirmed as being at risk of micro filarial infection in 16 provinces. The MDA will target this population and the patients in those provinces are also the target for disability prevention and control.

The 4 provinces initially excluded from programme (Manus province, Central province, Eastern Highland province and National Capital District) will be re assessed and the population at risk in these provinces will be included in the target population when their endemicity is confirmed.

The endemic provinces have been divided into 4 groups for implementation purposes as explained later in the document. The target populations in each group are as the follows (projected population in the year when programme starts is based on year 2000 census):

- Group 1: 220,392
- Group 2: 975,296
- Group 3: 1,856,124
- Group 4: 2,096,239
- Group 4+: 945,500 (refers to those initially excluded: Manus, NCD, Central and Eastern Highland Province)

3. Target

The target is the,

Elimination of Lymphatic Filariasis from Papua New Guinea by 2020

Elimination as public health problem is defined as a situation where transmission of the parasite to humans is brought down to levels below the threshold, which prevents new disease from occurring in the population or for a resurgence in infection prevalence.

4. Goals

(1) To stop the spread of infection - Interruption of transmission

(2) To reduce suffering caused by the disease – disability prevention and control

5. Objectives

1. To achieve over 85% of population coverage of each round of MDA in each Implementation Unit (IU)
2. To reduce prevalence of microfilaria in the general population to <1% at the end of 5-rounds of MDA in each IU
3. To reduce prevalence of microfilaria in children to <0.1% at the end of 5-rounds MDA in each IU

4. To achieve over 90% coverage of home-based self-care among registered individual patients presenting with acute or chronic phase of filariasis at the end of 5-round of MDA in each IU
5. To achieve over 50% coverage of surgical management of patients with urogenital manifestations of lymphatic filariasis at the end of 5-rounds of MDA in each IU

6. Strategies

(1) Interruption of transmission: This strategy is directed at the population at risk and aims to reduce the micro filarial load in the community to a level of 1% at which transmission of LF is interrupted. The strategy is initially based on the mass drug treatment of the population in the LF endemic areas once a year for at least 5 years. The use other interventions such as the use of DEC salt is also in consideration. This strategy will be continued until the criteria of less than 1% microfilaraemia in the general population and less than 0.1% new infections measured in children is achieved. The interruption of transmission will be measured by looking for infection in children born subsequent to the launch of the mass drug administration.

(2) Disability prevention and control: This strategy will manage individual patients presenting with the acute or chronic phase of the disease. This not only reduces the suffering of the individual and improves their physical, social and economic well-being but also gives credibility to the programme in the community.

7. Implementation activities

The programme is divided into three phases.

Phase I is the time period for preparation of program.

Phase II is the period for implementation of MDA, disability prevention and control, and programme monitoring and evaluation

Phase III is the period for verification and certification.

7.1 Activities in Phase I (2004-2007)

7.1.1 Assessing and mapping the distribution of micro filarial infection and disease

This is the very early activities. This information is collected and compiled through literature review, situation survey by questionnaire, direct physical examination, lot quality assurance sampling, antigen detection in blood, detection of microfilaria in blood to assess, prevalence of LF in all the provinces in PNG. The prevalence is expressed vividly by computerized mapping.

7.1.2 Development of National strategic Plan and implementation guides

Through consulting the GPELF strategy and PacELF strategy, a national strategic plan and several implementation guides for techniques such as MDA are developed and approved by Department of Health.

7.1.3 Establishment of Task Force

This is to establish the organizations at National, Provincial and District level which will be responsible for the policy-making, planning, implementation, monitoring and evaluation of programme.

7.1.4 Advocacy and Commitment

This is to advocate the vision, goals, objectives, strategies and activities and communicate necessary information to departments of government, academia other organizations and other stakeholders, which will support the implementation of the programme.

7.1.5 Community Awareness

This is to target people at community level by means of health education and health promotion, in order to improve the awareness of people on the burden of the disease in physical, psychological, social, economic aspects, and the awareness of the programme itself, and ultimately to secure maximum compliance and support from community.

7.1.6 Establishment of partnership

Partnership is very important for implementation and success of the programme, Partnership between different departments of government, International organizations,

NGOs and other stakeholders will be established. MOU will be developed between DOH, provincial departments, LLGs (Local Level Governments), NGOs and other partners like Rotary, Churches and the Private sector. The MOU will highlight the key functions and roles for each partner.

7.1.7 Identification of implementation units

A province is identified as an implementation unit (IU) in Papua New Guinea. The initial surveys indicated that 16 out of 20 provinces in the country are confirmed to be endemic. Re assessments will be conducted in the four provinces (Manus, Central Province, Eastern Highland Province and NCD) which were initially excluded from the programme to confirm the endemic status. Upon the confirmation of status, they will be included in the prgramme.

7.1.8 Budgeting and application for albendazole (GSK) to PacCARE and request from JICA for DEC and ICTs

When the national plan, organization and warehouse are in place, drugs for MDA should be ready for distribution to people eligible. Those drugs for MDA are albendazole and DEC, and diagnositic tools for microfilaria antigen are ICTs .Those are supplied free from GSK and JICA and coordinated by to PacCARE. and PacElf office. Requests are submitted each year before field implementation.

7.1.9 Preparing warehouse at DOH and supply network

The programme delivers anti-parasitic drugs, antibacterial drugs, anti-fungi drugs and diagnostic supplies from Department of Health to provincial health divisions and then to communities. All these supplies require a warehouse(s) with certain conditions for storage (such as ICT diagnostics requires storage at temperature between 4° and 8° C) and a supply network which can supply those programme supplies in good conditions.

7.2 Activities in Phase II (2005-2018)

7.2.1 MDA of DEC and albendazole or fortified DEC-salt to all population in LF endemic areas once a year for 5 years

7.2.1.1 MDA of DEC and albendazole

The first MDA was conducted in Milne Bay Province in 2005 and since than the programme has been stepped up from east to west. By 2008, the programme will be fully scaled up to all endemic provinces in the country. The activities for MDA include:

- Ordering of drugs and diagnostic tools: such as albendazole, DEC and ICTs from GSK and JICA early each year
- Shipment of drugs and diagnostic tools to provinces: drugs and diagnostic tools should be keep in certain required conditions (temperature)
- Preparation of registers: before each MDA. Population of each village will be registered and updated. This is one of the important steps to ensure high coverage.
- Awareness campaign: before each MDA, health education and health promotion activities will be conducted in order to increase the awareness of the population on burden of the disease and consequently secure high compliance of communities.
- Pre-implementation training: This is an annual activity to be conducted by staff of provincial and district health divisions before implementation. The trainees of the training are the health workers, nurses, health extension officers and volunteers who will be recruited to the MDA teams and will distribute albendazole and DEC to people in the villages in each IU.
- Distribution of drugs: Single annual dose of DEC (6 mg/kg) and albendazole (400 mg/person) will be given to each individual in IUs for five years. The dose of DEC can be standardized by body weight or age groups for convenience in administration in the field. Achieving the high coverage will depend on (1) the availability of both drugs in adequate quantities at the right time, (2) efficiency of the drug delivery system, (3) motivation and productivity of the drug distributor, (4) education and motivation of the beneficiary communities and (5) surveys to identify population groups being missed.

7.2.1.2 Fortified DEC-salt

Fortified DEC-salt will be applied to some areas that are hard to reach by MDA coverage of >85% due to the logistic support constraints and remoteness.

7.2.2 Vector Control

Integrated vector control measures with malaria control programme should be carried out. The long lasting insecticide-impregnated bed nets (LLINs) programme is likely to have an important impact.

GFATM malaria control programme will distribute LLINs to cover the whole population. At the end of GFATM programme, 1.9 millions LLINs should have been distributed and this will cover all population in Papua New Guinea.
Indoor residual spraying will also be conducted in some areas and this will impact of the vectors of both malaria and filariasis.

7.2.3 Disability prevention and control

7.2.3.1 Home-based self-care promotion and application

Patients with acute inflammation or attacks of adenolympangitis, can be easily managed at peripheral level using rest, analgesics, and antibiotics where appropriate.

For patients with lymphoedema, skills of home-based self-care such as regular skin care, exercise, and appropriate footwear will be transferred to patients by training provided by staff of district health centers. WHO designed home-based self-care poster with successful stories from other parts of the world will be distributed to encourage patients. With those proper education and support, the patients themselves must incorporate lymphoedema treatment into their daily routines and prevent acute attacks. Antibiotics, soap and antiseptics will be provided when necessary.

District health centres should be identified for the management of LF disease. The newer approaches to disability control will be incorporated in the training curricula of medical and health workers.

7.2.3.2 Increase access to surgery in peripheral health facilities for patients with hydrocele

Surgical approaches to the urogenital manifestation of lymphatic filariasis will be applied to patients who suffer from those manifestations, especially hydrocele and its complications such as chylocele, haematocele and pyocele.

7.2.4 IEC Campaign

Formative research has been carried out by the Health Promotion Branch of NDOH, based on a collaborative approach to understand the important community questions, understanding, and issues related to Lymphatic filariasis. This formative research is guiding development of IEC materials.

Community awareness has been supported through the production of lymphatic filariasis posters specific for PNG. The posters have been printed and distributed. This effort will continue to be strengthened with emphasis on newspapers and district health outreach and communities, in collaboration with the Health Promotion Branch at NDOH and Health Promotion staff in the provincial and district health offices.

7.3 Activities in Phase III (2019-2020)

This is the time period of preparation for final verification and certification of elimination of lymphatic filariasis from PNG after at least 5 years of Post MDA activities such as measuring the criteria for stopping MDA, transmission assessment, external verification of elimination and certification by the relevant authorities.

8. Monitoring and Evaluation of programme

8.1 Design database of programme information

In order to record, collect, analyze and report the progress of the programme and to find timely problems with the implementation of different techniques, a database of programme information such as population, eligible population, patients, drug delivery and taking will be designed and applied from the very beginning.

8.2 Sentinel sites selection and baseline prevalence survey in the sites before 1st round MDA in each IU

When mapping finished and before the first round of MDA, two sentinel sites are selected for each IU and then baseline indicator survey are conducted in the two sentinel sites. These sentinel sites will remain the same over the course of the programme and will be used to ascertain the baseline indicators (parasitological and clinical signs) and the progress indicators.

Criteria for selection of sentinel sites.

A sentinel site should:

- Have a population of at least 500 persons
- Be chosen from an area of high transmission (high disease or parasite prevalence, if known), or from an area where difficulty in achieving high drug coverage is anticipated.
- Have a stable population that is not affected by migration
- Have the same demographic characteristics as the IU as a whole.

The minimum set of essential indicators to be measured by cluster sampling in each sentinel site includes:

- Prevalence and density of microfilaria
- Clinical signs of the disease, and
- MDA coverage (except at pre-MDA survey)

8.3 Reporting MDA delivery coverage

Standardized format for recording, reporting, computerized data entry and management will be required to be applied by all IUs in order to maintain a high quality national database. Standardized analysis procedure, statistical outcome parameters and report format will be required to be applied by IUs in order to make data of drug distribution and coverage among IUs comparable and compile data efficiently.

The indicators on the effectiveness of MDA to be reported include:

- Geographical coverage of villages
- Geographical coverage of urban areas
- Drug coverage reported in total population by IU

- Drug coverage reported in eligible population by IU

8.4 Monitoring for an effective MDA campaign --coverage survey

This is the surveys to be carried out within 2 weeks after completion of each MDA to complement and verify the reported coverage by using active, population-based cluster survey methods. A sample size of 900 individuals from 30 clusters of 30 individuals per cluster are used (including sentinel sites) in each IU. The results are the surveyed coverage.

The steps of the survey include:

- Selection of the IU to be surveyed
- Selection of subunit or areas (e.g. villages, wards or localities) within the IU, using population-proportionate sampling to weight those areas according to their population size
- Random selection of a starting household followed by sampling from a cluster of contiguous households, and
- Use of a simple tabular data form and questionnaire to determine whether household members participated in the MDA

8.5 Monitoring the impact of MDA on microfilaraemia and/or antigenemia—impact survey

Monitoring the impact of MDA is conducted by measuring microfilaraemia and/or antigenemia in the 2 sentinel sites and 2 randomly selected spot-check sites. The characteristics of spot-check sites should be the same as sentinel sites. However , the spot check sites are different from year to year. The data from spot-check sites provide additional information on the prevalence of microfilaraemia.

Three indicators should be measured:

- MDA coverage: to be measured within 2 weeks after completion of each MDA in sentinel sites

- Microfilaria prevalence and density: to be measured in sentinel and spot-check sites before the 1st , 3rd and 5th MDA, if necessary, before the 7th and 9th rounds of MDA until criteria for stopping MDA are met
- Clinical manifestations: frequency is the same as measurement of Microfilaria prevalence and density, but only in sentinel sites (no need to estimate numbers of lymphoedema and hydrocele cases in spot-check sites)

8.6 Assessing interruption of LF transmission by Lot Quality Assurance Sampling (LQAS)

When the microfilaraemia prevalence rate achieves < 1% in general population, assessment of interruption should be initiated. Microfilarial antigenaemia of a sample of 3000 children aged 5 to 6 years old (children born after the first MDA) is tested by ICT cards by an independent agency. The children are selected from an area where the prevalence was high or the coverage was lowest. If all the children test negative for filarial antigen, MDA can be discontinued in the particular IU. If any one (0.03%) or more of the children test positive, then MDA needs to be continued and after every two rounds of MDA, filarial antigenaemia is tested in another sample of 3000 children until all 3000 children test negative. In this case, MDA can be stopped.

8.7 Surveillance after interruption of MDA or DEC salt distribution

A 5 years surveillance plan must be urgently developed in order to quickly identify any new focus of transmission and to provide appropriate action after interruption of the MDA or DEC salt. The plan under development in April/May 2007 for the other Pacific Island Countries could be adapted to PNG specificities.

8.8 Assessing eligibility of certification

After 5 years of cessation of MDA in an IU, the test of microfilarial antigenaemia of a sample of 3000 children aged from 6 to 10 years old is repeated to check whether microfilarial antigenaemia still continues to be below 0.1%, i.e., not single one of a sample of 3000 in the 6 – 10 year age group tests positive.

Once all the IUs in PNG achieve < 0.1% antigenaemia in the 5 – 6 year age group, PNG will be considered to have achieved elimination and be eligible for certification.

9. Training

Training will be conducted at national, provincial, district and community level to transfer knowledge and skills in the activities mentioned above in order to achieve a high quality implementation.

10. Timeline of programme

The programme covers the time period from 2004 to 2020. This time period is divided into three phases. Phase one, for preparation, is the time period for 2004 to 2007 .Phase two, for the implementation of mass drug administration (MDA), disability prevention and control (DPC) and conduction of monitoring and evaluation (M&E) of programme, is from 2005 to 2018. Phase three, for the verification and certification of elimination of lymphatic filariasis , is from 2019 to 2020.

10.1 General Timeline of Implementation

Year	Group 1 (1 province)	Group 2 (5 provinces)	Group 3 (5 provinces)	Group 4 (5 +4** provinces)
	MBP	Oro, Island provinces (NIP,ENB,WNB,NSP)	Gulf, Morobe, Madang, ESP,WSP	Highlands (SHP, Enga, WHP, Simbu), Western
2005	M&E/MDA I			
2006	M&E/MDA II	M&E/MDA I		
2007	M&E/MDA III/DPC	MDA II/DPC	M&E/MDA I/DPC	
2008	M&E/MDA IV/DPC	M&E/MDA III/DPC	M&E/MDA II/DPC	M&E/MDA I/DPC
2009	M&E/MDA V/DPC	M&E/MDA IV	M&E/MDA III/DPC	M&E/MDA II/DPC
2010	M&E/MDA*/DPC	M&E/MDA V/DPC	M&E/MDA IV/DPC	M&E/MDA III/DPC
2011	M&E//MDA*/DPC	M&E/MDA*/DPC	M&E/MDA V/DPC	M&E/MDA IV/DPC
2012	M&E/MDA*/DPC	M&E/MDA*/DPC	M&E/MDA*/DPC	M&E/MDA V/DPC
2013	Surveillance/MDA*/ DPC	Surveillance/MDA*/D PC	Surveillance/MDA*/ DPC	Surveillance/MDA*/DPC
2014	Surveillance/MDA*/ DPC	Surveillance/MDA*/D PC	Surveillance/MDA*/ DPC	Surveillance/MDA*/DPC
2015	Preparation for certification/DPC	Surveillance/MDA*/D PC	Surveillance/MDA*/ DPC	Surveillance/MDA*/DPC
2016		Preparation for certification/DPC	Surveillance/MDA*/ DPC	Surveillance/MDA*/DPC
2017			Preparation for certification/DPC	Surveillance/MDA*/DPC
2018				Preparation for certification/DPC
2019	Submission of application for LF elimination certification			
2020	External verification and certification			

* Additional rounds of MDA depending on results of post-MDA surveys and surveillance
** Inclusion of the 4 other provinces (initially excluded: Manus, Central, EHP, NCD) if necessary

10.2 Timeline for Monitoring and Evaluation

Year	Group 1 (1 province) MBP	Group 2 (5 provinces) Oro, Island provinces (NIP,ENB,WNB,NSP except Manus)	Group 3 (5 provinces) Gulf, Morobe, Madang, ESP,WSP	Group 4 (5+4** provinces) Highlands (SHP, Enga, WHP, Simbu, except EHP), Western
2005	1st MF baseline survey;1st coverage survey			
2006	2nd coverage survey	1st MF baseline survey;1st coverage survey		
2007	2nd MF survey ;3rd coverage survey	2nd coverage survey	1st MF baseline survey;1st coverage survey	
2008	4th coverage survey	2nd MF survey ;3rd coverage survey	2nd coverage survey	1st MF baseline survey;1st coverage survey
2009	3rd MF survey; 1st ICT survey ;5th overage survey	4th coverage survey	2nd MF survey ;3rd coverage survey	2nd coverage survey
2010	Interruption assessment(2nd ICT survey, children, LQAS)	3rd MF survey; 1st ICT survey ;5th overage survey	4th coverage survey	2nd MF survey ;3rd coverage survey
2011	Surveillance (method to be developed)	Interruption assessment(2nd ICT survey, children, LQAS)	3rd MF survey; 1st ICT survey ;5th overage survey	4th coverage survey
2012	Surveillance (method to be developed)	Surveillance (method to be developed)	Interruption assessment(2nd ICT survey, children, LQAS)	3rd MF survey; 1st ICT survey ;5th overage survey
2013	Surveillance (method to be developed)	Surveillance (method to be developed)	Surveillance (method to be developed)	Interruption assessment(2nd ICT survey, children, LQAS)
2014	Certification eligibility assessment(3rd ICT survey, children, LQAS)	Surveillance (method to be developed)	Surveillance (method to be developed)	Surveillance (method to be developed)
2015	Preparation for certification	Certification eligibility assessment(3rd ICT survey, children, LQAS)	Surveillance (method to be developed)	Surveillance (method to be developed)
2016		Preparation for certification	Certification eligibility assessment(3rd ICT survey, children, LQAS)	Surveillance (method to be developed)
2017			Preparation for certification	Certification eligibility assessment(3rd ICT survey, children, LQAS)
2018				Preparation for certification
2019	Submission of application for LF elimination certification			
2020	External verification and certification			

11. Sustaining Requirements for the Programme

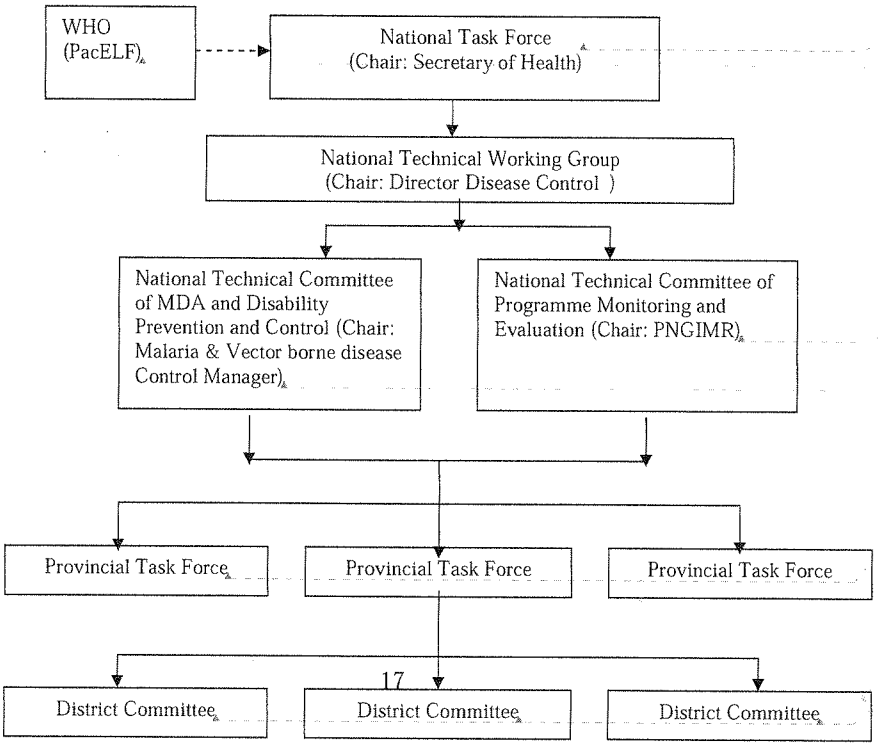
11.1 National policy on elimination of lymphatic filariasis and support to implementing the policy

"Mass drug administration (MDA) for filariasis control shall be adopted and focused on endemic areas." - *National Health Plan 2001-2010, Policy Directions and Priorities, Volume 1*

11.2 Organization for Programme Implementation

The organization for implementation of the programme includes organizations at 3 levels. At national level it is National Task Force. At provincial level, it is Provincial Task Forces and at district level it is District Committees. This organizational structure is applied both for malaria and lymphatic filariasis control but with separate strategies. Each Task Force should hold meetings on a quarterly basis.

The organizational structure is demonstrated as the following chart:



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11.2.1 National Task Force

National Task Force is the critical organization for implementation of the programme, which is responsible for policy-making, planning, coordination and resources mobilization.

11.2.1.1 Terms of reference of the National Task Force

- Establish national policies for lymphatic filariasis elimination
- Define the national objectives and the elimination strategy
- Promote political will and commitment through appropriate and targeted advocacy
- Obtain the cooperation of other ministers, the private sectors, major nongovernmental organizations, and international organizations
- Identify key issues requiring operational research for improved implementation of PELF in the country
- Mobilize resources from national and international donors
- Monitor and evaluate programme implementation

11.2.1.2 Chairman and Members of the National Task Force

The Secretary of Department of Health or his nominee acts as the chairman of the Task Force. Members of the National task Forces are representatives from the following organizations:

- DOH
- WHO
- Provincial affairs
- Community affairs
- Department of Education
- PNGIMR, JCU

- NGOs: World Vision, Rotary, Leprosy mission
- Development Partners: AUSAID, JICA
- Private sector: Oil search, City pharmacy, etc

11.2.1.3 Functioning of the Task Force

The Task Force should meet at least twice a year for planning, policy-making and review of the programme.

11.2.2 National Programme Manager

The National Malaria and Vector Borne Diseases Control Manager is the National Programme Manager, who is responsible for:

- Draft the strategic plan for the elimination of lymphatic filariasis for the approval of the National Task Force
- Implementing and monitoring of the programme
- Following up on the decisions of the national task force
- Routine management of the following National Technical Working Group
- Be the focal person for programme execution

11.2.3 National Technical Working Group (NTWG)

Within the National Task Force, a core group forms the Technical Working Group.

11.2.3.1 Terms of reference of TWG

- Formulate and review annual action plan on LF elimination in collaboration with stakeholders and implementers
- Solicit resources from within PNG and external sources to assist with the implementation of LF interventions by collaborating parties
- Promote awareness, forums and training to stakeholders on LF elimination in the country and region
- Provide technical support to stakeholders involved in the implementation of LF intervention strategies
- Inform the DoH of the LF status in PNG on a regular basis through established media and forums

- Act as the technical advisor to the National Government on any policies relevant to improve the strategies towards elimination LF in PNG
- Propose to establish a secretariat of National Elimination Lymphatic filariasis Program (NELFP) in PNG and sustain the office for the purposes stated above.

11.2.3.2 Chairman and Members of NTWG and Technical Committees

The Director of Diseases Control and National Malaria Control Manager act as the Chairman and Vice-Chairman of the TWG. The following will constitute the NTWG.

- Director of Disease Control Branch
- National Malaria & other vector borne diseases Control Manager
- Malariologist, WHO PNG
- Representative, JICA
- Representative, James Cook University
- Representative, PNG Institute of Medical Research
- Representative, National Medical Association
- Representative, University of Papua New Guinea
- Representative, Divine Word University
- Representative, Leprosy Mission International

A Technical Committee of MDA and Disability Prevention and Control, and a Technical Committee of Programme Monitoring and Evaluation are formed to deal with the technical aspects of implementation of MDA and disability prevention and control, and technical aspects of implementation of monitoring and evaluation of the programme respectively.

11.2.3.3 Functioning of NTWG

1. NTWG will meet quarterly and when necessary to review the progress of programme and make decision to solve problems.

2. An annual national workshop on Elimination of Lymphatic Filariasis Programme will be organized in the first quarter of each year to review the progress and plan for the coming year.

3. Routine administrative activities of NTWG will be carried out by the Malaria & other vector borne diseases Control Unit, Disease Control Branch, Department of Health.

11.2.4 Provincial Task Forces

Provincial Task Force should be formed as the Provincial vector borne diseases control committee, with strong link with related departments of province headquarter and NGOs or other organizations in the provinces.

11.2.4.1 Terms of reference of Provincial Task Forces

- To coordinate and liaise with national TF and district committee on policy matters
- To monitor and evaluate the performance of the LF program in the province
- To liaise and advocate with provincial government to ensure necessary funding is available
- To develop and strengthen partnership with all stakeholders including NGOs and private sector
- To plan and monitor the implementation of the whole MDA process, M&E, morbidity control on a yearly basis
- To organize training of implementation staff

11.2.4.2 Members of the Provincial Task forces

The provincial administrator is the chairman of the Provincial Task Force. The following representatives are the members:

- Provincial disease advisor
- Provincial health advisor
- NGOs
- Private sector
- Community groups
- Hospital representatives

11.2.4.3 Functioning of Provincial Task Forces

1. Provincial Task Forces will meet quarterly and when necessary to review the progress of programme and make decision to solve problems.

2. An annual provincial workshop on Elimination of Lymphatic Filariasis Programme will be organized in the first quarter of each year to review the progress and plan for the coming year (before or after national workshop).

3. Routine administrative activities of Provincial Task Forces will be carried out by the provincial Health Division.

11.2.5 District Committees

District Task Forces should be formed as the **District vector borne disease control committee**, with strong link with council of districts and, NOGs or other organizations in districts.

11.2.5.1 Terms of Reference of District Task Forces

- To endorse and implement the district implementation plan
- To monitor and evaluate the district plan
- To advocate for additional funding with the district and LLGs
- To advocate for strong community participation

11.2.5.2 Members of the District Task Forces

Council president is the chairman of the District Task Forces. The following representatives are the members:

- District disease control officer
- District health manager
- Environment health officer
- Ward counselor
- Community leaders
- Women's group

11.2.5.3 Functioning of District Task Forces

1. District Task Forces will meet when necessary to review the progress of programme and make decision to solve problems.

2. Routine administrative activities of District Task Forces will be carried out by the District Health Division.

11.3 Integration with other programmes

Integration with other programmes will strengthen the implementation and compliance of community to programmes and make most use of the limited resource. PNGELF will implement through the existing health system of service delivery; integrate with de-worming of World Vision working with provincial level, integrate with malaria, health promotion program, EPI, MCH programs; integrate with TB at laboratory level. The use existing manpower is one of the strategies in integration.

11.4 Supply of albendazole and DEC

Those drugs for MDA are albendazole,and DEC. Diagnostic tools for microfilaria antigen are ICTs and for microfilaria prevalence are slides, stains and microscopes. DEC, ALB and ICT are currently supplied free from GSK and JICA through application to PacCARE and JICA.

11.5 Budget for operational cost and its mobilization

Operational cost for implementation of programme includes the salary of national programme staff; biennium meetings/workshops of National, Provincial and district TF; quarterly meetings of National TWG; training courses in MDA, disability prevention and control, and monitoring and evaluation; storage and shipment of drugs, microscopes and diagnostic tools at national and provincial level; per diem of health staff and volunteers for delivery of MDAs; transportation in field; pre-implementation trainings and post-implementation meetings; MDA data entry and maintenance; supervisory visits from national and provincial level to districts and communities; training in transfer of home-based self-care to patients; cost of goods such as soaps, antibacterial and anti-fungi drugs for home-based self-care; cost of surgical approaches to urogenital manifestations; cost of vector control; cost of monitoring and evaluation; cost of preparation for verification and certification, etc.

The total budget is $ 79,551,915. Among it, programme management, MDA, Disability prevention and control, and monitoring and evaluation account for 3%, 69%, 11% and 17% respectively. On average, the budget is $ 5,682,680 per year from year 2007 to 2020.

Mobilization of financial support from different sources such as WHO, AUSAID will be explored. Specific budget line for LF elimination activities will be incorporated in the forthcoming budget planning meeting of Ministry of Health in 2007.

Annex 1 Population covered by 5-round MDA by year and by groups of provinces

(Predicted based on census 2000)

Year	Group 1 of province	Group 2 of provinces	Group 3 of provinces	Group 4 of provinces	Group 4+ of provinces	Total
2005	220,392					220,392
2006	246,884	975,296				1,222,180
2007	253,550	1,001,629	1,856,124			3,111,303
2008	260,396	1,028,673	1,906,239	2,096,819	949,500	6,241,627
2009	267,427	1,056,447	1,957,707	2,153,434	975,136	6,410,151
2010		1,084,970	2,010,563	2,211,576	1,001,465	6,308,574
2011			2,064,848	2,271,289	1,028,504	5,364,641
2012				2,332,614	1,056,274	3,388,888
Total						32,267,757

*: Group 4+ of provinces refers to those initially excluded: Manus, NCD, Central and Eastern Highland Province.

Annex 2 Number of albendazole and DEC required by year

Year	Target Population	Number of albendazole tablets	Number of DEC tablets (50mg/tablet)
2005	220,392	242,431	1,212,156
2006	1,222,180	1,344,398	6,721,991
2007	3,111,303	3,422,433	17,112,165
2008	6,241,627	6,865,790	34,328,949
2009	6,410,151	7,051,167	35,255,833
2010	6,308,574	6,939,432	34,697,158
2011	5,364,641	5,901,105	29,505,527
2012	3,388,888	3,727,776	18,638,882
Total	32,267,757	35,494,532	177,472,662

*: Based on the factors for calculation of number of tablets on page 22 of the WHO guideline " Preparing and implementing a National plan to ELF".

Annex 3 Number of individual samples for coverage survey

Year			Group 1	Group 2	Group 3	Group 4 & 4+	
	No. of Provinces		1	5	5	9	
	No. of sites/IU	No. of samples/site					Total by year
2005	30	30	900	-	-	-	900
2006	30	30	900	4500	-	-	5400
2007	30	30	900	4500	4500	-	9900
2008	30	30	900	4500	4500	8100	18000
2009	30	30	900	4500	4500	8100	18000
2010	30	30	-	4500	4500	8100	17100
2011	30	30	-	-	4500	8100	12600
2012	30	30	-	-	-	8100	8100
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
Total	240		4500	22500	22500	40500	90000

*: to be conducted in 2 weeks of finishing each round of MDA.

Annex 4 Number of Individual samples for MF survey

Year			Group 1	Group 2	Group 3	Group 4	
	No. of Provinces		1	5	5	9	
	No. of sites/IU	No. of samples/site					Total by year
2005	4	500	2000				2000
2006	4	500	-	10000			10000
2007	4	500	2000	-	10000		12000
2008	4	500	-	10000	-	18000	28000
2009	4	500	2000	-	10000	-	12000
2010	4	500		10000	-	18000	28000
2011	4	500			10000	-	10000
2012	4	500				18000	18000
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
Total	32		6000	30000	30000	54000	120000

* : As a pilot, 2 sentinel villages per district. 4 districts in MBP. 500 samples per sentinel village. Total sample numbers per year is 4000 (2x4x500=4000).

** : 2 sentinel villages and 2 spot-check per province (IU). 500 smaples per sentinel village

***: for baseline survey, mid-term assessment (before 3rd round of MDA), assessment before 5th round of MDA, and assessment 5 year of stopping MDA.

Annex 5 Number of Individual samples for ICT survey

Year			Group 1	Group 2	Group 3	Group 4	
	No. of Provinces		1	5	5	9	
	No. of sites/IU	No. of samples/site					Total by year
2005	1	3000	-4000	-	-	-	0
2006	1	3000	-	-	-	-	0
2007	1	3000	-	-	-	-	0
2008	1	3000	-	-	-	-	0
2009	1	3000	3000	-	-	-	3000
2010	1	3000	3000	15000	-	-	18000
2011	1	3000		15000	15000	-	30000
2012	1	3000	-	-	15000	27000	42000
2013	1	3000	-	-	-	27000	27000
2014	1	3000	3000	-	-	-	3000
2015	1	3000	-	15000	-	-	15000
2016	1	3000	-	-	15000	-	15000
2017	1	3000	-	-		27000	27000
2018							
2019							
2020							
Total	13		9000	45000	45000	81000	180000

*: for baseline survey , assessment before 5th round of MDA, and assessment of 5 year after stopping MDA

Annex 6 Budget for Programme of Eliminating Lymphatic Diseases in PNG from 2005 to 2020

Year	Grand Total Cost ($)	Grand Total Cost (Kina)	Management Total (Kina) (+NDOH)	Training Total (Kina) (+NDOH)	SSA Total cost (Kina)	MDA Total cost (Kina)	Disability prevention & Control Total cost (Kina)	Coverage survey Total Cost (Kina)	MF survey Total Cost (Kina)	ICT survey Total Cost (Kina)	Post-MDA surveillance Total (Kina) (+NDOH)	Preparation for Verification Total (Kina) (+NDOH)	National Workshop (2 days) Total (Kina) (+NDOH)
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	6,710,603	18,923,901	60,000	240,000	219,000	15,556,514	877,387	990,000	1,200,000	0	0	0	0
2008	13,525,984	38,143,275	105,000	420,000	219,000	31,208,136	1,760,139	1,800,000	2,800,000	0	0	0	50,000
2009	13,380,645	37,733,420	105,000	420,000	219,000	32,050,757	1,807,663	1,800,000	1,200,000	300,000	0	0	50,000
2010	14,259,055	40,210,534	100,000	400,000	219,000	31,542,871	1,807,663	1,710,000	2,800,000	1,800,000	0	0	50,000
2011	12,168,748	34,315,870	75,000	300,000	219,000	26,823,207	1,807,663	1,260,000	1,000,000	3,000,000	0	0	50,000
2012	9,170,958	25,862,101	50,000	200,000	219,000	16,944,438	1,807,663	810,000	1,800,000	4,200,000	0	0	50,000
2013	1,690,661	4,767,663	0	0	219,000	0	1,807,663	0	0	2,700,000	210,000	0	50,000
2014	839,597	2,367,663	0	0	219,000	0	1,807,663	0	0	300,000	210,000	0	50,000
2015	1,265,129	3,567,663	0	0	219,000	0	1,807,663	0	0	1,500,000	210,000	0	50,000
2016	1,265,129	3,567,663	0	0	219,000	0	1,807,663	0	0	1,500,000	210,000	0	50,000
2017	1,690,661	4,767,663	0	0	219,000	0	1,807,663	0	0	2,700,000	210,000	0	50,000
2018	733,214	2,067,663	0	0	219,000	0	1,807,663	0	0	0	210,000	0	50,000
2019	882,150	2,487,663	0	0	219,000	0	1,807,663	0	0	0	210,000	420,000	50,000
2020	882,150	2,487,663	0	0	219,000	0	1,807,663	0	0	0	210,000	420,000	50,000
Total	79,551,915	224,336,401	495,000	1,980,000	3,066,000	154,125,923	24,329,479	8,370,000	10,800,000	18,000,000	1,680,000	840,000	650,000