

## Report

First Technical Working Group Meeting on Lymphatic Filariasis Elimination Programmes in the Pacific Island Countries and Areas

Convened by:  
WORLD HEALTH ORGANISATION  
Western Pacific Region

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## CONTENTS

LIST OF FIGURES	3
LIST OF TABLES	4
LIST OF ANNEXES	5
EXECUTIVE SUMMARY	6
1. INTRODUCTION	7
1.1 Objectives	7
1.2 Participants and resource persons	7
1.3 Organization	7
1.4 Opening Ceremony	7
1.5 Appointment of Chairperson	8
2. PROCEEDINGS	8
2.1 Objectives of the Meeting	8
2.2 Progress and current challenges of the Pacific Programme to Eliminate LF	8
2.3 Update on the Papua New Guinea Programme to Eliminate LF	10
2.4 Results of the DEC salt feasibility study in Papua New Guinea	12
2.5 Brief summary of data review including post MDA surveillance by country.	15
Groups with less than 1% prevalence	15
Groups with greater than 1% prevalence	15
Partially Endemic Countries	15
2.6 Update on the Gates Foundation Grant to the Global Alliance	16
2.7 Report on the field visit in American Samoa, Fiji & Samoa	16
2.8 Draft active surveillance plan for the Pacific	19
2.9 Group Work part 1	21
2.10 Group presentations part 1	22
Group 1: Countries <1%	22
Group 2: Countries >1%	22
Group 3: Partially endemic countries	23
Group 4: PNG	23
2.11 Group Work part 2	23
2.12 Group presentations part 2: 2008 to 2010 plans of action	23
Group 1: Countries <1%	25
Group 2: Countries >1%	26
Group 3: Partially endemic countries	30
Group 4: PNG	32
2.13 Discussions and main conclusions	32
2.14 Closing ceremony	32
ANNEXES	33

## LIST OF FIGURES

Figure 1: Map of the Pacific Islands

Figure 2: Pacific MDA coverage over the course of the program

## LIST OF TABLES

Table 1: 2007 survey results

Table2: Cost of DEC salt program in PNG

Table 3: Key components and obstacles to a successful DEC salt program

Table 4: Targeted Approach to LF Elimination in Fiji

Table 5: Global versus PacELF surveillance strategies

Table 6: Summary of LF elimination progress in countries with >1% ICT prevalence

Table 7: Summary of work plans

## LIST OF ANNEXES

Annex 1: Agenda

Annex 2: List of Participants

Annex 3: Dr Chen Speech

Annex 4: Dr Alafaio Speech

Annex 5: Country presentations

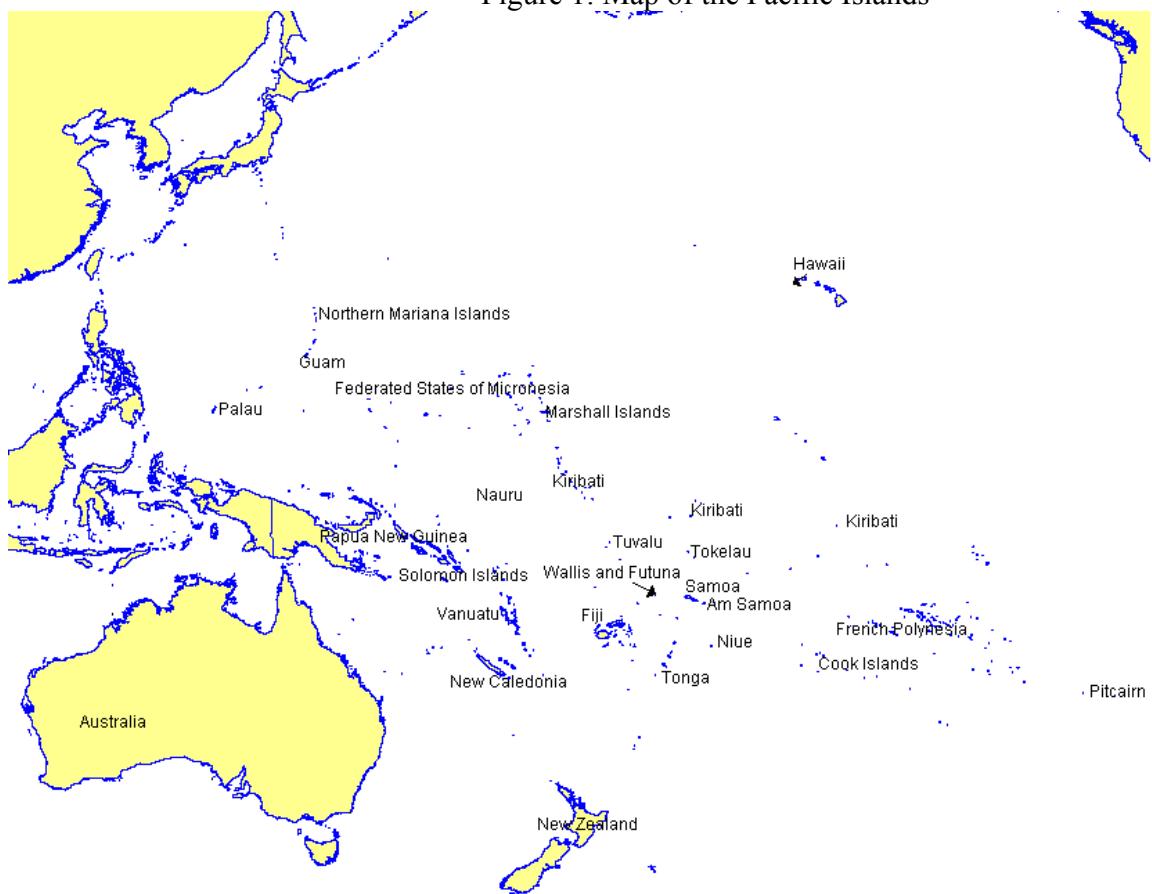
Annex 6: Conclusions and Recommendations

## EXECUTIVE SUMMARY

The Pacific Programme to Eliminate Lymphatic Filariasis began with 22 countries, of which 11 were classified as endemic for lymphatic filariasis (LF). Four of these countries have reached the elimination target of less than 1% LF antigenemia prevalence, and significant progress towards elimination has been made in at least five other countries.

In June 2008, the Pacific Program to Eliminate LF held its first Technical Working Group (TWG) meeting in Nadi, Fiji. The meeting was attended by temporary advisors from the Pacific, international experts and the WHO. The TWG meeting followed on from recommendations made in 2007 to conduct technically strong surveys in a number of countries. The data from these surveys guided the discussions of the TWG in identifying and addressing technical issues and developing country action plans for the next three years. These outcomes were achieved through a combination of presentations from the participants and group work.

Figure 1: Map of the Pacific Islands



## 1. INTRODUCTION

WHO estimates that over 120 million people worldwide are affected by lymphatic filariasis (LF), and 40 million are severely disfigured and incapacitated as a result of infection. At the beginning of the global program, over 1 billion people were at risk of being infected, in 83 countries throughout the world. When the Pacific Programme to Eliminate Lymphatic Filariasis (PacELF) began, 11 of its 22 Pacific island members were classified as endemic for the disease and an additional 5 countries were considered as “partially endemic”. Through yearly mass drug administration (MDA) activities, four countries have reached the target of below 1% antigenemia prevalence and have begun to implement active surveillance activities. In addition, a further five countries can now claim significant drops in antigenemia prevalence, with some having identified specific foci of infection for targeted testing and treatment.

The main partners contributing to LF control in the Pacific region are the Governments of the Pacific countries and territories, the Government of Japan, the Japan International Cooperation Agency (JICA), James Cook University, GlaxoSmithKline (GSK), the United States Centre for Disease Control and Prevention (US-CDC), Emory University LF Support Centre, Liverpool Lymphatic Filariasis Support Centre, Volunteering for International Development from Australia (VIDA), the Pacific Leprosy Foundation (PLF), the French Embassy in Fiji and WHO.

### 1.1 Objectives

The meeting aimed to achieve the following objectives:

- 1) Review the status of national lymphatic filariasis elimination programmes;
- 2) Identify the problems and shortcomings that have prevented some countries from achieving the target level of less than 1% prevalence after at least five rounds of mass drug administration; and
- 3) Provide clear cut recommendations on the next steps for each country to develop its action plan.

### 1.2 Participants and resource persons

Eleven temporary advisors from Pacific countries, 8 international experts and 6 WHO secretariat members attended the meeting. The agenda and list of participants are attached as Annexes 1 and 2.

### 1.3 Organization

The meeting was held in Nadi, Fiji, from 9-11 June 2008.

### 1.4 Opening Ceremony

Dr Eric Rafai from Fiji Ministry of Health was the Master of Ceremony for the opening ceremony and began by welcoming all participants. Dr John Ehrenberg from the WHO Western Pacific Region welcomed all participants and gave appreciation for time taken from the busy schedules of the participants. He explained that postponing the normal annual LF managers meeting was important to take a close analytical look at the results of the recent surveys. In order to do this, the meeting has been limited to a small group of people with strong technical backgrounds in LF.

Dr Chen Ken, WHO Representative for the South Pacific, was next to address the participants (see Annex 3 for the text of Dr. Chen Ken's speech). Following Dr Chen, Dr Alafaio, Director of Primary Health Care from Fiji Ministry of Health welcomed all participants to Fiji on behalf of the Permanent Secretary for Health. Dr. Alafaio took a moment to reassure participants of their safety in the current political climate of Fiji. The text of Dr Alafaio's speech is in Annex 4.

### 1.5 Appointment of Chairperson

It was agreed that the position of Chairperson would be rotated throughout the meeting. Day 1 was chaired by Professor C.P. Ramachandran, Day 2 was chaired by Dr. Nese Conway from Tuvalu, and the final day was chaired by Dr. Malakai Ake from Tonga.

## 2. PROCEEDINGS

The session commenced with all participants introducing themselves to the meeting.

### 2.1 Objectives of the Meeting

Dr. John Ehrenberg presented the objectives and expected outcomes of the meeting (see 1.1). In addition to the objectives, some important issues were highlighted for particular attention during the meeting. These were:

- to define a strategy for countries which have reached <1% antigenemia prevalence at national level;
- to define a strategy for countries which have not reached < 1% antigenemia prevalence at national level;
- to revise the definition for “partially endemic countries” and define a strategy accordingly;
- To define clear guidelines for the next rounds of MDA, addressing in particular :
  - the coverage target to be reached;
  - the distribution strategy;
  - the criteria for exclusion;
  - the monitoring of pregnant women, and other previously excluded groups;
- to review the framework for addressing LF elimination in PNG; and
- to define surveillance needs and methodology after additional rounds of MDA following completion of 5 rounds.

Regarding the issue of post MDA surveillance, a global surveillance meeting will be held in August 2008 to take a close look at the issue and lessons learned from the Pacific will be taken to this meeting.

#### Comments:

Dr. Rafe Henderson reinforced the need to implement basic scientific principles for producing good data, particularly related to MDA coverage. He stated the 80% target for MDA coverage is a minimum and that this figure needs to be validated by a correctly conducted coverage survey.

### 2.2 Progress and current challenges of the Pacific Programme to Eliminate LF

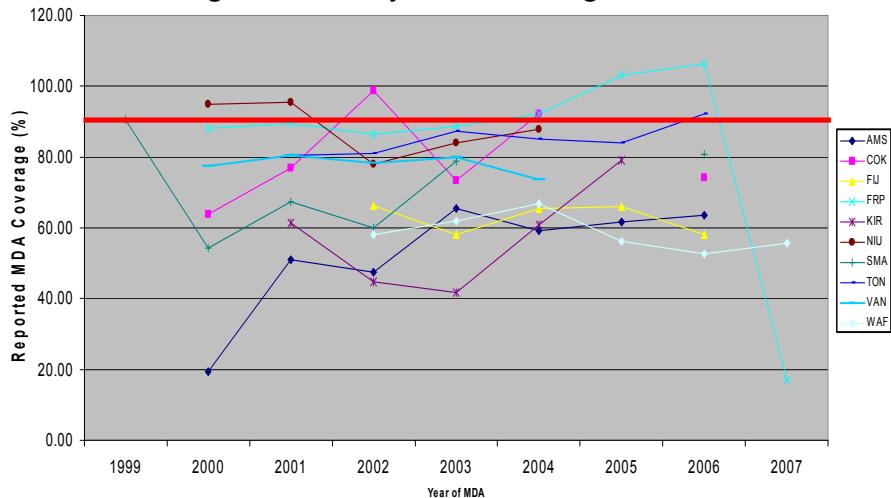
Dr. Corinne Capuano, Coordinator for the Pacific Programme to Eliminate LF at WHO South Pacific, presented on the progress made since 2007 and the challenges for the program. The program has achieved significant drops in Mf rates across the Pacific, with 4 of the 11 endemic countries reaching ICT prevalence rates of less than 1%.

Ensuring a target of 80% coverage is reached during MDA is a key challenge facing the program. The quality of data collected remains an important challenge, as collecting good quality data provides the basis for making decisions about program activities. The methodology used for blood surveys have been inconsistent. For example, sampling methods have been different and therefore data cannot be compared between surveys. In 2006, a review of the program highlighted issues with quality of data, in particular:

- the difficulty in understanding MDA coverage, because the denominator used varied, and no surveyed coverage was conducted;
- the inconsistencies in sentinel sites as they have changed and the population surveyed was different.

- the need for well designed surveys to be completed in each country, which resulted in a large number of good quality surveys being conducted in 2007

Figure 2: Country MDA Coverage over the course of the Program.



Following the 2007 PacCARE and PacELF meetings, a number of recommendations were made for countries regarding post-MDA surveys. The use of a stratified cluster protocol in large countries and mass screening in smaller countries was recommended. The results of surveys conducted in 2007 are summarised in table 1 below.

Table 1: 2007 survey results

Country	Type of survey	%ICT	%Mf
AMS	Stratified cluster	2.3	0.3
COOK	Total population North & South	0.3	pending
FIJI	Stratified cluster	9.5	1.4
KIR*	Stratified cluster	2.7	0
SMA	Stratified cluster	2.6	0.6
TUV*	Total population	5.7	pending
TON	Child Trans. survey	0	ND
VAN	Child Trans. survey	0	ND
MARSH.	Stratified cluster	pending	pending
FSM	Stratified cluster	pending	pending

\*Surveys still being completed

The outcomes from the 2007 surveys provide some key lessons for future activities:

- Countries which reached < 1% antigenemia prevalence are those which had high (80%) MDA coverage in at least 3 rounds.
- Significant number of males “missed” the MDAs over the years and are now the reservoir of the infection in several countries

- The reservoir also comprises people that had been previously excluded from MDA (e.g., sick, old, pregnant and lactating women in some countries).
- Strategies need to be tailored to each country, based on data obtained from scientifically sound surveys.

Countries in the Pacific Program to Eliminate LF were initially categorised as “Endemic”, “Partially Endemic”, or “Non-endemic”. Such classifications are not relevant to the current situation in the Pacific in light of the 2007 survey results in which countries such as Fiji and Samoa show differences in endemicity between districts and provinces. Increased effort is needed to support countries previously defined as “partially endemic” to ensure LF elimination is achieved, particularly as the quality of baseline data is questionable.

### **2.3 Update on the Papua New Guinea Programme to Eliminate LF**

Mr. Leo Makita provided an update of the Papua New Guinea (PNG) programme. The initial plan for PNG was to roll out MDA activities from east to west across the country; however this has not been completely achieved. Getting drugs to areas of MDA has been achieved but the implementation of MDA activities has stalled. The storage of the drugs used for MDA is an important issue in PNG due to the huge numbers of drugs that are sent to PNG. Isolation and other issues associated with geography also present problems. In light of this PNG is considering other suitable alternatives including DEC fortified salt.

The initial Strategic Plan from 2004-2012 was revised at a meeting with key stakeholders in April 2007. The revised strategic plan is now in line with the global strategy of elimination by 2020. The objectives of the strategic plan are:

- To achieve over 85% of population coverage of each round of MDA in each IU
- To reduce the microfilaremia prevalence in the general population to <1% at the end of round 5 MDA in each IU
- To reduce prevalence of microfilariae in children to <0.1% at the end of round 5 in each IU
- To achieve 90% coverage of home based self care among registered individual patient.
- To achieve over 50% coverage of surgical management amongst patients.

To achieve LF elimination in PNG, the 2004-2020 plan outlines 3 phases:

- Phase 1: Preparation
  - Re-assess & map mf prevalence
  - Develop National Implementation Guide
  - Establish Task Force
  - Establish Partnership
  - Advocacy & commitment
  - Community Awareness
  - Application for MDA Drugs
  - Prepare storage facilities
- Phase 2: Implementation
  - MDA
  - Consider Fortified DEC salt
  - Vector Control (LLIN)
  - Disability Prevention & Control
  - Post MDA surveillance
- Phase 3: Verification & Certification 5 years post MDA

One of the key factors identified for successfully implementing the strategic plan was the need to establish a national task force to promote the program at the national level. Additional requirements were: having a national programme manager, a technical working group, provincial task forces, and district committees.

Partnerships are also important for ensuring the implementation of the strategic plan. In PNG, important partnerships have been built with the Leprosy Mission, the business sector, James Cook University, and various departments across government. Integration with other programs will also be an important strategy, such as the Global Fund malaria program, World Vision's de-worming program, and Family Health Services. Working with vector control activities is very important because of the Global Fund, which has a goal of 100% coverage with ITN.

An update of activities in 2008 was provided. Mass drug administration was conducted in 6 provinces. Contrary to what was planned for 2008, there were no baseline studies for 5 new provinces, no mid-term survey in Milne Bay, and no budget allocated by government due to logistic, financial, and human resource limitations. In November 2007 M. Trevor Milner, a WHO short term consultant, visited PNG to conduct a feasibility study on DEC salt fortification. A group of physicians formed a group that endorsed the pilot testing of salt, and government agreement has been received; now the program needs the resources to do the piloting.

#### Comments

Dr. Wayne Melrose highlighted the excellent progresses of PNG, in particular the MDA in Milne Bay and Bougainville that both had high coverage. He stated that if PNG are adequately resourced then they will do a very good job. He extended his congratulations to Leo and his team.

Dr John Ehrenberg focused on other strategies to support PNG, including the Global Fund, bednets, AusAID, and neglected tropical diseases. He emphasized the need for a clear framework for PNG to move forward, that requires careful planning with key stakeholders. The plan should focus on how to implement activities.

Dr. Mark Bradley discussed a recommendation raised at the Global Technical Advisory Group that said it is unnecessary to carry out mid-term surveys, particularly in resource constrained areas. Rather efforts can be targeted to conducting well structured coverage assessments.

Professor CP Ramachandran followed up on the issue of drug storage, asking if the drugs currently in storage have expired. Mr Leo Makita said the drugs were close to expiring and a week has been set aside in September by the Health Minister where the health programs will be carried out around the country, including drug distribution for filariasis in those locations where the LF drugs are currently stored.

Professor CP Ramachandran also asked which provinces have been covered by the ITN distribution programme. Mr Makita said that all provinces except 2, with 80% coverage. Some provinces are now showing decline in malaria incidence. The next grant has the intention to revisit high coverage areas and to reach 100% bednet coverage 2 times in 5 years.

Dr Eric Ottesen asked if baseline LF surveys had been conducted in ITN programme areas, or if they could be done. Mr Makita said the 2 areas without bednets are likely LF endemic, as with the rest of the country. By the end of this year these two will be covered by the ITN programme and LF surveys can be done.

Dr Ehrenberg suggested that MDA and ITN roll out could be done at the same time.

In follow up to the discussion on baseline studies in the areas not yet involved in the ITN program, Dr Melrose stated that he has a budget for 2 more baseline surveys before end of year, and so offered his support, which was accepted by Mr. Makita.

#### 2.4 Results of the DEC salt feasibility study in Papua New Guinea

M. Trevor Milner presented on the outcomes of the DEC salt feasibility study conducted in PNG in November 2007. The study looked at the LF issue, the salt assessment, and what DEC salt would involve,

particularly in terms of costs and issues. Salt is a vehicle to deliver DEC, as has been done already with Iodine and Fluoride. Such a program would use existing distribution systems to deliver DEC, reducing the need to mobilize resources. Normal trade-consumer relations carry this product to the people.

Lessons learned from other countries show that using DEC salt has had mixed success, and that it is not a “magic bullet” for eliminating LF. In China, 149 million people received DEC salt, which was not the only component of the China elimination effort. In the Americas, Haiti & Guyana both had DEC salt programs that were not so successful because of low government commitment, partnerships, salt distribution, and poor quality salt. There have already been some experiences in PNG through mining companies, where someone decided to crush the tablet and put it in the salt. A small scale study in Milne Bay proved its effectiveness and acceptance.

The estimated costs of implementing a DEC salt program in PNG are shown in table 2. The cost effectiveness of using DEC salt has been compared to tablet distribution in PNG and in Egypt. In both cases, the results showed DEC salt to be more cost effective.

Table 2: Estimate costs of a DEC salt program in PNG

<b>Activity</b>	<b>Cost</b>
Pilot	USD 2 million
DEC salt distribution	USD 10 million
Per capita expenditure	USD 2 per capita over 6 years USD 0.66 per year per person

Table 3 shows the key components for a successful DEC salt program and the potential obstacles.

Table 3: Key components and obstacles to a successful DEC salt program

<b>Key Components</b>	<b>Obstacles</b>
Strong political will and commitment at the highest level, and support of stakeholders	Government political will & commitment
Adaptation of the legislative framework: a simple change to legislation to incorporate DEC salt is needed	Operational model is different from normal government run public health programs
A good coverage of salt, and consistent consumption is required	Salt situation information not perfect, need to know more about salt distribution & coverage in remote areas
Good quality salt is needed	Operational model is complex
The program and management must be well designed and organised and adequate resources are needed	Uncertainty as to public acceptance
Strong monitoring and surveillance of infection rates and salt coverage	Costs of delivering salt to remote areas

The key steps to implementing a DEC salt program in PNG are:

1. Make the decision, ensure commitment and political will;
2. Develop and maintain organisational structures
  - a. National Working Group and Technical Working Group
  - b. Provincial Working Groups
  - c. District Working Groups

3. Design pilot study in 2 provinces with the understanding that pilot is not to test effectiveness but for operational practice and institution building;
4. Develop proposal for funding the piloting and commitment for national program;
5. Implementation.

The outcomes of the feasibility study indicated that there is a good opportunity to use DEC salt in PNG. An 18 month to 2 year pilot study has been proposed in 2 provinces, which if successful will transition into 4 year, full scale national program. A small, highly skilled team is required for its implementation.

#### Comments

Professor CP Ramachandran asked why the prescribed length of time for the DEC salt program was 4 years. Mr. Milner replied that the exact length of time required to achieve elimination through DEC salt is currently unknown. The purpose of the pilot is to test operational effectiveness and also determine impact on infection levels. Four years is a safe term that allows flexibility with contingencies.

Professor CP Ramachandran queried the potential of using tinned sardines. Mr. Milner said that it would be more complicated than DEC salt, but that DEC salt will get in sardines anyway through the manufacturing process.

Dr John Ehrenberg highlighted that in Guyana management and political commitment was the key issue.

Dr Eric Ottesen asked about the coverage of non-DEC salt in the country. Mr. Milner said that no evidence has been collected but the presence of different sources of salt makes this an issue. Dr. Ottesen also asked about the use of non-manufactured salt. Mr. Milner said there is only a small amount of salt leakage occurring from people taking salt from tuna and fish manufacturers who bring raw salt.

Dr Chen Ken mentioned 2 opportunities for building support for DEC salt and LF elimination in PNG. Firstly, WHO is organizing a meeting on food fortification with UNICEF and FAO later this year. This meeting was a consequence of the Pacific Health Ministers meeting in Vanuatu in 2008. Secondly, the next Pacific Health Ministers meeting in 2009 will be held in PNG.

Dr Nese Conway asked how the areas for the DEC salt pilot project will be selected.

M. Trevor Milner said that there will be areas with access to good quality salt and the distribution means for it to be done. Dr Conway also asked about the possibility of DEC salt being used in other Pacific Island Countries. Mr. Milner said this would need to be discussed individually to assess if it is appropriate.

Dr Alefaio commented that yearly MDA coverage in Fiji has not yet reached 80%, and questioned if Fiji has reached what it can with MDA. She wondered if DEC-salt might be the way to go.

Dr Corinne Capuano said that the questions of feasibility in Fiji and Tuvalu need to be listened to and answers provided. Dr. Pat Lammie suggested that countries that have made significant investments in MDA should continue to use this strategy and that programs that are working well should be reinforced. He reminded people that DEC salt is not a magic bullet; its use requires strong management and good relationships. Dr. Rafe Henderson said that DEC salt is not for the faint hearted, and that there is lots of preparation involved, yet its potential is excellent.

Dr. Wayne Melrose reminded that LF programmes are important in the control of worms and that using just DEC raises issues of parallel worm control programs in kids. In selling the program to people, worms control is an important way of promoting it. Dr. Pat Lammie said that Albendazole is superior for killing worms but there is still some effect from DEC.

Dr Joe Koroivueta asked if iodisation affected DEC. M. Trevor Milner said that there is no interference. Dr Koroivueta also asked if DEC fortified salt is cheaper than normal salt. Mr. Milner said that it would be more expensive because of adding an expensive substance, the costs to the manufacturer for making modifications, and surveillance costs. He said that public acceptance is most important, as is keeping distribution and buying activities normal.

M. Trevor Milner raised a question about whether or not a DEC salt programme could be enhanced if it was not under MOH control. Dr. John Ehrenberg raised his concerns about removing operational control from the government.

Dr. Kapa Ramaiah questioned the level of government commitment in PNG, given that right now LF is not a priority. Dr. Makita said there have been 2 meetings with medical staff where all these issues were discussed and recommendations went to the Secretary of Health, where preliminary acceptance was gained.

## 2.5 Brief summary of data review including post MDA surveillance by country.

Country presentations were divided into 3 groups: (1) countries that have achieved less than 1% antigenemia prevalence (Cook Islands, Niue, Tonga & Vanuatu); (2) countries still with greater than 1% antigenemia prevalence (American Samoa, Fiji, French Polynesia, Kiribati, Samoa and Tuvalu); and (3) those countries who were initially categorized as being partially endemic (Marshall Islands, Federated States of Micronesia, New Caledonia, Palau, & Wallis & Futuna). For the purposes of this meeting the Solomon Islands were included in the last group despite being initially categorized as non-endemic by PacELF.

All presentations are available in annex 5. The discussions that followed the end of the presentations are summarized below.

### (1) Groups with less than 1% prevalence

A question was asked about the definition of registered, reported and corrected MDA coverage. Dr. Corinne Capuano explained that registered coverage used the number of people recorded in MDA registers (books used during MDA) while reported coverage used the census population as the denominator. However it was noted that the census figure did not change over each MDA for most of the countries. As none of these denominators were found to be satisfactory an attempt was made this year to calculate a “corrected coverage” using SPC population estimates for each year of MDA as the denominator. In addition to ensuring an accurate estimated coverage, using directly observed treatment is also vitally important. Tonga, Niue and Vanuatu each utilised directly observed treatment during their MDA campaigns.

It was also highlighted that *Aedes polynesiensis* was not the main vector in these countries (except for the Cook Islands) and that they began with relatively low infection rates at baseline.

### (2) Groups with greater than 1% prevalence

American Samoa: all MDA in American Samoa used a directly observed treatment strategy. The low coverage in AMS was due to issues with using population data to calculate coverage. Surveyed coverage in American Samoa has shown higher levels of MDA coverage than when using population figures. Older adults being excluded from MDA was the rationale given for the higher levels of ICT prevalence in this population.

Fiji: For the 2007 survey there were not enough funds to do a stratified cluster survey across the whole country, so sentinel sites only were used in the Central and Eastern regions. An increase in ICT prevalence from 2002 to 2004 was due to a small sample size of sentinel sites that were surveyed. Fiji has experienced issues with registers not being returned, which has therefore reduced MDA coverage rates. Directly observed treatment strategy has not been widely used in Fiji.

### (3) Partially Endemic Countries

Marshall Islands: an issue was raised about outer islands that have not been tested and how to address this. Dr Wayne Melrose suggested testing people from outer islands living on the main island. Dr Rafe Henderson suggested focusing on children who represent current transmission. This could be further discussed during the group work sessions.

#### 2.6 Update on the Gates Foundation Grant to the Global Alliance

Dr. Eric Ottesen presented the update on the Gates Foundation Grant. The Gates Foundation Grant is funding operational research activities for the Global LF alliance targeting the resolution of critical challenges now facing the Global Programme to Eliminate Lymphatic Filariasis. The grant of \$US 11.7M is for 4 years ending in 2010. The grant program has 8 main objectives:

- Objective 1: identify best measures of impact on LF transmission;
- Objective 2: identify determinants of program success;
- Objective 3: identify most effective surveillance strategies;
- Objective 4: define effects of MDA on morbidity;
- Objective 5: define optimal role and strategies for vector control;
- Objective 6: determine effectiveness of increasing drug dosage and frequency schedules for the current LF regimens;
- Objective 7: carry out financial situation analysis for LF/NTDs in selected countries;
- Objective 8: bridge gap between available international development funds and the MOH programs for LF or NTDs.

The Gates Foundation funding in the future will move into targeting implementation rather than research.

#### Comments

Dr. Mark Bradley discussed the idea of developing packaged NTD programs. He indicated that soil transmitted helminths are still an issue in the Pacific, that LF is very much included in the NTD, and the importance of considering what other diseases might be relevant.

Dr. Pat Lammie highlighted that each region needs its own approach with a “hook”. For example, in Africa NTD control is a huge issue; in the Americas CDC is marketing the program as a disease elimination and eradication effort. The Pacific needs to develop its own package.

Dr. John Ehrenberg said that a regional review on the helminth situation has been completed and will be available on the WPRO website soon. He reinforced the recommendation of promoting a package of diseases and suggested a possibility of also packaging dengue fever and LF.

Dr. Wayne Melrose suggested that scabies is an issue of note in the Pacific, particularly due to the degree of overcrowding in some places. He suggested that it could be a good selling point for an NTD program.

#### 2.7 Report on the field visit in American Samoa, Fiji & Samoa

Dr. Kapa Ramaiah presented the report on the expert team field visit to American Samoa, Fiji, and Samoa. The aim of the field visit was to assess the epidemiological situation in these countries and outline the strategy for the next 3-5 years. There has been low and inconsistent MDA coverage across the 3 countries. However there have also been good reductions in Mf and ICT prevalence in all countries ranging from 40-70% reductions from baseline to post MDA. Within each country there are differences in Mf and ICT prevalence across different regions, therefore it was concluded that different strategies may be required for different regions. There are also differences in residual infection across age and sex groups. To date, no data on LF morbidity has been collected; therefore there is no estimate of chronic disease burden in each country.

The conclusions made from the trip included:

- Each country has made significant progress with antigenemia levels being lower at the C survey than at baseline;
- MDA coverage has varied and DOTS was not consistently used.
- Adult men present a concern due to high levels of infection and systematic low compliance.
- Exclusion of pregnant women and the sick may have contributed to residual infection.
- A better understanding of the epidemiological situation in urban areas is necessary, particularly in Fiji.
- Resources, at this critical juncture, are a major concern.
- Incentives to drug distributors may be considered

Based on the data collected during the field mission a number of recommendations were developed:

- For Fiji, a targeted approach should be used for different regions of Fiji (see table 4)
- For Samoa, 2 more rounds of MDA with high coverage (>80%) for the whole country should be implemented;
- For American Samoa there should be 1 more round of MDA followed by a Child Transmission Survey. The reason for the different strategies for AMS and SMA is because of the greater trajectory of progress in AMS;
- MDA must achieve at least 80% of DOT;
- COMBI will be needed to help achieve this MDA target;
- Each country should develop an estimate disease burden;
- Countries should explore the possibilities for switching to 100mg tablets so less tablets are consumed;
- Each country should consider increasing human resources; and
- Each country should develop clear and detailed budgets to assist with obtaining funding.

Table 4: Recommended intervention strategy for Fiji by Division.

	<b>Eastern</b>	<b>Central</b>	<b>Northern</b>	<b>Western</b>
<b>2007 Ag prevalence</b>	10.02	12.56	2.43	0.94
<b>Intervention</b>	MDA 1 Ag + ves 4	MDAs 2	MDAs 2	MDA 1
<b>C survey after</b>	1 year	2 years	2 years	1 year
<b>Ag prevalence &gt;1%</b>	S & T 4	MDAs 2	MDAs 2	-
<b>Ag prevalence &lt;1%</b>	Active surveillance	AS	AS	AS

Sincere thanks and gratitude was given to the CEO of the Ministry of Health in Samoa, and all program managers and staff from each country.

#### Comments

Professor CP Ramachandran questioned why there was a high ICT prevalence in the 60 year age group in American Samoa. Dr. Pat Lammie said that older adults had been excluded from MDA as “medically excluded groups”. Therefore there is a need to work closely with physicians to ensure these people are not excluded during the next MDA.

Dr. Joe Koroivueta said that Fiji is 30 months away from 2010 and even with intensified strategies he doubted that Fiji could realistically reach the elimination target of 2010. He said that the budget is very intensive. Dr Ramaiah agreed that it is intensive and that 2010 may not be appropriate for Fiji.

Dr. Joe Koroivueta also queried why in the Fiji data there was a 37% reduction in ICT and 73% in Mf and how to explain these differences? Dr Pat Lammie replied that in the early stages of a program Mf drops earlier than ICT.

Dr Ake said that activities for estimating the burden of disease are difficult in countries with low prevalence because it is harder to justify a budget for it. In response, Dr. Pat Lammie said that there is no expectation of conducting national morbidity surveys; however suitable alternatives need to be identified for generating useful information, such as combining it with registers that are developed prior to MDA, or making LF morbidity notifiable.

Dr. Charlie Ave asked when those excluded because of pregnancy or sickness should be treated. Dr. Ramaiah suggested that the sick should be included in the MDA under supervision from a physician and that pregnant women can be screened following delivery and then treated. Dr. Mark Bradley said he would prepare a safety document regarding the treatment of excluded groups. However he highlighted that the document will be necessarily conservative because of the need to avoid risk.

Dr. John Ehrenberg stated that the question of resources is important. There has been resurgence in many diseases that have tried to be eliminated. It is important to avoid this situation and there is a need to come up with different strategies that will be effective and less costly. Dr. Ehrenberg then went on to say that with morbidity it is unlikely that there will be new cases, but there is likely to be residual cases that need to be considered. This can be done by incorporating it into the health system to make it more efficient.

Professor CP Ramachandran questioned that if Fiji has a national MDA and they hit 80% coverage then will they achieve the target of less than 1% prevalence. Dr. Eric Ottesen said that there are 2 phases of the PacELF program. The first was the “one-size fits all” to reduce prevalence rates. The second and current phase is to tailor activities to each country and within each country. The recommendations from the mission tried to stay within the PacELF framework. MDA coverage is just an estimate and surveyed coverage is needed. Dr Rafai’s idea to get it into the health system in a way that serves the program and health service better was a great suggestion for finishing the job in the Eastern region of Fiji. Additionally reaching a point where countries can shift from MDA and surveys to a surveillance mode are important. Funding for the program is expensive, but it is vital to prevent resurgence. We need to estimate costs and see what the government can contribute. Then donors can come on board.

Dr. John Ehrenberg highlighted some key issues. Firstly the need to achieve high coverage and compliance still stands. It is difficult and expensive to catch the last positive and therefore surveillance becomes of critical importance. Finally it is important to catch those people left out of MDA, not just the excluded groups but those from the general population as well.

In relation to COMBI, Dr. Wayne Melrose said that there has been the issue of non compliant males in other programs in Australia and that JCU has some experts in COMBI with adult males that he could put PacELF in contact with.

Pr. CP Ramachandran was concerned about changing the recommendations made at the beginning of the PacELF program saying that achieving less than 1% ICT was the generic level recommended, and then also 0.1% in children. Dr. Pat Lammie suggested that the recommendation of below 0.1% antigenemia prevalence in children is no longer appropriate as countries who have tried to do these surveys feedback that it is impossible. Dr. Lammie suggested that it is a young program that is learning as it goes and that PacELF has recently raised a lot of questions about surveillance, which is good learning for global program.

Dr Ake provided the experience of Tonga with medically excluded groups saying they can be easily treated under supervision when they go to the clinic for a check-up or for their regular treatment.

## 2.8 Draft active surveillance plan for the Pacific

The draft active surveillance plan was presented by Dr. Corinne Capuano. The current global recommendations are for passive surveillance which involves collecting data on infection trends throughout the year from easy accessible population groups (eg, hospital patients, blood donors, military recruits, etc). The recommendation is for this process to continue for 5 years after which 3000 children should be tested. If no positive case is found elimination has been achieved.

In contrast, an active surveillance strategy is recommended for the Pacific. An active surveillance strategy is needed in the Pacific because of its long history of LF control programs; the remoteness of some villages and islands may result in positive cases being missed; LF remains asymptomatic for a long time making hospital-based surveillance inappropriate, and finally because the Pacific has a history of LF resurgent infection.

A draft surveillance plan was developed in 2007 and presented at the 2007 PacCare and PacELF meetings. Since then thinking has evolved, particularly in light of the 2007 survey results. The primary goals of active surveillance are:

- To detect all remaining foci of transmission
- To detect any new foci of transmission
- To ensure that transmission has been interrupted

The draft surveillance plan consists of 3 surveillance strategies and 2 control measures. The key to the strategy is that surveillance is linked with a response. That is, action is taken to treat positives and identify the sources of infection.

The first of the surveillance strategies is the Child Transmission Survey (CTS). The CTS targets all grade 1 or 5 year old children with the aim of detecting transmission in children and then taking action to detect and eliminate the source of infection from the community through close contact testing. The second surveillance strategy is the Hot Spot Survey which aims to expand the CTS by surveying children in areas of previously high prevalence rates (“hot spots”). The hot spot survey targets children 3-8 years of age in both schools and the general community. The final surveillance strategy is Border Control. It aimed at preventing the reintroduction of LF from outside the country by detecting and eliminating any possible source of infection in new arrivals to the country. This last strategy is still under development as the actual threat it poses is unknown.

The first control measure is targeted MDA. Targeted MDA is used following either a C survey (in areas still greater than 1%) or CTS (in areas with 5 or more school children who are positive, or 2 or more children in the community) to decrease community reservoir of LF by providing MDA to a “target group”. The second control measure is vector control which aims to decrease community prevalence of LF by conducting mosquito control programs. Vector control programs are important to consider in countries where *Culex* and *Anopheles* are the primary LF vectors. Table 5 compares the surveillance strategy of the global program to that of the Pacific.

Table 5: Global versus PacELF surveillance strategies.

	<b>Global strategy</b>	<b>Pacific strategy</b>
<b>Goals of post MDA surveillance</b>	<p>Detect new foci of transmission</p> <p>Collect data on infection trends in the general population</p> <p>Confirm end of transmission</p>	<p>Detect all remaining foci Transmission</p> <p>Detect any new foci of transmission</p> <p>Confirm interruption of transmission</p>

Type of surveillance	Passive Selected group of the population	Active CTS: Detect transmission in children with ACTION to <i>detect</i> and <i>eliminate</i> source of infection, Hot spot, Border detection Control measures
Age group, Frequency & duration	Adults, continuous After 5 years: 3000 5 year old children	Children 5 year old for CTS & 3 to 8 yo in hot spots Every second year for 5 years
Test	ICT	ICT, Antibody, Mf
Contact tracing	None	2 methods: 200 meters or 24 households
Treatment ICT+, Mf +		ALB+DEC (6mg/kg) OR ALB+12-day DEC (6mg/kg/day) DOT
FU ICT+ MF+		Every 6 month until ICT negative. If Mf+, repeat Mf 1 month after treatment
Targeted MDA		Every 6 or 12 months, DEC+ALB

To date only Tonga and Vanuatu have implemented CTS, both in 2007. Additional recommendations for future surveillance activities are to use GPS mapping for CTS, close contact tracing and hot spot surveys; and to combine surveillance activities with other surveillance programs, such as malaria baseline surveys.

#### Comments

Mr. Charlie Ave said that in the Cook Islands the whole population was tested in which no positives were found in children and therefore he questioned the relevance of doing a CTS in this population. It was decided to leave this discussion until the group activities.

Professor CP Ramachandran suggested that with the objective to ensure transmission is interrupted, a good methodology is PCR in mosquitoes. He said that PCR is critical towards the end and asked if the plan could be changed to include PCR. Dr. Pat Lammie said that there is a need to build on the draft surveillance plan and that a rigid system should be avoided. Surveillance strategies can be flexible and creative; the important thing is that it has to meet the specific needs of the Pacific.

Dr Ake raised some questions about border control. Currently in Tonga no disease is under surveillance and requested clarification of the border control. Dr Capuano suggested that the term “border control” may not be the best terminology and that the strategy was still up for discussion. The concern is with people living outside the country that may return to home country and with people coming from endemic countries outside the Pacific. The idea needs to be discussed further and the real risk identified. There is a need to survey expatriates to assess the risks.

Dr Wayne Melrose said that research is underway to attempt to understand the dynamics and spatial distribution of LF infection. The research looked at hotspots and the relationships between houses. He hopes the results will be available by February. Regarding the issue of migration, attempts have been made to survey expatriate communities in Australia but it has been difficult to implement. However it is important to know prevalence of active LF in these populations.

Dr. John Ehrenberg gave examples from other regions, such as Trinidad and Tobago, Costa Rica, and Surinam. He said in Surinam, which borders Guyana, they keep active border surveillance. In principle all countries should have a disease surveillance plan in place for all diseases. But there is a need to be careful that

stigma is not generated amongst particular groups. At the end of the day the decision to do border control is up to each country and WHO will provide support to countries.

Mr Charlie Ave said that in the Cook Islands all migrants coming to work need to produce a medical report from the country they come from. He has pushed for LF testing to be included but to date has been unsuccessful.

Dr Ake indicated that national laws will be in line with the International Health Regulations for minimizing and preventing disease transmission between countries. Dr. John Ehrenberg said that LF notification is not part of the IHR requirements.

Dr. Mark Bradley acknowledged the sensitivity to the issue. He asked if anybody was in communication with Dr Joe Williams as he is screening Cook Islanders in New Zealand. Dr Wayne Melrose said he is trying to encourage a Masters student in Auckland to do a thesis in this area and raised the issue of what to do if an expatriate is found with LF, because treatment costs in these countries are high. Dr John Ehrenberg also raised concerns with the possibility that visas could be revoked.

Professor CP Ramachandran suggested that these concerns are important but we may be over-reading the issue. To date there is no evidence of migrants creating an issue and LF is not a disease that spreads so quickly.

## 2.9 Group Work part 1

The participants were divided into four groups, each with a facilitator. The four groups were defined by current ICT prevalence:

- Group 1: Countries with less than 1% prevalence
- Group 2: Countries with more than 1% prevalence
- Group 3: Countries initially defined as partially endemic and Solomon islands (non endemic)
- Group 4: Papua New Guinea

The task for each group was to review the data for each country and identify the gaps, clarify issues, come up with questions and develop strong conclusions to describe the data. Each group was provided with the most updated set of data for each country in an electronic format.

## 2.10 Group presentations part 1

After the completion of the Part 1 of the group work, each group presented back to the meeting. Each group presentation can be found in Appendix 3.

### Group 1

Group 1 summarised the data for each country and came up with the key reasons for successfully reducing ICT prevalence to below 1%. These reasons were:

- An initial low ICT prevalence, ranging from 2.7% to 8.6%
- 5 MDA with high coverage and compliance, ranging from 78% to 97%.
- Use of DOT during MDA.
- Stable commitment from the country's Health Department.

### Group 2

Group 2 provided a summary of each countries progress (see table 6).

Table 6: Summary of LF elimination progress in countries with greater than 1% ICT prevalence.

	'C' Survey	Coverage	DOTS	Distribution Strategy	Stratify IUs	Resource Needs
<b>Am. Samoa</b>	2.3% ICT	19-65%	Yes	Churches, schools	No	Incentives, D survey
<b>Fiji</b>	0.9 – 15.4%	58-66%	Partial	Door-to-door, churches, workplaces	Yes	COMBI, Incentives, transport.
<b>French Polynesia</b>	In progress	17- >100%	No	Distribution posts	Pending	COMBI, Training, Surveys
<b>Kiribati</b>	0.83% Preliminary results	42-79%	No	Door to door, distribution post	Yes – Line Is.	ICT – screen/treat
<b>Samoa</b>	2.6%	54-90%	No	Door-to-door	No	COMBI
<b>Tuvalu</b>	100% testing	46-83%	Yes	Door-to-door, distribution post	No	ICT, transport, incentives

The group then presented a list of questions and challenges facing these countries in their quest to eliminate LF. These were:

- Cost of COMBI and enhanced MDA
  - Urban delivery strategies
  - Persons who opted out, adult men
  - Is DOT achievable?
- Better data management
- Excluded groups – elderly
- Optimal treatment for follow up of ICT-positives?
  - How long is follow up required?
- Capacity building
  - Training for nurses – patient management (both for DEC/Alb and morbidity)
- Morbidity register
- Is there a role for vector control?
- Resources and guidelines for active surveillance

### Group 3

Each country presented a summary of its data review. The Solomon Islands indicated that all surveys conducted since 1998 to 2004 show there is no transmission. A recent survey of children that is 60% complete has yet to find any positives. The western border close to Bougainville in PNG provides a very unlikely risk of re-introduction because the migration is transient.

Palau reported they have good data collected in 2003 to suggest that there is no transmission occurring. Therefore they need to consider transitioning into a surveillance program. However no detail was available at the time of the meeting and it was agreed that the 2003 survey results would be forwarded to WHO/PacELF after the meeting.

In FSM pending the results of the Yap proper survey it appears that Yap state will be non-endemic. Further investigation is needed into the other 3 states in Micronesia, in particular Chuuk which has been found to be endemic in some areas. The survey in Chuuk should pay special attention to the islands neighboring

Satawal. The FSM program would benefit from dividing the country into four separate implementation units, one for each state.

#### Group 4

Group 4 focused on Papua New Guinea. The group recognized that eliminating LF in PNG is a challenging and complex task. Additionally they highlighted that the most important thing is the obtaining of stable political commitment at the highest level. Group 4 indicated that more data needs to be collected to accurately identify high and low risk areas and that along with political commitment policies and government working groups need to be developed to support program implementation. The DEC salt initiative needs to be piloted and a feasibility study should be conducted regarding the development of multi-disease control programs.

#### 2.11 Group Work part 2

In light of the outcomes developed from part 1 of the group work, part 2 required each group to develop a set of recommendations for 2008-2010 work plans. In the case of PNG, Group 4 was also required to identify and address any potential problems that could impact on the DEC salt initiative.

#### 2.12 Group presentations part 2: 2008 to 2010 plans of action

Table 7: Summary of work plans for Pacific Island Countries.

Country	2008	2009	2010	Budget (USD)
AMS	MDA Communications plan MDA coverage survey	CTS	Adult screening	35,000
COK	Complete whole population survey;	Follow up positives; CTS		5,500
FSM	Complete C survey; Survey Yap residents from Satawal	Survey other states	CTS	41,300
FIJ	MDA in 3 divisions; T&T^ in East. COMBI MDA coverage survey	MDA in 2 divisions; COMBI; MDA coverage survey; CTS in West; Follow positive in East.	C survey in North & Central; CTS in East.	1,220,575
FRP	C survey	MDA; COMBI; MDA coverage survey.	Targeted MDA Surveillance pilot.	
KIR	Complete C survey; T&T in Line island group.	CTS		25,000
NIU	Whole population survey, T&T		CTS	7,100
PAL	T&T	CTS		20,000
PNG	MDA 6 provinces; MDA coverage survey; Set up operational	MDA 6 provinces; MDA coverage	MDA 5 provinces; C survey Milne Bay;	7,000,000

	structures;	survey; DEC Salt pilot	MDA coverage survey; DEC salt pilot	
SMA	COMBI MDA MDA coverage survey	COMBI MDA MDA coverage survey	C survey	
TON		CTS		15,500
TUV	Continue whole population survey, T&T	T&T Mass treatment of school children	CTS	41,330
VAN		CTS		20,000
<b>Total Budget</b>				<b>8,431,305</b>

\*Following discussion it was decided that the Solomon Islands do not need to conduct any further LF elimination activities and therefore it is not included in the table.

\*\*Marshall Islands, New Caledonia, and Wallis and Futuna were all absent from the meeting and are not included in the table.

<sup>^</sup>T&T = Test & Treat strategy that is implemented in countries or islands where the whole population is tested and treated at the same time. People who are antigenemia positive are repetitively treated and regularly tested until they become antigenemia negative.

### Group 1 **Cook Islands**

Year	Activities	Budget (USD)
2008	• Complete whole population survey on Pukapuka & Aitutaki and treat the positives.	\$1500
2009	• Follow up of positives on Pukapuka & Aitutaki • CTS	\$4000
<b>Total</b>		<b>\$5,500</b>

### Discussion

Dr Ramaiah suggested that there is no need to put efforts into catching the last ICT positive because it is very expensive. This was supported by others in the group and therefore it was recommended that instead of implementing another round of MDA on Pukapuka and Aitutaki that the screening of the entire population on these islands should be completed and the positives followed up and treated.

### **Tonga**

Year	Activities	Budget (USD)
2009	• CTS	\$15,500
<b>Total</b>		<b>\$15,500</b>

### Discussion

Dr. Rafe Henderson raised a question regarding the timing for the next CTS. He suggested that as the 2007 CTS found no positives if there is any transmission this would occur at extremely low levels. Therefore it is unlikely that there would be new positives emerging in the 2 years until the next recommended CTS. He referred to the experts in the area about whether the CTS could be postponed for 5 years instead of 2. He also suggested that waiting will also allow Tonga to benefit from the development of knowledge on surveillance.

Dr Ake said that the roadmap he outlined was that set by WHO, so that is what Tonga follows, but he was hoping for some recommendations from this meeting.

Dr Pat Lammie said that this was a good situation where we need to answer a few research questions. He said that Dr Henderson presented a good point. Given that transmission in Tonga is very low, Dr Lammie recommended doing an antibody survey to define an age prevalence curve. If the curve shows that antibody prevalence is low then Tonga would require an end point survey rather than surveillance. This idea is still under development but Dr Lammie offered to continue to provide advice to PacELF. Dr. Wayne Melrose said he would do the age prevalence curve for antibody free of charge for Tonga.

Dr Capuano stated that at this stage PacELF and the Global program have recommendations and that is what should be followed until more experience from the field is gained. She said that recommendations for surveillance can be re-visited after the August meeting.

#### **Niue**

<b>Year</b>	<b>Activities</b>	<b>Budget (USD)</b>
2008	<ul style="list-style-type: none"> <li>• Conduct whole population survey</li> <li>• Treat and actively follow up positives</li> </ul>	\$5,100
2010	<ul style="list-style-type: none"> <li>• CTS</li> </ul>	\$2,000
<b>Total</b>		<b>\$7,100</b>

#### **Discussion**

Dr Wayne Melrose affirmed JCU support with the provision of supplies and testing and therefore the costs for Niue will be significantly reduced. Dr Ramaiah questioned the need to screen the whole population. Dr Capuano said this is because the whole population was not screened last time and even during the baseline where about 70% of the entire population was covered. This is a similar situation to the 2 islands in the Cook Islands. The population not screened in 2004 was about 300 people which represents one-fifth of the entire population. The survey will be combined with the country wide NCD survey which will target the whole population.

#### **Group 2 American Samoa**

<b>Year</b>	<b>Activities</b>	<b>Budget (USD)</b>
2008	<ul style="list-style-type: none"> <li>• Develop communication strategies to target males and excluded groups</li> <li>• Work with hospital staff to develop protocol for treatment of excluded groups</li> <li>• Develop plan for public health nurses to treat pregnant women on post-partum visit</li> <li>• Repeat MDA – 80% coverage</li> <li>• Using current strategy – churches, schools, etc.</li> <li>• Carry out 30 cluster coverage survey</li> </ul>	<ul style="list-style-type: none"> <li>• MDA \$15,000</li> <li>• Coverage survey \$8,000</li> </ul>
2009	<ul style="list-style-type: none"> <li>• Develop plan for CTS survey <ul style="list-style-type: none"> <li>○ 100% sample of target age group (~1000 children)</li> <li>○ Screen in villages of positive children</li> <li>○ Targeted treatment for positive</li> </ul> </li> </ul>	ICT cards + \$12,000

	villages	
2010	<ul style="list-style-type: none"> <li>• 2010 <ul style="list-style-type: none"> <li>◦ Consider screening adult patients in context of diabetes clinics</li> </ul> </li> </ul>	ICT cards
<b>Total</b>		<b>\$35,000</b>

### Fiji

Year	Activities	Budget (USD)
2008	<ul style="list-style-type: none"> <li>• MDA in Western, Central and Northern Divisions. <ul style="list-style-type: none"> <li>◦ Use volunteers to implement a door-to-door DOTS strategy;</li> <li>◦ Aim to achieve minimum 80% coverage.</li> </ul> </li> <li>• Conduct MDA coverage survey</li> <li>• Test &amp; treat strategy in the Eastern division</li> <li>• Develop and Implement COMBI plan to support MDA activities</li> </ul>	\$629,462
2009	<ul style="list-style-type: none"> <li>• Conduct MDA in Central and Northern Divisions, including: <ul style="list-style-type: none"> <li>◦ COMBI</li> <li>◦ Volunteers for door-to-door distribution.</li> <li>◦ DOTS</li> <li>◦ 80% coverage</li> <li>◦ Coverage survey</li> </ul> </li> <li>• CTS in Western division</li> <li>• Active follow up of all positives identified in the Eastern region.</li> </ul>	\$409,283
2010	<ul style="list-style-type: none"> <li>• Conduct antigenemia prevalence survey in the Central and Northern Divisions using a stratified cluster protocol.</li> <li>• Conduct CTS in the Eastern Division.</li> </ul>	\$181,830
<b>Total</b>		<b>\$1,220,575</b>

### Discussion

Dr Eric Rafai highlighted that at the beginning Fiji aimed to eliminate LF by 2010 and therefore there is a need to focus energies on 2010 because funding guaranteed until then.

Professor CP Ramachandran asked if morbidity control was in place yet. Dr Rafai said that nurses being trained in primary health care will also be trained in morbidity identification and control activities. He said that a proposal has already been submitted to PacELF. Dr Joe Koroivueta said he has spoken to leprosy foundation to get support for morbidity control and that there is also a TB pilot project being implemented with partners from Australia which has good potential to support the morbidity control programme as well.

### French Polynesia

Year	Activities	Budget (USD)
2008	<ul style="list-style-type: none"> <li>• Carry out C survey <ul style="list-style-type: none"> <li>◦ June –Sept : collect blood and data</li> <li>◦ July – Oct : lab. analysis ICT &amp;Mf</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li>○ Oct – Dec : stat. analysis and final report</li> <li>• Medical consensus on treatment of ICT + and MF +</li> <li>• Treatment of ICT and Mf + found during the C survey, and follow-up</li> </ul>	
2009	<ul style="list-style-type: none"> <li>• Feb-March : LF committee meetings : design the future programme for the next 5 yrs</li> <li>• WHO Consultancy</li> <li>• April : government approval</li> <li>• April – May : WHO consultancy</li> <li>• Training on COMBI concept and methods</li> <li>• Draft a COMBI plan for LF</li> <li>• April – Sept : training sessions on the new programme</li> <li>• Oct : 1st round MDA</li> </ul>	
2010	<ul style="list-style-type: none"> <li>• 1st year of implementation</li> <li>• Pilot surveillance</li> <li>• Targeted MDA ( 6 months after the 1st)</li> </ul>	

#### Discussion

Dr Capuano raised an issue with MDA regarding the gap between the April 2007 MDA and a plan to do the next MDA in 2009. She said that French Polynesia will try to implement the next MDA at the end of 2009, and then again in 6 months to catch up to the original plan. She queried if it would be ok to wait til 2010 to ensure that they get everything planned to achieve 80% coverage. It was agreed that it was important to make sure that a high coverage (>80%) is reached for the next MDA and that it would be best to have it in 2009. However, if needed the MDA could be postponed to 2010 keeping in mind that the high coverage target is a priority.

#### Kiribati

Year	Activities	Budget (USD)
2008	<ul style="list-style-type: none"> <li>• Complete post-MDA survey on South Tarawa</li> <li>• Implement test &amp; treat strategy in the Line Island Group.</li> </ul>	\$5,000
2009	<ul style="list-style-type: none"> <li>• CTS in other Island Groups</li> </ul>	\$20,000
<b>Total</b>		<b>\$25,000</b>

#### Samoa

Year	Activities	Budget (USD)
2008	<ul style="list-style-type: none"> <li>• Develop COMBI strategy</li> <li>• Develop plan for implementation of DOTS <ul style="list-style-type: none"> <li>○ Work within existing social networks to improve participation of men in MDA</li> <li>○ Work with health staff to have nurses supervise MDA</li> <li>○ Repeat MDA – 80% coverage</li> </ul> </li> </ul> <p>Carry out 30 cluster coverage survey</p>	
2009	<ul style="list-style-type: none"> <li>• Analyze coverage data and address problems areas</li> <li>• Repeat MDA including COMBI, DOTS and 80% coverage target.</li> </ul>	
2010	<ul style="list-style-type: none"> <li>• Conduct post-MDA prevalence survey using stratified cluster protocol</li> </ul>	
<b>Total</b>		

### Discussion

Dr Ramaiah questioned why Samoa would do a C survey and not a CTS after the additional rounds of MDA like in the case of American Samoa. Dr Pat Lammie said that a whole population survey would be needed because of the slower rate of decline in ICT prevalence than seen in American Samoa.

Dr Ake highlighted that there are inconsistencies in what we are promoting as PacELF strategy. Dr Lammie suggested that this is the case because we don't know the answer to questions about surveillance yet. He said that more frequent surveillance will increase our learning about how these surveys work, but there are arguments to support longer gaps in surveillance surveys.

Dr Rafe Henderson said the rationale for the differences between countries is that in Tonga there appears to be no transmission and therefore frequent surveys will be unlikely to give us useful information. In the cases of American Samoa and Samoa, transmission is active therefore more surveys can be justified. Dr Pat Lammie said that in American Samoa surveillance will represent a change from national MDA to targeted MDA where transmission is still present. Continuing this discussion, Dr John Ehrenberg highlighted that decisions are now based on the data available from good surveys carried out in 2007.

Dr Ake asked a question regarding surveillance and what is appropriate, particularly because of the resurgence in Tonga from late 1970s to 2000. Dr Melrose reiterated that research is still being done to find an answer to the question of the frequency of surveillance. Dr Lammie suggested that the past situation in Tonga was not resurgence, but rather stable transmission because only Mf was tested, and we now know that ICT rates remain higher than Mf. He said the ICT prevalence in Tonga in 1977 is unknown. Dr Lammie said he understands the concern in the Pacific about resurgence and that if this means we have to do the surveillance more often then it is worth the investment. Dr Ake stressed that a PacELF surveillance plan exists that recommends surveillance every 2 years. Dr Ramaiah stated that nobody is saying that 2 years is incorrect, but that surveillance guidelines are under ongoing development.

Dr Capuano reinforced that a comprehensive post MDA active surveillance plan does exist for the Pacific and that it is the only one existing at global level at present. Therefore she hopes this plan will be recognised and used to guide the discussion on surveillance during the meeting in August.

### Tuvalu

Year	Activities	Budget (USD)
2008	<ul style="list-style-type: none"><li>Continue active follow up and treatment of positives found during 2007/08 survey</li></ul>	\$13,066
2009	<ul style="list-style-type: none"><li>Continue active follow up and treatment of positives</li><li>Mass treatment of school children (combined with de-worming program).</li></ul>	\$22,604
2010	<ul style="list-style-type: none"><li>CTS</li></ul>	\$5,660
<b>Total</b>		<b>\$41,330</b>

### Discussion

Dr Pat Lammie discussed the optimal treatment for each positive saying that spaced doses are known to be more effective than the 12 day program. He suggested that the frequency of the doses, whether quarterly or monthly should be determined by the capacity of the nursing staff and that if we want to eliminate LF sooner then we should treat more regularly if the nurses can. In Tuvalu, there will only be about 200 positive people therefore it would be very similar to a TB program.

Dr Ramaiah highlighted that ICT testing does not have to be done every month or quarter but rather it should be done just once a year. We need to have a consistent approach for all countries. So, as discussed earlier he recommended to treat the positives on quarterly basis and to test them by ICT every year.

Dr Henderson said that although it is usually recommended to test ICT positive people for Mf, in the “test and treat” situation the result of the Mf test will not change the decision. As action is taken based on the ICT result he suggested that Mf testing would have no added value in this case and that there was no need to do it.

**Group 3**  
**Federated States of Micronesia**

Year	Activities	Budget (USD)
2008	<ul style="list-style-type: none"> <li>• Complete post-MDA survey on Yap proper</li> <li>• Active follow up of 1 positive case found on outer islands.</li> <li>• Targeted survey of all residents on Yap proper who have migrated from Satawal.</li> <li>• Pending results of Yap proper survey, conduct targeted MDA.</li> </ul>	\$11,300
2009	<ul style="list-style-type: none"> <li>• Conduct prevalence surveys in other states of Micronesia to confirm status.</li> </ul>	\$20,000
2010	<ul style="list-style-type: none"> <li>• CTS</li> </ul>	\$10,000
<b>Total</b>		<b>\$41,300</b>

**Palau**

Year	Activities	Budget (USD)
2008	<ul style="list-style-type: none"> <li>• Implement test &amp; treat strategy</li> </ul>	\$5,000
2009	<ul style="list-style-type: none"> <li>• CTS – all high school students</li> </ul>	\$15,000
<b>Total</b>		<b>\$20,000</b>

**Discussion**

Dr Corinne Capuano asked if Palau would require financial support for these activities. Ms Losii said that Palau could provide half of the budget.

Dr Thane Hancock asked if surveying high school students would qualify as an appropriate CTS survey, because it is an easy environment to capture young people from many different places. Dr. Corinne Capuano said it would be acceptable as long as it captures the outer islands.

**Solomon Islands**

Year	Activities	Budget (USD)
2008	<ul style="list-style-type: none"> <li>• Conduct CTS</li> </ul>	\$20,000
<b>Total</b>		<b>\$20,000</b>

**Discussion**

Dr Ramaiah requested of PacELF that steps to be taken to certify the Solomon Islands as being free of LF. He said that LF was eliminated 30 years ago. In addition vector control activities have been implemented for 30 years. The tests with children in the past few years show no positive. He stated that if we can not certify Solomon Islands then no country can be certified.

Dr. Henderson, as facilitator of the group of Partially Endemic countries, said he was at a loss as to what to recommend. He said that there is a political desire to finish the job, and look at potential hot spots but that there is very little justification to continue. He asked why there was a need to do so many ICT, particularly if the criterion of less than 0.1% in children is no longer valid. Dr Henderson said he agreed with Dr Ramaiah and that the Solomon Islands are being put through the hoops when there is no need.

Dr John Ehrenberg said he agrees that the Solomon Islands have reached LF elimination. He said that a letter of acknowledgement from the WHO Regional Director could be sent similarly to what was done in the Americas. He said that there is currently no certification of elimination process in LF. Dr Ehrenberg said that the Solomon Islands would have to create a dossier summarising results of activities and evaluations and request an official acknowledgement from WHO. He also suggested that PacELF should consider writing in publishing articles to recognise the work by the Solomon Islands and the other countries currently below 1% ICT prevalence. These achievements should be properly acknowledged. It will raise awareness and may help with securing additional funding for other countries.

Dr Lammie suggested that there is no justification for surveying children or older adults. From a research perspective, Dr Lammie said he is interested in what happens to antibody levels in countries where elimination has occurred. He said he can propose a small survey of adults to build a case for using adults for elimination criteria in other countries. Dr Lammie reiterated that the Solomon Islands have done a fine job and that they do not need to keep spending resources on LF control activities.

Dr Wayne Melrose highlighted 2 very good review papers from 1970's regarding the elimination of LF in the Solomon Islands. In one paper no Mf positive was found in the blood taken during surveys for malaria. Dr Melrose offered to do antibody testing in the Solomon Islands.

Dr Ehrenberg suggested that surveillance on the border with PNG may be worth considering. Dr Henderson followed Dr Capuano's call for some clear recommendations for the Solomon Islands. He proposed that no further LF testing or surveillance be done in the Solomon Islands. The group agreed and suggested that antibody research be implemented. If any positive is found during this research then the situation could be reviewed by a group of experts.

#### Group 4: PNG

Year	Activities	Budget (USD)
2008	<ul style="list-style-type: none"> <li>• MDA in 6 provinces + Coverage survey</li> <li>• Developing operational support of strategic plan</li> </ul>	2,360,000
2009	<ul style="list-style-type: none"> <li>• MDA in 6 provinces + Coverage survey</li> <li>• Pilot DEC salt</li> </ul>	2,155,000
2010	<ul style="list-style-type: none"> <li>• C survey in 1 province</li> <li>• MDA in 5 provinces + Coverage survey</li> <li>• Pilot DEC salt</li> </ul>	2,964,875
<b>Total</b>		<b>7,479,875</b>

#### Discussion

Dr Henderson highlighted that PNG is a critical situation for PacELF. Dr Henderson suggested that an appeal be made by the WHO Regional Director to the Minister for Health and donors to mobilise support and ensure that PNG includes funds for LF in its next budget.

Dr Ehrenberg said the Regional Director is very interested in the PNG situation. He said Japan is also interested in seeing PacELF finish the job. What is needed is a well prepared plan of action. He said he believes the Regional Director will be convinced and be a good advocate on behalf of Japan and WPRO. Dr Ehrenberg also highlighted that package deals will attract donors, particularly AusAID and that linking with the malaria programme will be important.

#### **2.13 Discussions and main conclusions**

Dr Corinne Capuano presented the main conclusions from the meeting. These conclusions were discussed by participants and then revised by the secretariat and experts on the day following the meeting. The final conclusions are presented in Annex 6. Special mention was made of the morbidity component of the programme and the need to find ways to progress this aspect of the LF programme.

#### **2.14 Closing ceremony**

Dr John Ehrenberg made the closing remarks. He thanked all the participants for their participation and for taking the time out of their busy schedules to attend the meeting. He stated how he was somewhat sceptical and worried about the progress of PacELF, but found the experts mission and the current meeting both to be very rewarding experiences. The Pacific Island countries are motivated to achieve the goal and the countries have done a very good job. There are not too many diseases that can be eliminated but this group has demonstrated that the job is doable. Dr Ehrenberg thanked the participants for bringing their experiences and knowledge. He acknowledged the big effort that is needed to support PNG, and the fascinating opportunity it presents, particularly regarding combining disease programmes. Dr Ehrenberg gave special thanks to GSK for their expertise and for co-sponsoring the meeting, to Dr Leo Makita from PNG, and to the international experts. Special thanks also went to the Government and people of Fiji for hosting the meeting and to the WHO support staff who worked behind the scene to ensure a smooth meeting under the particular circumstances of the late arrival of the experts due to delay in their flight back from Samoa.

ANNEX 1

WORLD HEALTH  
ORGANIZATION



ORGANISATION MONDIALE  
DE LA SANTÉ

TECHNICAL  
WORKING  
GROUP ON  
LYMPHATIC  
FILARIASIS  
ELIMINATION

REGIONAL OFFICE FOR THE WESTERN PACIFIC  
BUREAU RÉGIONAL DU PACIFIQUE OCCIDENTAL

30

May 2008

PROGRAMMES IN THE PACIFIC  
ISLANDS COUNTRIES AND AREAS

Nadi, Fiji

9-11 June 2008

ENGLISH ONLY

PROVISIONAL AGENDA

1. Opening ceremony
2. Objective and expected outcomes of the meeting
3. Progress and current challenges of the Pacific Programme to Eliminate Lymphatic Filariasis
4. Update on the Papua New Guinea Programme to Eliminate Lymphatic Filariasis
5. Results of the DEC salt feasibility study in Papua New Guinea
6. Brief summary of data review, including post MDA surveillance data by Country
7. Draft active surveillance plan for the Pacific
8. Report on the field trip in American Samoa, Fiji and Samoa
9. Update on the Gates Foundation Grant to the Global Alliance with a focus on the Pacific challenges
10. Group work objectives and guidelines
11. Group work part 1: data review and analysis, main conclusions
12. Group work presentation part 1: data review and analysis, main conclusions
13. Group work part 2: recommendations on next steps for each country based on the data review and conclusions
14. Group work presentation part 2: recommendations on next steps for each country based on the data review and conclusions
15. Discussions, conclusions and recommendations
16. Closing ceremony

31

ANNEX 2

WORLD HEALTH  
ORGANIZATION



ORGANISATION MONDIALE  
DE LA SANTÉ

REGIONAL OFFICE FOR THE WESTERN PACIFIC  
BUREAU RÉGIONAL DU PACIFIQUE OCCIDENTAL

TECHNICAL WORKING GROUP  
MEETING ON LYMPHATICFILARIASIS  
ELIMINATION PROGRAMMES IN THE  
PACIFIC ISLAND COUNTRIES AND AREAS

WPR/2008/DCC/02/MVP(2)/2008/IB/2

Nadi, Fiji  
9-11 June 2008

6 June 2008

ENGLISH ONLY

INFORM  
ATION  
BULLETI  
N NO. 2

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ANNEX 3

**Speech by Dr Chen Ken, WHO Representative, for the South Pacific  
at the Technical Working Group on lymphatic filariasis elimination programmes in the Pacific island  
countries and areas**

*Nadi, Fiji, 9 - 11 June 2008*

Distinguished Guests

Ministry of Health, Fiji:

*Dr Losevata Alefaio, Director of Primary Health Services*

Lymphatic Filariasis Specialists:

*Dr Patrick Lammie*

*Dr Dasaradha K. Ramaiah*

*Dr Ralph Henderson*

*Dr Eric Ottesen*

*Dr John Ehrenberg*

Lymphatic filariasis is a threat to 1 billion people in 80 countries with over 120 million affected and 40 million severely disfigured and incapacitated. It is considered as the second leading cause of disability worldwide.

In the Pacific, Captain Cook was the first to observe and report on cases of elephantiasis in the population of Tonga in the 18<sup>th</sup> century and since then many sources reported cases in the various islands of the Pacific. Today it is estimated that 7.9 million are still at risk of infection in sixteen Pacific countries and areas.

Not only do those individuals affected suffer physically; but there are also enormous social and economic burdens affecting both the individuals and their families. Even when no clinical symptoms are present, hidden lymphatic pathology and kidney damage exists. The visible and disfiguring consequences of the disease, such as elephantiasis and hydrocele, will often drag entire families into poverty.

The Pacific Programme to Eliminate Lymphatic Filariasis was launched in 2000 under the auspices of the WHO following the World Health Assembly resolution WHA50.29 which called for the elimination of lymphatic filariasis as a public health problem. Several countries and areas in the Pacific such as Cook Islands, French Polynesia, Samoa and Wallis and Futuna already had a long history of fighting the disease and its resurgences when the WHA resolution came into effect.

Significant efforts have been made by the Member States to eliminate lymphatic filariasis in the Pacific area in partnership with the Government of Japan and other stakeholders. Good progress has been achieved.

Among the endemic countries in the Region, all but Papua New Guinea have completed at least five rounds of mass drug administration (MDA) and since 2000, about 1.5 million people have been reached. However, there is much more to be done. Among the critical challenges, is the need for most endemic countries to achieve treatment coverage rates above 85% if elimination is to succeed. Active surveillance strategies need to be discussed and recommendations should take into account the specific challenges of the Pacific, with its history of resurgences of LF, despite continuous efforts to combat the disease.

Prevalence surveys were implemented in 2007 to get a better understanding of the current epidemiological situation in the Pacific. American Samoa, Cook Islands, Fiji, Kiribati, Samoa and Tuvalu implemented post-MDA prevalence surveys in 2007-2008. The State of Yap in the Federated States of Micronesia implemented a baseline survey while Vanuatu and Tonga carried out a transmission survey in children. So far, Tonga has achieved the target of below 1% antigenemia prevalence and the results from Vanuatu are also encouraging. Other countries have either reached a national prevalence rate below 1% with some remaining geographical areas or population groups still showing antigenemia prevalence rates above 1% prevalence; or they have reached the target in some geographical areas and/or groups of the population but still need to reach the target of a national prevalence below 1%.

In addition, since the beginning of the programme, Papua New Guinea, which represents 70% of the total population of the Pacific, was not fully incorporated into the Pacific initiative due to the enormous challenges that this country represents. An analysis on salt importation and consumption patterns was carried out in 2007, to assess the feasibility of using diethylcarbamazine (DEC) fortified salt as an alternative to MDA. It was found that DEC-salt is an appropriate and cheaper option for Papua New Guinea and that this should be seriously considered in the deliberations on what the country thinks it would suit it best.

Clearly, these are important challenges to the elimination of lymphatic filariasis that need to be addressed if we want to sustain the progress made so far in reaching the target. Efforts need to be made now by the leading experts in the field to assist the Member States in clarifying particular criteria for stopping MDA and post-MDA surveillance strategies in the specific settings which characterize the Pacific region.

WHO felt it would be appropriate for a group of international and national experts to meet at this point in order to review and discuss progress, identify obstacles and formulate solutions so that the Pacific Island Countries could achieve the goal of eliminating lymphatic filariasis in the near future.

These reasons led WHO to decide to hold a Technical Working Group Meeting on Lymphatic Filariasis Elimination Programmes in the Pacific Island Countries and Areas to address these important technical questions, postponing the annual LF Managers meeting until 2009.

This meeting is critical. Expected outcomes should include clear technical answers and proper guidance to countries on when to stop MDA; including the need for proper guidance on the type of surveillance to be implemented after it has been stopped. Elimination of lymphatic filariasis in the Pacific islands is feasible, but will require good technical and continuous financial support, as well as a high level of commitment from all the key stakeholders.

I wish to sincerely thank our distinguished guests, partners, donors and participants; may this be a successful workshop and I look forward to the outcomes.

#### ANNEX 4

### **Speech by Dr Alefaio, Director of Primary Health Care, Fiji Ministry of Health, for the South Pacific at the Technical Working Group on lymphatic filariasis elimination programmes in the Pacific island countries and areas**

WHO Representative Dr Chen Ken, the Regional advisor Dr John Ehrenberg, the team leader of the Pacific Program Dr Corinne Capuano, and regional technical advisors and colleagues. First of all I would like to convey to you all the apologies of the permanent secretary Dr Lepani W who is also down with the laryngitis going around. It is my pleasure to be here. I would like to begin by welcoming you all to Nadi, Fiji and to all of the participants and technical advisors we extend to you a big bula vinaka. You're all aware of Fiji's political situation and I would like to assure you that despite that political challenges we have here, Fiji still struggles on like normal times and its still safe for locals and tourists alike. I hope you can alleay any fears regarding your security, and let's focus on enjoying the proceedings over the coming days.

Filariasis control in Fiji continues to be a challenge for the Government and its people. Fiji's demographic structure has changed rapidly in the last 10 years with urban drift contributing to a growing squatter population in the peri-urban area. Moreover, with expiring farm land leases in our northern division, the urban migration issue has become a major major problem for the country. As we all know in 1999 our ministers and directors of health meeting in Palau endorsed the development and implementation of a comprehensive strategy to eliminate LF in all our 22 pacific island countries and territories by the year 2010. The elimination strategy refers to achieving a prevalence rate of less than 1% for all nations. Indeed PacELF was the direct outcome of this meeting following by the regional meeting in Brisbane, Australia in the same year.

The commitment of the Fiji government to achieve LF elimination status by 2010 is reflected in MoH allocated annual budget of 100k for just control activities, and almost all of this funding is used for our annual MDA activities. Moreover we note that the global strategy for elim of LF involves (a) interruption of transmission by mass treatment of the population and (b) control of morbidity for those suffering the disease. As likely with other Pacific island countries the LF program since 1999 has mainly focused on interrupting transmission. Although we have set the interruption of transmision as our primary strategy for the program, we also realize that the control of morbidity associated with the disease needs to be critically considered. MDA for LF has been conducted every year since 2001, the drugs are administered once a year to all persons in Fiji; except infants under 2 years old, pregnant women, and the severely ill. MDA is usually conducted in September for us with health workers and village MDA volunteers visit homes and register household members. The National coverage of MDA however has averaged 66.6% for the past 5 years, 2002-2006, not in any year has it exceeded 70% or reached the PacELF recommended standard of 80%. The reasons for the low MDA coverage over the last 5 years are attributed to mainly administrative issues rather than a lack of or shortage of drugs and/or supply. Moreover our C survey in 2007 showed that we have not achieved the elimination prevalence of less than 1%. However it must be said there is some measure of success in Fiji in reducing the prevalence from 16.7% in 2001 to 9.6% in 2007. This figure gives some assurance that our prevalence LF is reducing and can be directly attributed to the effects of the MDA in the last 5 years. The MoH is eagerly awaiting the direction from WHO and you, the technical advisors, on the way forward after the last 5 years of MDA, particularly as our coverage has not been sufficient.

Ladies and gentlemen, this meeting as indicated by the invitation given by WHO, has changed slightly from previous years, from the usual annual meeting of LF program managers, it has changed to look at factors for guiding the next round of LF activities following the five rounds of MDA. More specifically, the meeting will

focus on identifying the problems and shortcomings that have prevented some countries from achieving their targets.

Some Pacific Island countries, like Fiji, conducted a C survey in 2007 and based on these results the target for elimination can be said to have been partially achieved, which leads to the urgent technical question of the direction from here on. This meeting therefore provides the opportunity to program managers to review the progress made and in discussions amongst colleagues identify obstacles, and formulate solutions so that the goal of elimination can be achieved.

An expectation of this meeting is that a clear plan of action is outlined with clear recommendations from advisors and colleagues. Fiji stands ready to work with partners and countries in the region on the further control of filariasis. Fiji also likes to acknowledge with thanks the contribution and support from the Japanese Government, the drug company GSK, World Health Organization, the Global Alliance, and PacELF for assisting us in achieving our current level of LF control.

Ladies and gentlemen, I wish to conclude by again conveying my ministry's and government's warm welcome to you all and during your stay here in Nadi do take time to visit some of the sites in this town. To WHO and the facilitators, we wish you a successful meeting and may you all, together, achieve the set objectives.

Vinaka vakalevu and God bless you.

## ANNEX 5

### Country Presentations

#### Group 1: Countries <1% ICT prevalence

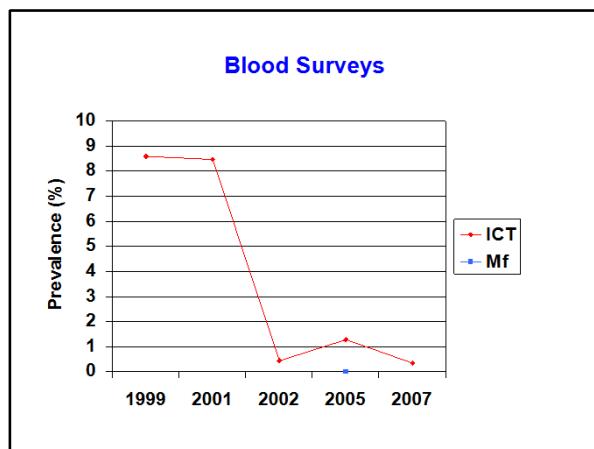

  
**Technical Working Group Meeting on Lymphatic Filariasis Elimination Program in the Pacific**  
**From Monday 09<sup>th</sup> to Thursday 11<sup>th</sup> June, 2008**  
**Nadi, Fiji**  
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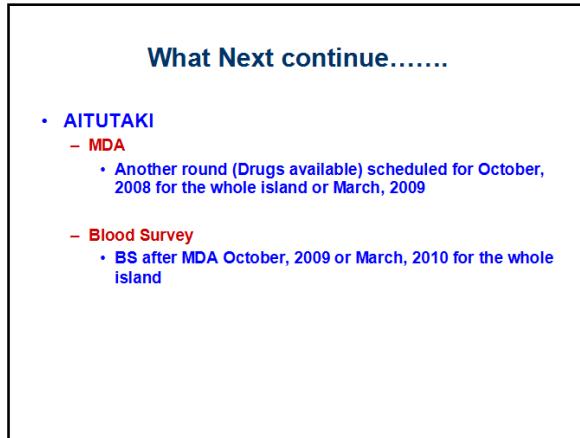
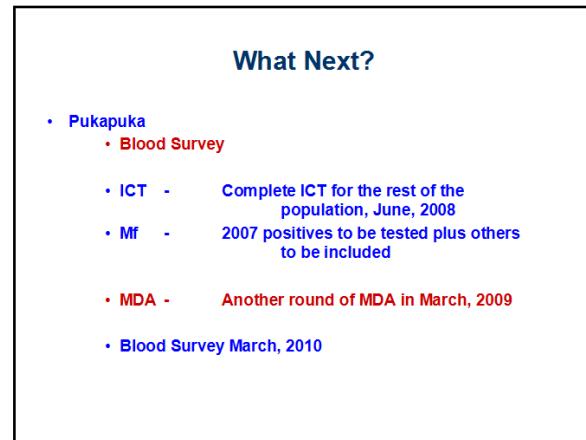
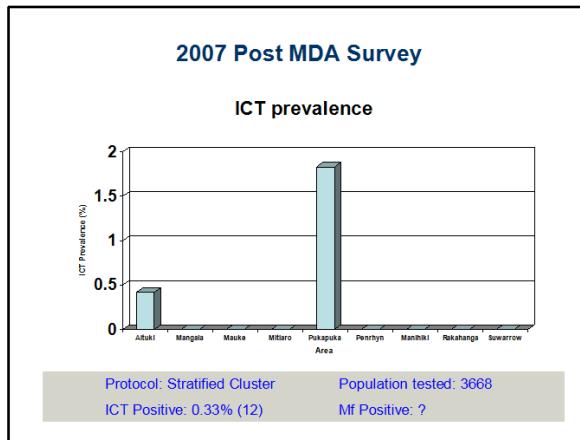
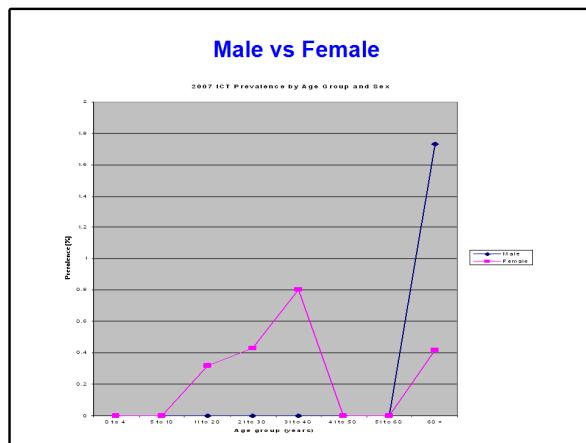
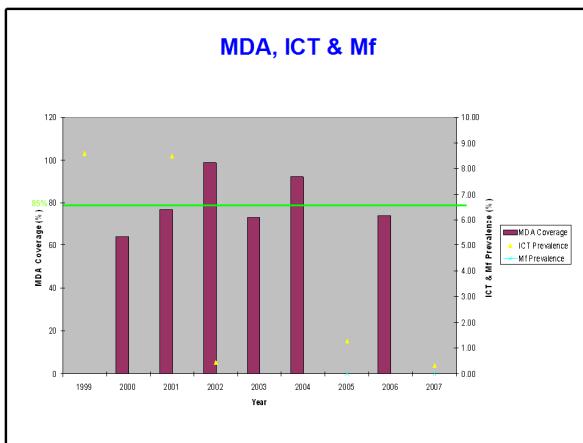
#### **Summary**

- Population: 19,569 (SPC 2006 est.)
- Status: Endemic
- Main vector: *Aedes polynesiensis*
- 6 rounds of MDA: 1/yr from 2000 to 2004, + 1 additional round in 2006
- Surveys
  - 1999 “Baseline” (convenience) ICT only
  - 2001 Sentinel site (convenience) ICT only
  - 2002 Whole country (convenience) ICT only
  - 2005 Whole country (convenience) ICT & Mf
  - 2007 Whole country (Stratified cluster) ICT

<b>MDA</b>			
<b>Year</b>	<b>Registered Coverage</b>	<b>Reported coverage</b>	<b>Corrected Coverage*</b>
2000	81.45	62.44	63.79
2001	77.8	64.14	76.99
2002	98.00	98.00	98.75
2003	96.56	88.39	73.30
2004	97.88	92.77	92.14
2006	91.74	98.40	90.60

\*Based on SPC population estimates





## Reasons

### Different pattern between males and females (ICT 2007)

- The blood test (ICT) may not be consistent or otherwise, compared to mf is negative
- Migration between the islands may be a contribution factor

### Prevalence male over 60 and female under 40

- All 4 males and 1 female over 60 may have been infected with the filarial worms before MDA 2000
- They have not been tested until 2007 (previous test includes clustered and randomly)
- Those under 40 years have not taken the drugs as they are new to the islands

## Higher prevalence in Aitutaki and Pukapuka

	AITUTAKI	PUKAPUKA
Some reasons		
Information from team leaders on the islands		
Frequent movement of people to and from islands	Yes	No
Direct observation of drug consumption during MDA	Not all	Not all
Drugs being taken home and probably forgotten	15%	20%
Refusal to take drug	2%	Nil
Information from people is not reliable	5%	1%
No proper follow up of families who may have not taken the drugs	10%	15%

Thank you and Meitaki Maata

## Niue



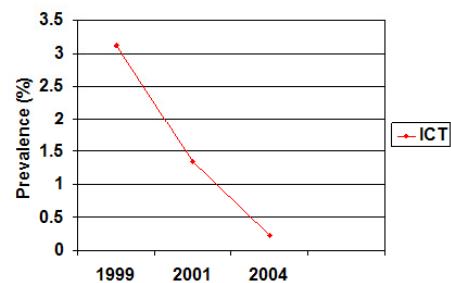
## Summary

- Population: 1600
- Status: Endemic
- Main vectors: *Aedes cooki*
- 5 rounds of MDA: 1/yr from 2000 to 2004
- Surveys
  - 1999 Baseline (Whole population) ICT only
  - 2001 (Whole Population) ICT only
  - 2004 Post MDA survey (Whole population) ICT only.
  - 2006 3 positives – 1 died, 1 migrated to NZ, 1 ICT negative.
  - 2007: Planned blood survey not done

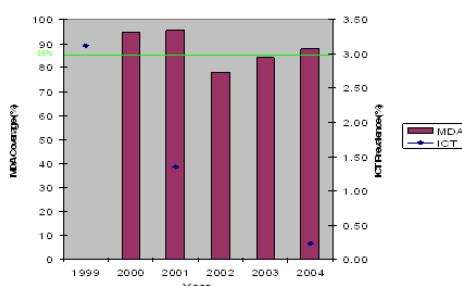
## MDA

Year	Registered Coverage	Reported Coverage	Corrected Coverage
2000		94.2	94.84
2001		99.07	<b>95.41</b>
2002		82.16	<b>78.06</b>
2003		77.52	84.00
2004		85.23	87.70

## Blood Surveys



## MDA & ICT



## Next Steps

- 2008:
  - Lab based surveillance system established
  - Plan to test immigrants
  - “piggy back” ICT tests on whole population
  - Global school health survey (GSHS) and NCD steps survey

## Question

- What kind of surveillance needed and for how long?

## Tonga



## Summary

- Population: 99,928 (2006 Census data)
- Status: Endemic
- Major vectors: *Aedes tabu*
- 6 rounds of MDA:
  - 2001 to 2005: 1/yr National MDA
  - 2006: MDA in 1 site only
- Surveys:
  - 2000: "Baseline" (Convenience) ICT only
  - 2004: Whole country (Random) ICT only
  - 2006: Post MDA, Whole Country (Stratified Cluster) ICT & Mf
  - 2007: targeted all class 1 students (6 years old)

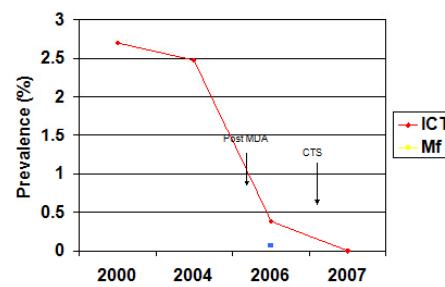
## MDA

Year	Registered Coverage	Reported Coverage	Corrected Coverage*
2001	93.14	79.35	80.46
2002	90.41	83.88	81.13
2003	94.76	90.76	87.27
2004	86.70	85.62	85.15
2005	84.20	85.10	84.01
2006**			92.12

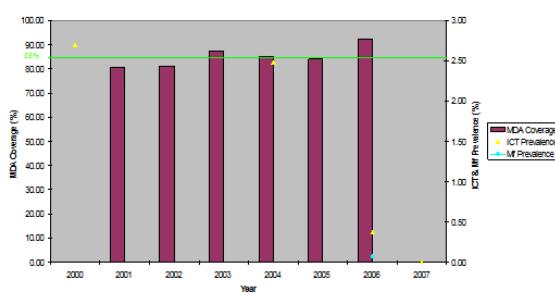
\*Based on SPC population estimates except 2006 which was based on Census data

\*\* MDA in one site only

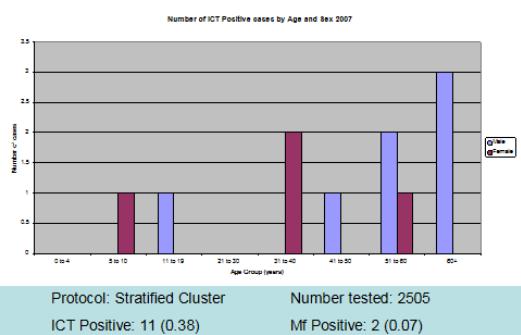
## Blood Surveys



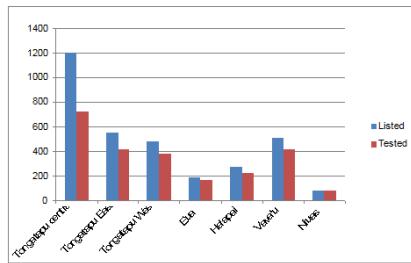
## MDA, ICT & Mf



## Post MDA Survey 2006



## 2007 CTS



Number tested: 2391

ICT Positive:0

## Our Two Year Plan of Action

<b>2007</b>	Finalize and report on results of CTS Planning for morbidity survey
<b>2008</b>	Morbidity survey (Jan)
<b>2009</b>	Repeat CTS Follow up and treatment of ICT positives

## Next steps

- What kind of surveillance and for how long?

## Vanuatu



## Summary

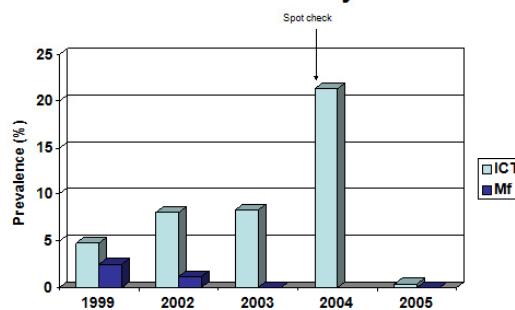
- Population: 221,417 (2006 SPC est.)
- Status: Endemic
- Major vector: *Anopheles farauti*
- 5 rounds of MDA: 1/yr from 2000 to 2004
- Surveys:
  - 1999: "Baseline" (convenience) ICT & Mf
  - 2002, 2003: SS (convenience) ICT & Mf
  - 2004: Spot check C (convenience) ICT only
  - 2005: Post MDA (stratified cluster) ICT & Mf

## MDA

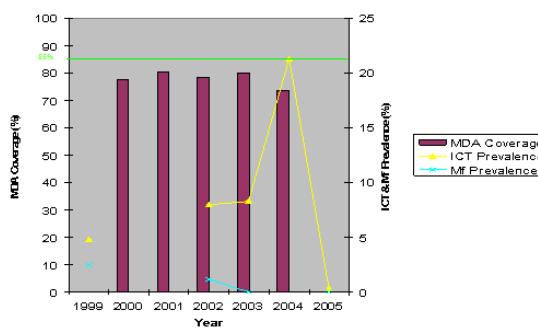
Year	Registered Coverage	Reported Coverage	Corrected Coverage*
2000	78.86	82.89	77.45
2001	83.12	83.76	80.34
2002	85.08	83.75	78.33
2003	83.13	87.46	80.00
2004		85.04	73.55

\*Based on SPC population estimates

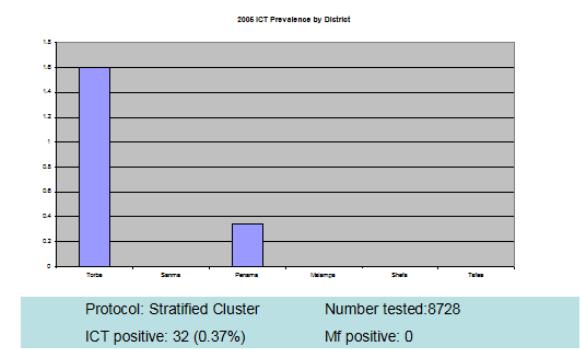
## Blood Surveys



## MDA, ICT & Mf



## Post MDA Survey 2005



- Add 1 or 2 slides with results of the Child transmission survey in 2007

## Next steps

- Hot spot survey
- Surveillance: what kind of surveillance, for how long, etc

## Group 2: Countries >1% ICT Prevalence

### American Samoa



### Summary

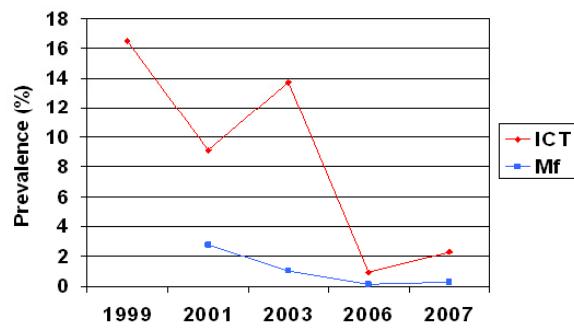
- Population: 63,308 (SPC 2006 est.)
- Status = Endemic
- Main vectors: *Aedes polynesiensis*, *A. upolensis*, *A. samoanus*, *A. tutuilae*
- 7 rounds of MDA: 1/yr from 2000 to 2006
- Surveys:
  - 1999 "Baseline" (convenience), ICT only
  - 2001, 2003: Sentinel site (random) ICT & Mf
  - 2006: Sentinel site + 1 spot check (random) ICT & Mf
  - 2007: Post MDA survey (random cluster) ICT & Mf

### MDA

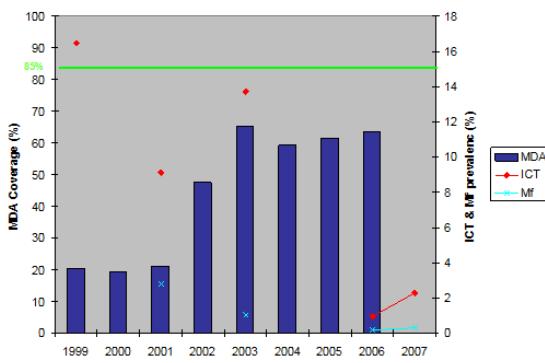
Year	Registered coverage	Reported coverage	Corrected coverage*
2000	59.39	23.69	<b>19.34</b>
2001	57.32	52.35	51.05
2002	49.57	49.57	47.48
2003	70.19	70.19	<b>65.49</b>
2004		64.61	59.17
2005		66.29	61.52
2006			63.49

\*Based on SPC population estimates except for 2000 which is based on Census data

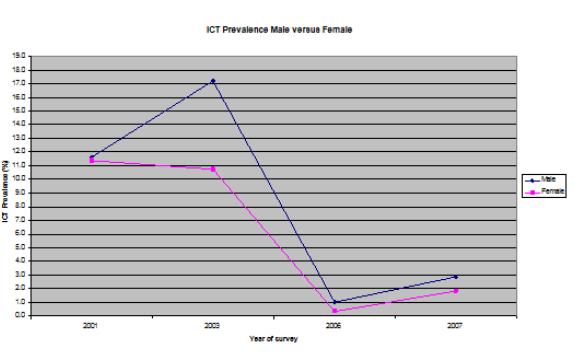
### Blood Surveys

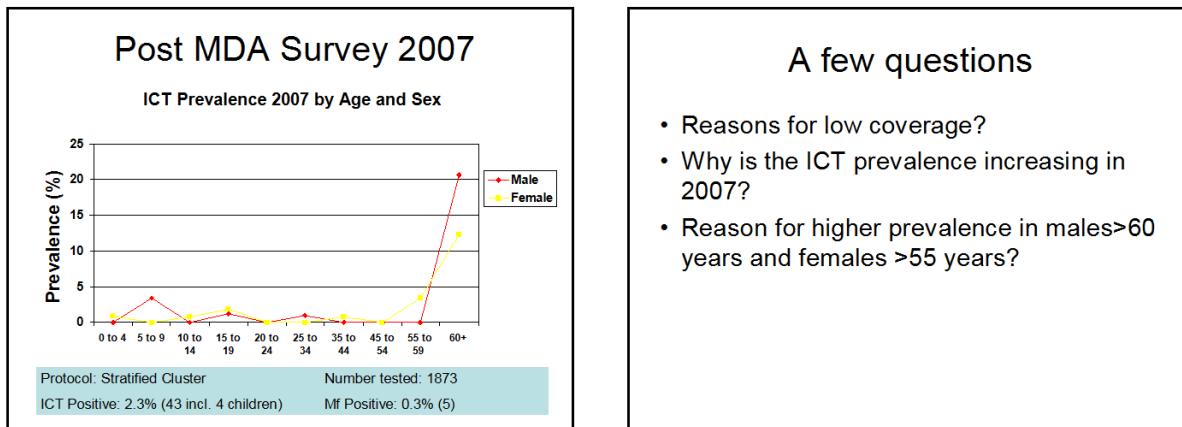


### MDA, ICT & Mf



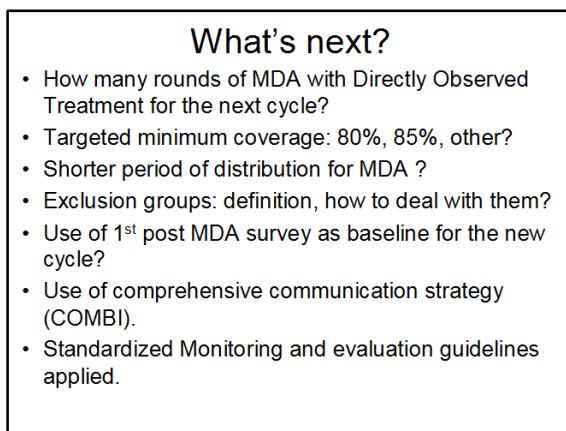
### Male vs Female





### A few questions

- Reasons for low coverage?
- Why is the ICT prevalence increasing in 2007?
- Reason for higher prevalence in males >60 years and females >55 years?



## Fiji



Technical Working Group meeting on Lymphatic Filariasis Elimination Programmes in the Pacific Island Countries and Areas: 9 -11th June 2008

8/5/2008

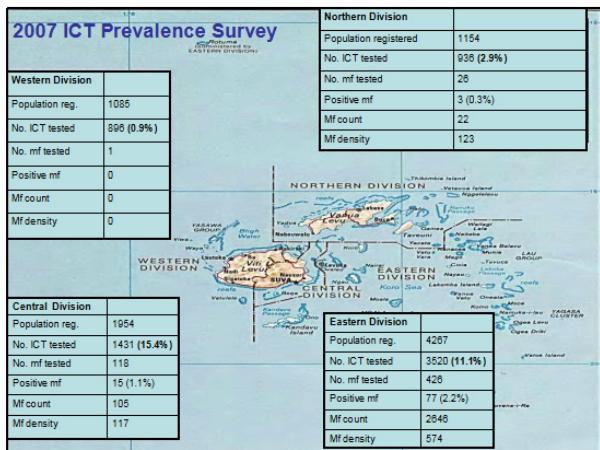
NACD 2008, evrafai

## Summary

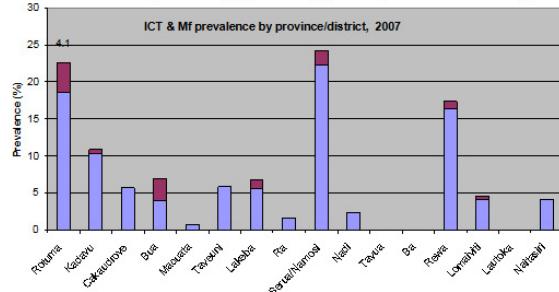
- Population:** 827,900 (2007 BoS, Census)
- Status:** Epidemic
- Main vectors:** *Aedes polynesiensis*, *A. fijiensis*, *A. pseudoscutellaris*, *A. rotumae*, *Culex quinquefasciatus*
- 5 rounds of MDA:** 1/yr from 2002-2006
- Surveys:**
  - 2001 “Baseline” (Convenience) ICT only
  - 2002, 2004, 2005 Sentinel Site + Spot Check (Convenience) ICT & Mf
  - 2007: Post MDA (Stratified Cluster) ICT & Mf

8/5/2008

NACD 2008, evrafai

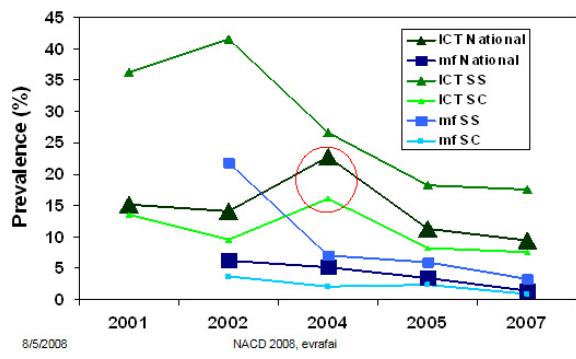


## 2007 LF(ICT) prevalence survey



**National Survey Protocol:** Stratified Cluster Survey (Western & Northern), Sentinel Sites (East & Central). No. ICT tested: 6783. ICT Positive: 647 (9.50%). Mf Positive: 95 (1.4%).

## ICT & mf prevalence 2001-2007



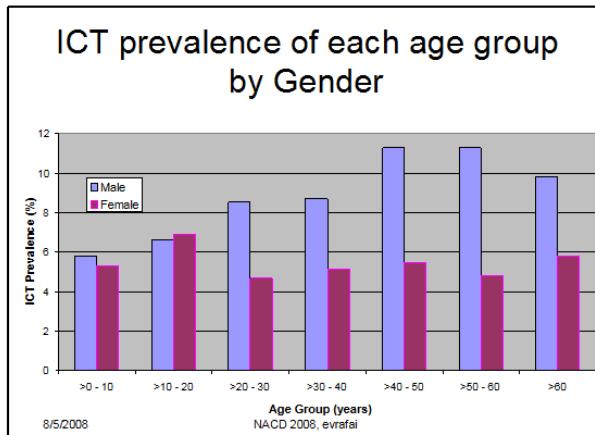
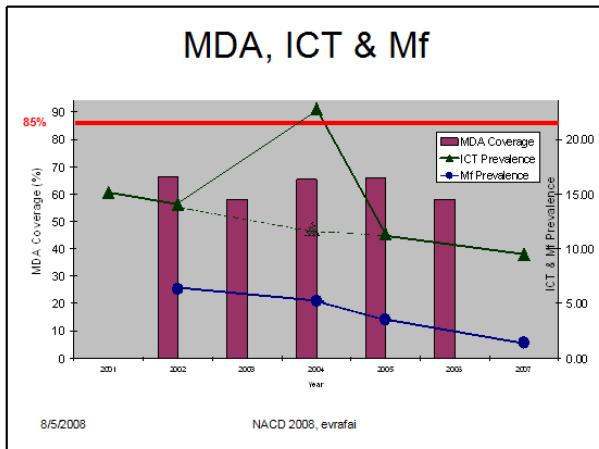
## MDA

Year	Registered coverage	Reported coverage	Corrected coverage*
2002	95.04	70.46	<b>66.29</b>
2003	94.85	62.36	58.2
2004		69.25	65.49
2005		70.16	65.92
2006			<b>58.03</b>

\* Based on SPC population estimates

8/5/2008

NACD 2008, evrafai



### A few questions

- Why the low MDA coverage? What is the best way to collate MDA coverage data?
- Why the difference in ICT prevalence between males and females in 2007?
- Why the high ICT prevalence in Rotuma, Seru/Namosi, Kadavu and Rewa ?.
- What is the impact of vector control integration into the LF program?
- How is mf prevalence determined?

8/5/2008

NACD 2008, evrafai

### What's next?

- How many rounds of MDA with Directly Observed Treatment for next cycle?
- Targeted minimum coverage: 80%, 85%, other?
- Shorter period of distribution for MDA ? Cost implications?
- Use of post MDA survey as baseline for the new cycle?
- Use of comprehensive communication strategy (COMBI)? Where are the Resources?
- Standardized Monitoring and evaluation guidelines applied.
- How to conduct Active Surveillance?

Thank you

8/5/2008

NACD 2008, evrafai

## French Polynesia



TWG meeting on LF programmes, june 2008, Nadi

*Ms Yolande MOU*

1

## Summary

- Population : 259 596 (census 2007)
- 5 archipelagos, 118 islands
- 70% in Tahiti
- Pacelf program since 1999
- Main LF vector : *aedes polynesiensis*
- Status : endemic

2

## History of the programme

Year	Strategy	LF Prevalence	Coordination of the LF programme
1948	None	Tahiti : 40% (Mf) Elephantiasis : 8%	Collaboration with the University of California
1949-1960	MDA with DEC (6mg/kg), home to home distribution	1958 - Tahiti : 7% (Mf) Elephantiasis : 1.2%	Fare Marri (1948)
1967	Targetted treatment of the Mf positives	5% (Mf)	Louis Malardé Institute (LIM)
1974 à 1983	MDA with DEC (6mg/kg), home to home distribution, all the year, <i>7 full time staff</i>	1980s : 1.5 % (Mf)	Louis Malardé Institute
1983-1993	Cessation of the prophylactic campaigns	1993 - Tahiti - school pop, 5 yrs old : 8.3% (IgG anti Brugia malayi)	
1993-1999	MDA with DEC (3mg/kg), 2 per year, points of distribution	1995 - îles de la Société - school pop 4-7 yrs old : 6.5% (IgG) 1998 - Tahiti - school pop, 5 yrs old : 2.5% (IgG)	Health Direction
2000-2007	Pacelf strategy : MDA with DEC (6mg/kg) + ALB (400mg), 1 per year, points of distribution	2000-2003, 2006 : ILM evaluation on 3 sites in areas 2007 : ILM survey in Moorea	Health Direction

3

## PacElf méthodes in PF

PAcELF recommandations	Application in PF
MDA, one treatment DEC 6mg/kg +ALB 400mg, 1 per year, within 2 months	Yes, since 2000 Within 2 weeks for the school pop. During 1 week for the rest of the pop.
Implementation of a register of people treated (record of names, age, sex, village, treatment given)	No nominated register Data Collection : nb of treatments distributed in the school children and rest of the population (sex & age not recorded) Post MDD surveys since 2004, in non representative samples (n=800-1000) to estimate compliance coverage
5 years of implementation	8 annual rounds of mass drugs distribution
Evaluation and monitoring plan, PacMAN	Partially done No initial assessment Evaluation in 2000, 2003, 2006, in 3 sentinel sites (ILM) : Tevaitoa, Maupiti, Tahiti Nation wide survey in 2008

4

## Available Data, 2000-2007

- Louis Malardé Institute surveys :
  - 2000, 2003, 2006 evaluation in 3 sites in rural area - ICT & Mf
  - after 7 rounds of MDD, in 2006, decrease of Mf prevalence in the 3 sites and decrease of ICT prevalence in 2 sites
  - MDD coverage : 76% in 2000-2003 to 88% in 2004-2006

5

## Available Data, 2000-2007

- 2007 multi-center study on Lymphatic Filariasis Impact Assessment Tools, 2007 in Moorea  
Louis Malardé Institute, Bill & Melinda Gates Foundation
- Post 8th MDD
  - Afareaitu, Pop ≥ 3 yrs old (n=1018)
    - Mf prevalence : 2.6 %
    - ICT prevalence : 11.9 %
  - School pop, 6-7, 9-10 yrs old (n=436)
    - Mf prevalence : 0 %
    - ICT prevalence : 2.5%

6

## Mass drugs distribution

	Reported coverage (%)	
Year	School pop.	Adults
2000	99	90
2001	97	94
2002	97	91
2003	95	92
2004	94	96
2005	96	113
2006	98	112
2007	Nd	Nd

- In schools and colleges (n=240)
  - Distribution by the teachers mainly or a health staff, on Wednesday
- In 250 points of distribution for the other pop, within the Filariasis week
  - Drugs made available in all public health structures, all the drug stores, private doctors, university, private departments of workers health care
  - Street stands of in popular public places (100 environ) in all islands on Friday
- Supported by a large media campaign
- Exclusion of children under 2 yrs old, pregnant women and women who breastfeed

7

## Change of the method of drugs distribution in 2007

- Instructions given :
  - people do swallow the drugs as far as possible the moment they get the tablets
- Home to home distribution by mobile teams
- Change of the day for the public street points of distribution : on Thursday instead of Friday
- Modification of the data record to improve the information on the compliance
- Proper survey on compliance and reasons for no absorption in a representative population
- Media campaign to raise the awareness : positive messages about the value of the treatment and the eventual side effects

8

## Résults of MDA coverage in 2007

- Data collected during the campaign, are still being explored
- Survey on compliance, after 1 month in 2007 :
  - n=1018, aged of 18 and over, representative sample, interview by phone
  - Résults :
    - 85 % said they received their tablets
    - 96% of them said they have absorbed the drugs
    - MDA coverage in this pop : 81%

9

## Comments on the LF programme in FP

- Choice of the method of mass distribution :
  - Same channels of drugs distribution for years: habits taken by people, less involvement, decrease of their motivation
  - The strategy is based on an auto responsibility of the individuals to take the treatment : a challenge every year to reach the goal
  - The prophylactic campaign is carried within only 15 days :
    - high pressure on the staff at the central and field levels
    - Difficulty to innovate health promotion methods and communication technics to explain, inform and convince
  - No measure to control and limit the waste of drugs
  - Home to home distribution by mobile teams is difficult to implement : related to the geography and the spread of the islands, and the urbanization of lifestyles
  - Only use the health professionals network : community doesn't participate

10

- Data on LF
  - Lack of a proper LF surveillance system
  - No information at the central level on the treatment and the follow-up of the patients
  - standardised protocol for the treatment of LF is old (1996)
- Weak data collection on MDA coverage
  - Data on drugs distribution, but not on drugs administration and real compliance
    - Rates of reported coverage >100 % in 2005 and 2006
    - nb of drugs distributed > nb of pop
  - Post mass distribution surveys : results are not representative
  - Résults from these assessments cannot be used to evaluate the efficiency of the strategy and to monitor the programme

11

- evaluation plan
  - The results from the 3 sentinel sites do not reflect the global situation in the country
  - But, they only tend to a hypothesis of a prevalence rate higher than the regional goal of PacELF
  - Questions persist on the faisability to reach the the cut-off of 1% ICT prevalence in FP
- Paradoxal situation : lot of financial means, but lack of humans resources in the field structures and lack of available skills for central en PF
  - Multiple reasons at political and administrative levels, or in health organization
  - Negative effects on all public health programmes

12

## Next steps

- 2008 nation wide survey
  - Objectives :
    - To estimate the global LF prevalence (ICT and Mf) and compare with PacELF goal
    - To measure the Mf prevalence among the persons positive in ICT
    - To estimate the compliance during the 2 last rounds of MDD
    - To estimate the morbidity of LF
  - Methods :
    - Stratified cluster sampling, based on 2007 population census
    - Study sample : 1100 persons aged of 2 and over
    - Blood analysis by LMI : antigen detection by ICT and Mf filtration through membrane when ICT is positive
      - Questionnaire : age, sex, compliance, signs of morbidity
  - Statistic analysis and final report by the Health Direction

13

- 2008 agenda for implementation
  - march : Protocol finalised
  - april-may : Sampling
  - june – september : Collecting data
  - july - october : Blood analysis
  - october - december : Statistic analysis
  - january 2009 : Final report
- Discussion with the decisionmakers and local experts and decision by the health authority for a new strategic plan in FP
  - WHO expertise needed at this stage of planification and programme conception for a new period

14

## Kiribati



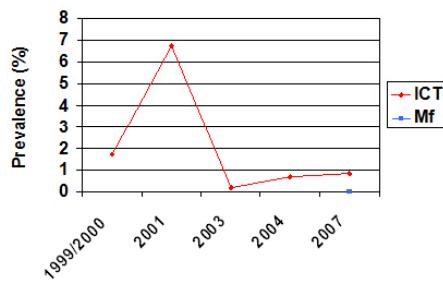
## Summary

- Population: 93,706 (2006 SPC est.)
- Status: Endemic
- Main vectors: *Aedes marshallensis*, *Culex quinquefasciatus*
- 5 rounds of MDA: 1/yr from 2001 to 2005
- Surveys
  - 1999/2000, 2001, 2003, 2004 Sentinel Site (Convenience), ICT only
  - 2007-08 Entire country (stratified cluster) ICT & Mf

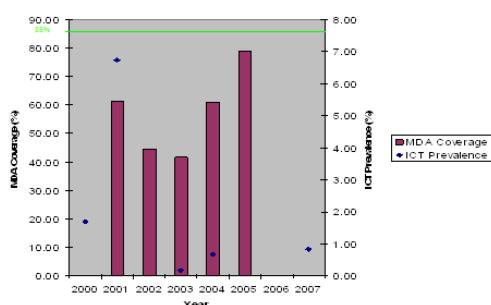
## MDA

Year	Registered Coverage	Reported Coverage	Corrected Coverage
2001	83.52	59.84	61.32
2002	82.97	45.92	44.65
2003	89.06	43.48	41.70
2004		67.15	60.95
2005		86.54	79.02

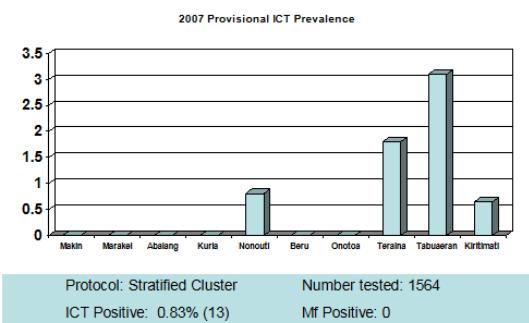
## Surveys



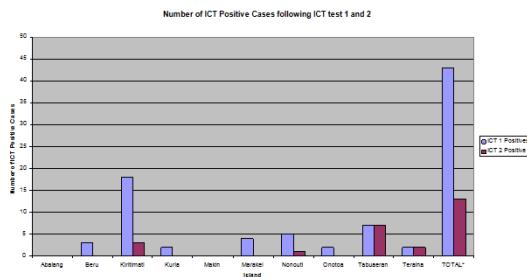
## MDA, ICT & Mf



## Post MDA Survey 2007/08



## ICT 1 vs ICT 2



## A few questions

- Why the low MDA coverage?
- Reason for increased ICT since 2003?
- Reason for discrepancies in ICT 1 & ICT 2 in 2007?
- Reason for difference in ICT prevalence for some islands?

## Next steps

- Complete post MDA survey in Tarawa in 2008.
- If MDA needed how many more rounds?
- What kind of monitoring and evaluation protocols will be needed?
- If only a few islands have an ICT prevalence > 1% what kind of MDA will be required (nationwide or at provincial level) ?
- Use of Long Lasting Impregnated bednets in Kiribati?

## Samoa



## Summary

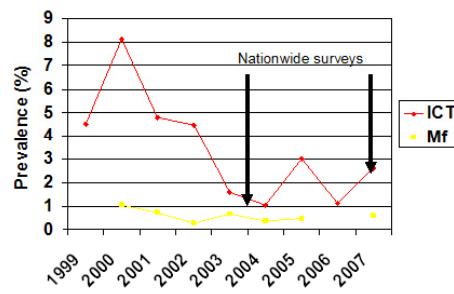
- Population: 176,848 (2006 SPC est.)
- Status = Endemic
- Main vectors = *Aedes polynesiensis*, *A. upolensis*, *A. samoanus*, *A. tutuila*.
- 6 rounds of MDA: 1/year from 1999 to 2003 + 1 additional round in 2006
- A 3 days Nationwide MDA 7 planned for June 2008 with COMBI plan
- Surveys:
  - 1999: "baseline" (convenience), ICT only
  - 2000, 2001, 2002, 2003: various sites (convenience), ICT & Mf
  - 2004: first post MDA survey: stratified cluster sampling, ICT & Mf
  - 2005: 6 sites (convenience), ICT & Mf
  - 2006: sites, ICT
  - 2007: second post MDA survey: stratified cluster sampling, ICT & Mf & antibody testing

## MDA

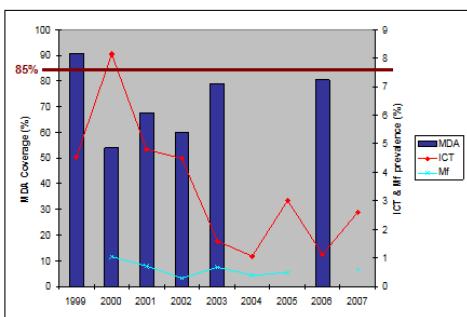
Year	Registered coverage	Reported coverage	Corrected Coverage*
1999	96.01	90.49	<b>90.49</b>
2000	96.24	56.80	<b>54.14</b>
2001	93.63	68.39	67.40
2002	92.59	60.26	59.93
2003	93.53	79.65	78.78
2006	NA	80.61	80.61

\* Using SPC population estimates for each year

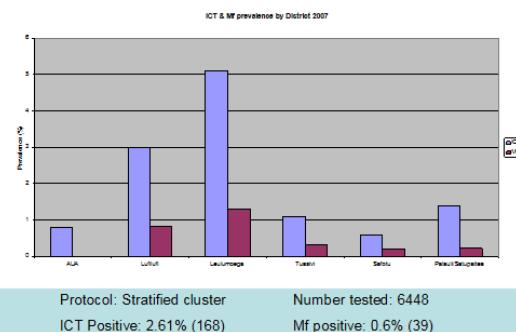
## Blood Surveys



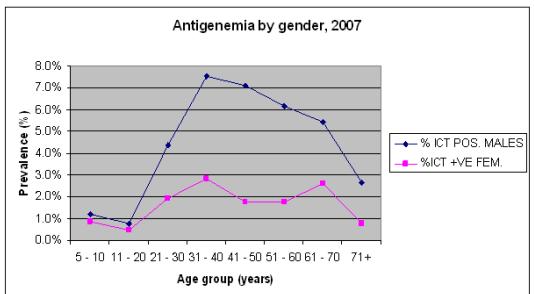
## MDA, ICT & Mf



## Post MDA Survey 2007



## Male vs. female prevalence in 2007



## A few questions

- Can the gap in MDA in 2004 and 2005 be responsible for the increased ICT and Mf prevalence between 2004 and 2007?
- How to explain the difference in prevalence between males and females?
- Role of the vector?

## What's next

- What should be the minimum MDA coverage (DOT)?
- How many more rounds (yearly, bi-yearly)?
- What post MDA surveillance strategies?
- Shorter period of distribution for MDA ?
- Use of post MDA survey as baseline for the new cycle?
- Use of comprehensive communication strategy (COMBI)?
- Standardized Monitoring and evaluation guidelines?

## Tuvalu



## Summary

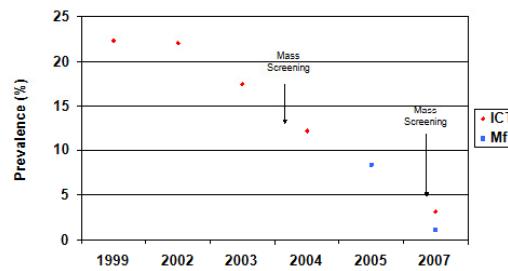
- Population: 9,652 (2006 SPC est.)
- Status: Endemic
- Main vectors: *Aedes polynesiensis*
- 5 rounds of MDA: 1/yr from 2001 to 2005
- Surveys:
  - 1999, 2002, 2003: SS (convenience) ICT only
  - 2004: Whole country (Mass screening) ICT only
  - 2005: Follow up of positives from 2004, Mf testing only
  - 2007: Whole country (Mass screening) ICT & Mf

## MDA

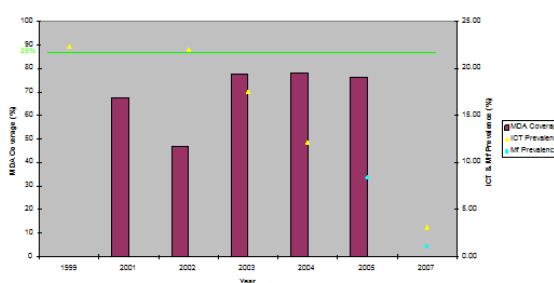
Year	Registered Coverage	Reported Coverage	Corrected Coverage*
2001	93.97	81.16	67.49
2002	94.28	46.72	<b>46.72</b>
2003	94.45	82.59	77.41
2004		83.67	<b>77.90</b>
2005	89.03	76.79	76.11

\* Based on SPC population estimates

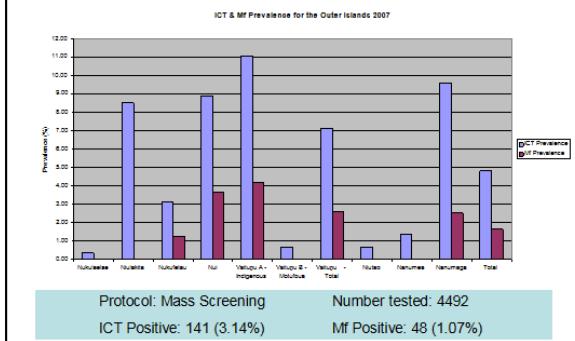
## Blood Surveys



## MDA, ICT & Mf



## Post MDA Survey 2007



## ICT 1 vs ICT 2

- Nese, please add a graph or data showing the number of people ICT positive on the first test and the number ICT positive on the second test.

## A few questions

- Reason for discrepancies in ICT 1 & ICT 2 in 2007?

## What's next

- How often and for how long should active follow up of positives be done?
- When should the next mass screening be conducted?

### Group 3: Partially Endemic Countries



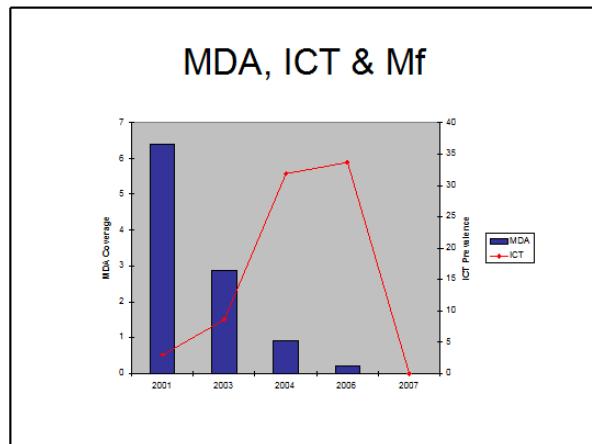
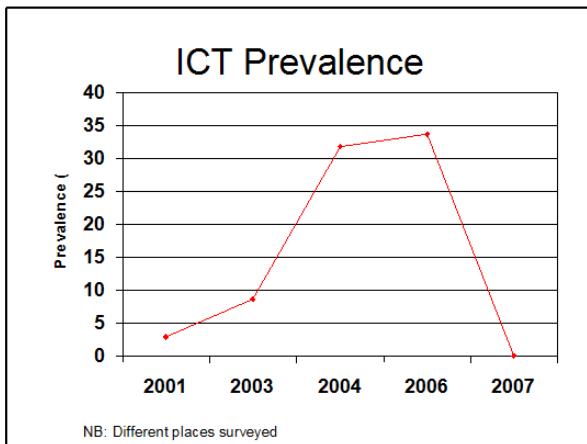
**Summary**

- Population: 110,218 (SPC 2006 est.)
- Status: Partially endemic
- Main vectors: *Culex annulirostris*
- 4 rounds of "convenient" MDA: 2003, 2004, 2006, 2007
- Blood surveys in various islands in the 4 states:
  - 2001: 8-15 year olds (convenience) ICT only
  - 2003, 2006: Sentinel Sites + Spot Checks (convenience) ICT only in different islands
  - 2004: SS (convenience) ICT only
  - 2007: SC (convenience) ICT & Mf
- Stratified cluster survey of Yap State underway in 2008.

**MDA (different islands in Yap)**

Year	Reported Coverage (targeted population)	Corrected Coverage (whole of Yap state)*
2003	49.74	6.39
2004	95.86	2.89
2006		0.91
2007		0.22

\*Yap state only



## 2007/08 Blood Survey Provisional Results

- Outer Islands of Yap State: Mass Screening; Yap Island Stratified Cluster.
- Outer Islands:
  - 3099 Tested out of 3810 total population est.
  - Number of positives: 1 (Satawal Island)
  - ICT Prevalence = 0.03%

## A few questions

- Are the data collected so far providing enough quality information?
- Can we say FSM campaign has really begun?
- Should FSM be considered as 4 different IU?

## What's next ?

- Implement and complete the current baseline survey using the designed protocol for Yap state.
- If MDA needed follow standardized monitoring and evaluation protocols and ensure high coverage of DOT.
- Implement baseline surveys for the three other states?
- More reliable transportation to Neighboring Islands is essential.

## Marshall Islands



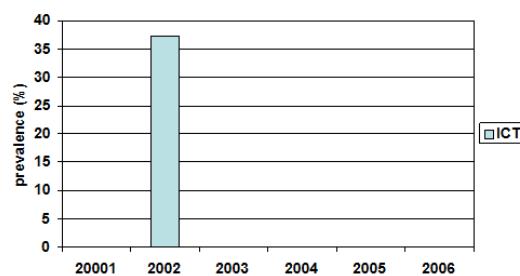
### Summary

- Population: 55,981 (2006 SPC est.)
- Population at risk: 1,008
- Status: Partially endemic (2 islands)
- Main vectors: *Culex quinquefasciatus*
- 5 rounds of MDA (in 2 islands): 1/yr from 2002 to 2006
- Surveys (various sites):
  - 2001, 2002, 2003, 2004, 2005, 2006: Spot Check (convenience) ICT only

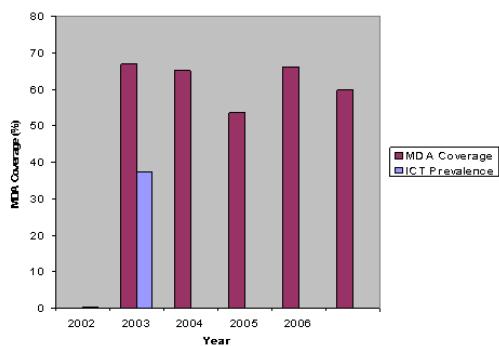
### MDA

Year	Registered Coverage	Reported Coverage	Corrected Coverage
2002	93.7	68.90	<b>66.83</b>
2003	86.81	68.10	65.02
2004	61.90	57.44	<b>53.45</b>
2005			65.98
2006			59.74

### Blood Surveys



### MDA & ICT



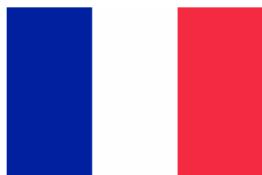
### A few questions

- Are the data collected so far providing enough quality information?
- Are we confident that the other islands of Marshall I. Are non endemic?

## **Next steps**

- Implement and complete the baseline survey in 2008 using the protocol designed in 2007 by WHO consultant.
- If MDA needed how many rounds?
- What kind of monitoring and evaluation protocols will be needed?
- If some islands have an ICT prevalence > 1% what kind of MDA will be required ?

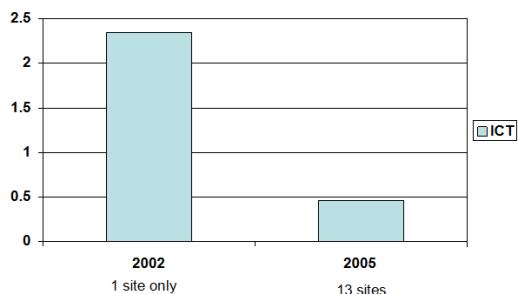
## New Caledonia



## Summary

- Population: 238,035 (2006 SPC est.)
- Population at risk: 12,378
- Main vectors: *Aedes vigilax*
- Status: Partially endemic
- 0 rounds of MDA
- Surveys:
  - 2002: Spot Check (convenience), ICT only
  - 2005: Spot Check (convenience) ICT only

## Blood Surveys



## A few questions

- Are the data collected so far providing enough quality information?
- Are we confident that the other areas are really non endemic?
- The absence of clinical manifestations makes difficult to raise the LF profile in NC, how to address this?
- Should NC be considered as non endemic?
- What's next?

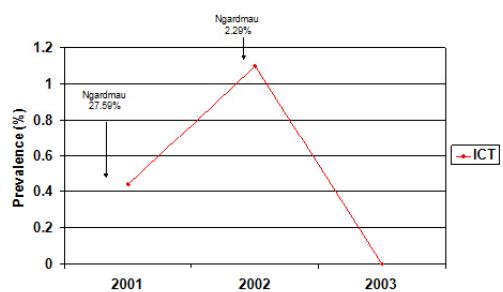
## Palau



## Summary

- Population: 20,044 (2006 SPC est.)
- Population at risk: 166
- Status: Partially endemic
- Main vectors: *Culex quinquefasciatus*
- 0 rounds of MDA
- Surveys:
  - 2001: Various sites (convenience) ICT only
  - 2002: SC (convenience) ICT only
  - 2003: SC (convenience) ICT only

## Blood Surveys



## How to explain the drop in ICT prevalence in Ngardmau between 2001 & 2002 from 27% to 2%?

- ??????

**Are the data collected so far providing enough quality information?**

- No

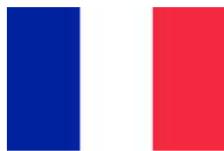
**Are we confident that the other parts of the country are non endemic?**

- Yes

## **What's next?**

- Assistance in Clinical manifestation
- Need for prevalence rate study
- Action plan if seropositivity without clinical symptom is a critical issue (funding)

## Wallis & Futuna



## Summary

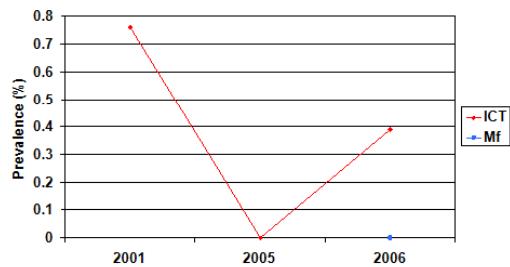
- Population: 15,260 (2006 SPC est.)
- Status: Partially endemic
- Main vector: *Aedes polynesiensis*
- 6 rounds of MDA: 1/yr from 2002 to 2007
- Surveys:
  - 2001: "Baseline" (convenience) ICT only
  - 2005: Children 5-10 years, ICT only
  - 2006: Whole country (convenience) ICT & Mf

## MDA

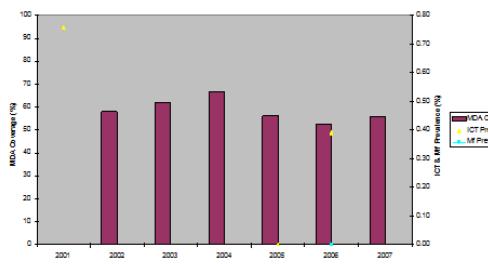
Year	Registered Coverage	Reported Coverage	Corrected Coverage*
2002		60.16	57.97
2003	68.33	65.31	61.91
2004	78.84	66.37	66.71
2005		59.96	56.16
2006	55.94	52.37	52.52
2007			55.62

\*Based on SPC population estimates

## Blood Surveys



## MDA, ICT & Mf



## Few questions and next steps

- What tests should we now use for monitoring considering the 30 years history of MDA and the probable interruption of transmission?
- Is xenomonitoring an option?

## Solomon Islands



## Summary

- Population: 487,237 (2006 SPC est.)
- Status: Non-endemic
- Main vectors: *Anopheles farauti*, *Anopheles punctulatus*.
- Surveys:
  - 1998-2001: Whole area (stratification & EPI type cluster), ICT only.
  - 2003-2004: Children age 5-6 (LQAS) ICT & Mf; survey not completed
  - 2007: ad hoc survey, children aged 10-15 ICT & Mf

Table 1. Summary Table of regions, villages/schools and samples completing ICT screening survey by Province (2004)

Province	No. of regions	No. of villages/ sch.	Target sample	Total sample completed	% of samples completed (5-8)	Result (CT) +ve (%) -ve (%)	Remarks
Western	3	47	2100	1,969	94	0 1969 (100)	Completed
Guadalcanal	5	63	3500	2,037	58.2	0 2,037 (100)	1 more trip needed
Malaita	5	43	3500	717	20	0 717 (100)	3 trips needed
Central	3	56	2100	1486	73 (1.4)	30 1468 (98.6)	1 more trip
Makira	4	45	2800	768	27	0 768 (100)	1 more trip
Ysabel	3	55	2100	1989	95	0 1989 (100)	Completed
Temotu	1	15	700	700	100	0 700 (100)	Complete
Honaira	2	24	1400	1369	98	0 1369 (100)	Complete
Rendel	-	-	700	-	-	-	1 more trip
Choiseul	3	7	2100	317	15	0 317 (100)	1 more trip
Total		355	20300	11364	56	30 11017 (99.7)	

Temotu Survey – Ndeni region (2007)  
10 – 15 year olds

Village	Samples	Positive	Negative
Nooka	23	0	23
Kala Bay	23	0	23
Bomalu	3	0	3
Maleg	10	0	10
Poa	8	0	8
Luaselemba	8	0	8
Naban	2	0	2
Luasalepoa	1	0	1
Nelua	7	0	7
Lualesa	4	0	4
Luemimi	8	0	8
Nyletai	2	0	2
Otomongo	14	0	14
Manelu	6	0	6
Nganubo	2	0	2
Mnembi	1	0	1

## Issues

- All 30 positives in 2003-2004 were found to be false positives.
- One province located very close to endemic province of PNG.
- Both malaria and filariasis are transmitted by *An. farauti*, and *An. punctulatus*
- Malaria hot spots are also potentially LF hot spots

## What's next?

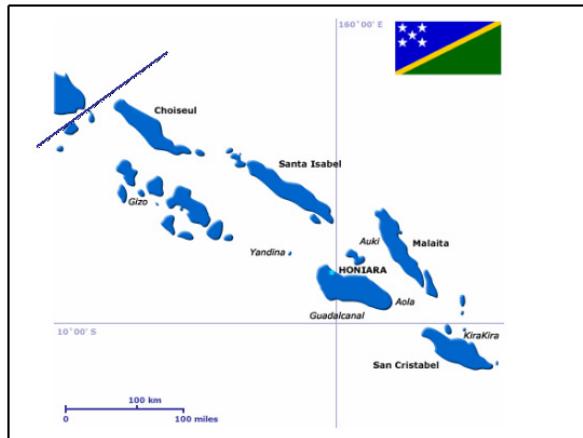
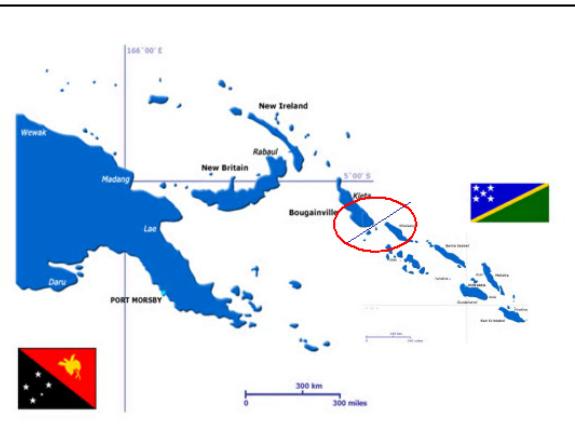
- What tests should be used for monitoring considering that interruption of transmission has probably been achieved 30 years ago?
- Any special strategy for province closed to PNG?
- Is xenomonitoring an option?

## Modified type D surveys

- Do a modified Type D survey in Malaria "Hotspot areas"
- Rationale: Filaria lives for over 7 years so each person carries a filariasis transmission history for at least 7 years. Children 10-15 years old have been born since filariasis transmission ceased, in at least some areas of the Solomon. By using children under 15 years old, we avoid the problem of the very long term infections that have been recorded.
- Do Thick & thin film – malaria (all age groups)
- Plus ICT filarial antigen test on 10-15 yr olds
- If ICT is +ve, do nocturnal blood films
- Plus filter paper for Wb ELISA antigenemia

## "Malaria hotspots"

- Makira: Zones 94 (Ulawa), 106 (Kira Kira),
- Guadalcanal Province: Zones 4, 18, 13, 1, 17, 7, 3
- Malaita Province: 84, 74, 82, 77, 85, 66, 67, 83, 68, 76, 81
- Central: 61, S/Ngella, 59 (Russell), 60 B. Ngella.
- Western: **Zones 28 (Shortlands), 29 (Fauro) border PNG**
- Honiara: White River
- Temotu: 107/11 Ndeni (Santa Cruz) completed
- Sample sizes = to be determined



- Mf Plan to survey Western & Choiseul provinces: **Zones 28 (Shortlands), 29 (Fauro) border PNG**
- Vector Control

## Is xenomonitoring an option

- Logistics problems – need to rear thousands of Anopheles farauti for feeding experiments.
- Need technical support to construct a field insectary

## ANNEX 6

### **Technical working group on LF elimination programs in the PIC and areas 9 to 11 June 2008, Nadi, Fiji**

#### CONCLUSIONS AND RECOMMENDATIONS

1. The group welcomed the progress made by the PIC and the fact that four countries (Cook Islands, Niue, Tonga and Vanuatu) have already reached the target of below 1% antigenemia prevalence. Common elements of success include:
  - Initial low prevalence
  - Directly Observed Treatment including follow up of people missed during MDA
  - Good coverage and compliance throughout the 5 rounds of MDA
  - Stable health department commitment (adequate human resources, motivated drug distributors).
2. Five other countries (American Samoa, Fiji, Kiribati, Samoa, Tuvalu,) can now claim significant drops in antigenemia prevalence.
3. Papua New Guinea presents the most difficult challenge in PacELF. Political commitment is required to obtain resources and to implement plans of action. The WHO's continued support is needed towards implementing the PNG Plan of Action.
4. The quality of the data collected since 2007 is such as to provide a solid basis to guide decisions for future plans of action. The stratified cluster surveys can be used as the reference for future assessment of the overall progress made and can also drive decision making at divisional and nursing zone levels.
5. As countries approach the point of stopping MDA, decisions concerning the need for additional coverage efforts, on actually stopping MDA and on post-MDA surveillance should be data-driven and adapted to the circumstances of each country.
6. Cluster surveys should be used to calculate coverage and can also be used to estimate the total resident population. Where unavailable, nurses' registers are a second alternative. Census-based denominators to estimate drug needs and to calculate MDA coverage should be avoided.
7. Data management poses challenges throughout the PIC. Register books are now used to record coverage. The data within these registers should also include the status of treated ICT positives and those with LF-related hydrocele and lymphoedema; they need to be digitized in order to provide insurance against the loss of register books, improve data analysis and form the basis of the dossiers used to certify LF elimination. Such digitization would also be an enhancement to information management for the national health system.
8. In places where the whole population has been screened in 2007 or 2008 (i.e. Tuvalu) and appropriate follow up and treatment of the positives has taken place, MDA should be stopped and active surveillance implemented. A similar strategy may be appropriate for other countries or islands which will test (or treat and test) 100% of the population.

9. In such circumstances, ICT positives should be:
- treated by the local health care personnel on a quarterly basis (or twice per year if quarterly is not practically feasible) with a single dose of Albendazole and DEC (6 mg/kg);
  - tested by ICT on a yearly basis until they turn negative.
- A register with all the results (including follow up and treatment) should be kept at national level.
10. Upon receipt by the WHO/PacELF office, ICT cards should be tested using purified antigen before they are sent to countries and then tested again before use at country level.
11. Future MDA should be based on the following principles:
- A strong social mobilization plan focusing on “reaching the un-reached”
  - Coverage of at least 80% of the eligible population
  - Directly Observed Treatment (DOT)
  - 30 cluster sampling to assess coverage
12. Contraindications to treatment should be standardized. True contraindications should be excluded from treatment and people who have been excluded from MDA should be evaluated and positive cases referred for treatment under close medical supervision.
13. The draft 5-year surveillance plan for the Pacific developed in May 2007 will be further discussed in August 2008 in Geneva during the Post MDA surveillance meeting. The outcomes of this meeting will be further shared with the Pacific for any needed revision of the draft plan and for further implementation. Until then, countries are recommended to follow the draft 5-year surveillance plan.
14. LF elimination activities should be integrated with other elements of the health services especially those dealing with Neglected Tropical Diseases, other communicable diseases, Non Communicable Diseases and child health services.
15. The country plans of action presented the last day were discussed with the following recommendations:
- *Cook Islands* should complete the current whole population screening in Pukapuka and Aitutaki and do active follow up and treatment of the positives found in 2007-2008 instead of the MDA proposed for these two islands.
  - *Niue* may consider implementing a whole population survey in 2008 targeting 100% of the population and implement a “test and treat” strategy. The country should then implement an active surveillance strategy.
  - *Solomon Islands* have not had evidence of infection for over three decades. No further control efforts are required.
  - For *Papua New Guinea*, commitment at the highest level is urgently required to strengthen the program and implement the Plan of Action. This process will be supported by the WHO.
  - *Tonga* should delay its second CTS to either 2010 or 2011. This is due to the very low level of transmission in Tonga and the absence of any positive cases in the 2007 CTS.
16. The term “Partially endemic country” is becoming less helpful as elimination efforts continue. A clear classification of the PIC is:
- a. Non endemic/post endemic
  - b. Implementing or requiring MDA
  - c. Implementing or requiring targeted treatment
  - d. Implementing surveillance