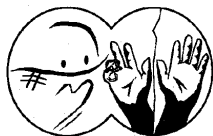


Ministry of Health

Kingdom of Cambodia

Nation Religion King



National Center for Tuberculosis-Leprosy Control

***Annual progress Report of
the National Leprosy
Elimination Program***

2012

National Leprosy Elimination Programme

Kingdom of Cambodia
National Leprosy Control Program
Annual progress report 2011

A. Introduction:

The National Leprosy Control Program, Kingdom of Cambodia has achieved the goal of elimination of leprosy as a public health problem (prevalence less than 1 case per 10000 populations) at the national level by the end of 1998. The elimination status was well sustained between 1999 and 2010 with a further decline in prevalence and case detection rates. Elimination was also accomplished at 21 out of 24 provinces and 75 out of 77 operational districts 2012 (launched Leprosy Active Case Finding Project through Household members and Neighbours Contact Examination with IEC). This was made possible by the continued support from the participating agencies, the priority granted by the government and the efforts put in by staff at various levels.

Implementation of National Leprosy Control Program activities were continued during year 2012 and leprosy continues to be a notifiable disease along with other notifiable diseases in the country.

The National Central Database for leprosy has been designed and installed. This allows for central registration of all cases and provides a wealth of information in assessment of epidemiological patterns, performance of the program including management of reactions and drug supply which will help to target improvements and future activities. Cohort analyses in the end of 2012 for PB patients are 100% started MDT in 2011 and for MB patients are 100% started MDT in 2010.

One of the main focuses of 2012 was continues to bridge the gap between communities and health systems by empowering people with knowledge to access assessment and treatment. As discussed below, we had to encourage innovative provincial strategies which include working with voluntary health support groups (VHSGs), other government groups and Non Government Organizations (NGOs) as well as broader focused factory and media campaigns.

New cases continue to be mapped using the Geographic Information System (GIS) for the identification of high endemic pockets.

World Leprosy day and 10 years of Kien Khleang leprosy rehabilitation unit established ceremony on 27th January at National Rehabilitation Centre supported by CIOMAL.

Participate Meeting of National Leprosy Program Manager in the Western pacific Region, Manila, on 13-15 February supported by WHO

Organize Leprosy and Human Dignity workshop at Gold Diana Hotel Phnom Penh, on 28-29 February, supported by Leprosy and Human Dignity - Southeast Asia project, Sasakawa Memorial Health Foundation, Nippon Foundation

OFM supported staff from Battambang referral hospital and NLEP / Kien Khleang staff to train reconstructive surgery and sterilization in Dermato-Venereology HCMC

NLEP staff to study specialist Dermatology in PHAM NGOC THACH Medical University Vietnam supported by OFM and CIOMAL

Contact survey to patient affected by leprosy family (2001 to 2010) in 15 operational districts in 9 provinces cover 762 patients affected by leprosy with families from February to March and in April to May 2012 supported by Novartis Foundation, CIOMAL and WHO

Contact survey to patient affected by leprosy family (2001 to 2010) in 5 operational districts in 4 provinces cover 440 patients affected by leprosy with families from December 2012 supported by Novartis Foundation, CIOMAL.

Annual leprosy conference in March for provincial/operational district supervisor and provincial health director supported by NLR

Regional workshop for Review activities plan and discussion activities plan for next year for provincial, operational district supervisor and health workers selected in October supported by NLR

Insensitive Foot Care Plantar Ulcer Healing seminary organized on 22nd to 23st November in Battambang referral hospital and Foot care unit new building in Battambang referral hospital will be establish a service soon, supported by OMF

Rehabilitation services for leprosy patients with established disability and treatment of cases with complications at Kean Khleang National Rehabilitation Center, Phnom Penh have continued. Rehabilitative surgery continues to be a priority but has been supplemented this year with an emphasis on training in self care and a more multidisciplinary approach.

The program received support to a considerable extent from Campagne Internationale de l'Ordre de Malte contre la Lepre (CIOMAL), Netherlands leprosy Relief (NLR), Sasakawa Memorial Health Foundation (SMHF), Ordre de Malta France (OMF) and Word Health Organization, besides others, during the year 2011/2012.

B. Epidemiology:

At the end of 2011, there were 255 active cases of leprosy under treatment with a prevalence rate of 0.18 per 10,000 populations. 314 new cases were detected in 2011 with a case detection rate of 2.2 per 100,000. All the detected new cases were put on multi-drug therapy (MDT). Both prevalence and new case detection rates have declined compared to 0.29/10,000 and 3.6/100,000 respectively of 2004. 297 cases were released from treatment after cure out of 542 total cases treated.

In the end of 2012, there were 353 active cases of leprosy under treatment with a prevalence rate of 0.25 per 10,000 populations. 475 new cases were detected and put on multi-drug therapy (MDT) and 379 cases were released from treatment after cure out of 721 total cases treated.

Province and operational district wise case detection, discharged as treatment completed and under treatment is enclosed as annex – 1 and 2.

Both prevalence and new case detection rates that increased between 1993 and 1996 declined markedly and continuously between 1997 and 1999 due to a change in the length of treatment of MB cases, a clearing of

“backlog” cases and a reduction in the number and scale of campaigns. The prevalence and new case detection trends from 1990 up to 2012 are attached as diagram 1.

The proportion of MB, child and cases with Grade 2 disability among new cases was 59.55%, 8% and 6.05% respectively in 2011 and 54.53%, 10% and 9.68% respectively at the end of 2012 are attached as diagram 2.

The child rate has remained steady at around 10% over the last 10 years. There have not been activities targeted to children such as special IEC materials or school surveys. The fact that this indicator has remained steady is likely to mean that transmission of leprosy is still ongoing in the community.

The trend of proportion of MB, child and cases with Grade 2 disability among new cases is attached as diagram 2.

The number of cases reported as cured from up to 1990 to the end of 2012 (about 20,367 cases) is attached as diagram 3.

Efforts are still being made to map the data to facilitate identification of high endemic pockets (Geographic Information System). 6 health centers with more than 10 new cases detected, 4 health centers with 9 new case detected, 1 health centers with 7 new case detected, 2 health centers with 6 new case detected, 8 health centers with 5 new case detected, 8 health centers with 4 new case detected, 22 health centers with 3 new case detected, 39 health centers with 2 new case detected, 101 health centers with 1 new case detected and 765 HCs were no case reported out of 956 HCs at the end of 2012. 19 operational districts was no case reported out of 77 operational districts Categorization of HCs according to new cases at the end of 2012 is attached as in Map- 1

C. Activities:

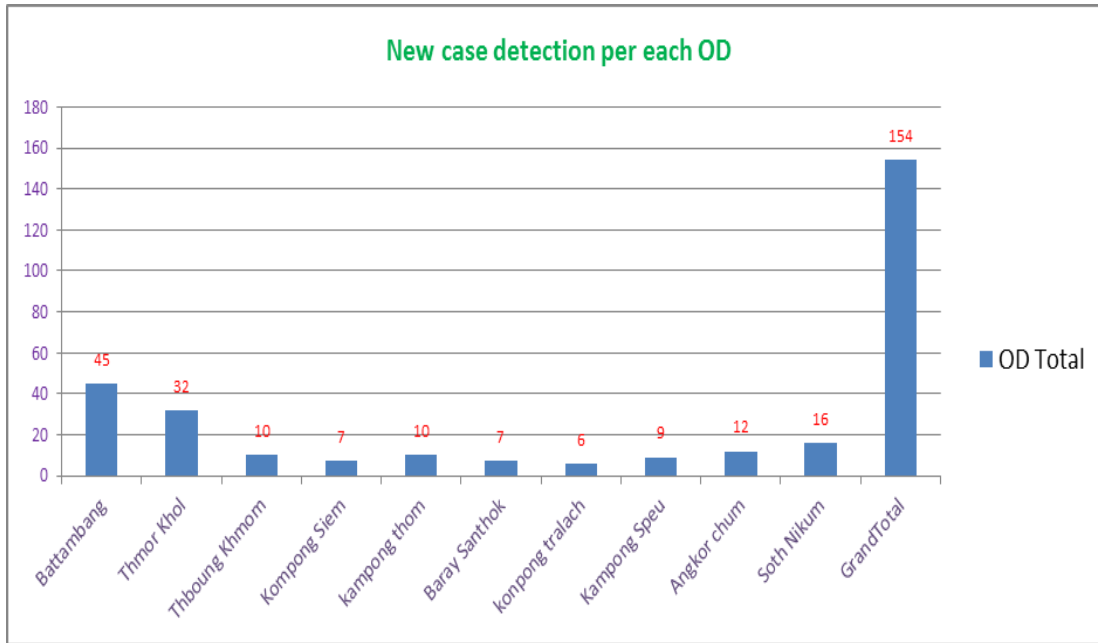
1- Contact tracing survey

The protocol for the Contact Survey of leprosy affected people’s household members and neighbors with IEC campaign as in annex 3- a

The 4 survey teams, led by 4 national leprosy supervisors, undertook and completed their field activities in the 20 Operational Districts, 10 provinces during February to December 2012. 282 new cases detected (PB: 173 cases and MB: 109 cases)

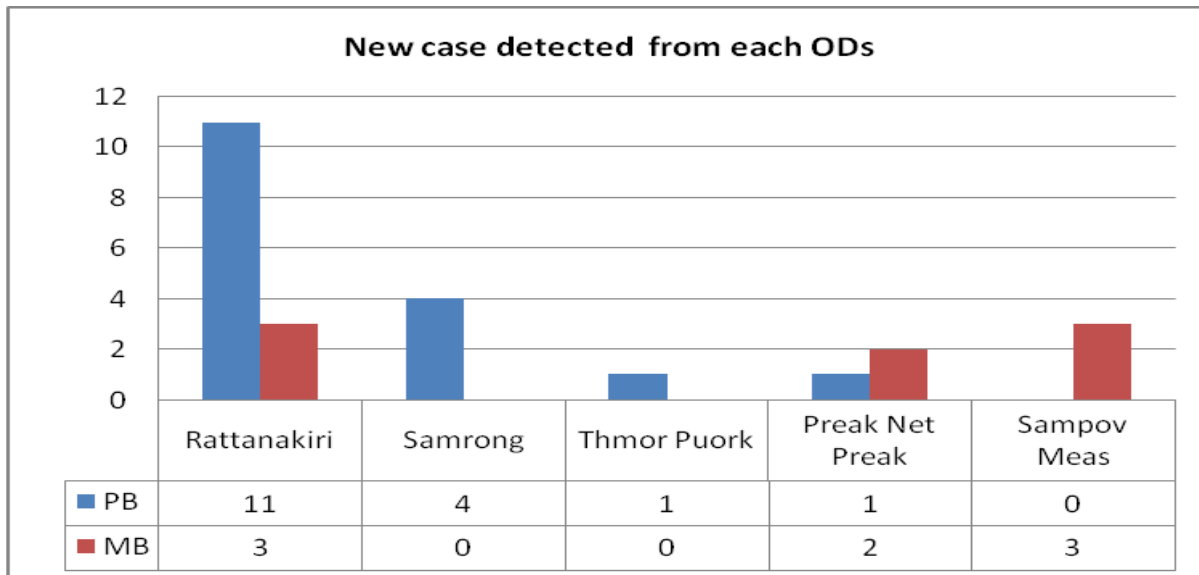
The first contact survey project selected 987 Leprosy Affected Persons (LAP) from the NLEP central data-base; out of these 987 LAP diagnosed and treated between 2001 and 2010, only 797 could be found/identified by the operational district leprosy supervisors. Only 542 LAP, 1,919 contacts and 1,390 neighbours were present and could be checked on the day of the visit. 154 new cases detected (PB: 99 cases and MB: 55 cases) (Detail in annex 3-b)

New cases detected from each operational district (ODs)



The second contact survey project selected 419 Leprosy Affected Persons (LAP) from the NLEP central data-base; out of these 419 LAP diagnosed and treated between 2001 and 2010, only 349 could be found/identified by the operational district leprosy supervisors. Only 210 LAP 503 contacts and 417 neighbours were present and could be checked on the day of the visit. 26 new cases detected (PB: 18 cases and MB: 8 cases) (Detail in annex-3-c)

New cases detected from each operational district (ODs)



The third contact survey project selected 440 Leprosy Affected Persons (LAP) from the NLEP central data-base; out of these 440 LAP diagnosed and treated between 2001 and 2010, only 401 could be found/identified by the operational district leprosy supervisors. Only 384 LAP, 1,030 contacts and 3,580 neighbours were present and could be checked on the day of the visit. 102 new cases detected (PB: 56 cases and MB: 46 cases) (Detail in annex 3-d)

Province	Operational district	Female	Male	PB1	PB2-5	MB	Total	DII	Child
Battam Bang	Sangke	3	3	1	3	2	6	1	0
Kampong Cham	Ponhea Krek	4	5	2	5	2	9	1	1
	Prey Chhor	5	5	3	3	4	10	0	2
Siem Reap	Siem Reap	9	21	7	9	14	30	0	1
Kampong Speu	Kong Pisey	21	26	5	18	24	47	2	7
Total		42	60	18	38	46	102	4	11
%		41.18	58.82			45.10			3.92 10.78



During the contact tracing survey, the theater performances also used to distribute Information, Education and Communication leprosy-related information (leaflets and posters) to people in the community.



2-Factory Campaign

The leprosy awareness campaign covered 12 factories. 424 labor union members received training on leprosy disease and become the important key volunteers in those factories. They were also able to give education about the early sign of leprosy to their friends and family.

About 33,950 workers labors had participated in the campaigns, amongst 30,400 of labors had received the leaflet and 424 posters were fixed and disseminated. (Detail report as in annex – 4)



3- Self care and follow up of patient

13 self care trained courses to 325 patients or people affected by leprosy and 64 health staffs in 13 operational districts in 11 provinces

262 people affected by leprosy training by self care were following by self care team 2012 in 11 Provinces and 34 refer to rehabilitation unit

3 operational districts self care training course in kampot, Takeo and Kandal provinces was organized by NLEP. (Detail report as in annex – 5)



4- Information Education and Communications materiel and mass median through local radio



60,000 leaflets and 6000 posters were product and distributed to all health centre and to village health support groups during supervisions activities and campaign.

Radio broadcast in Battambang, Kampong Cham, Kampong Thom and Banteay Meanchey province.



5- Workshop

Annual leprosy conference and regional workshops were done in March and October 2012.

During the workshop, all provincial health director very interested about the leprosy activities in year 2011 and strengthen support the activities plan for year 2012, especially contact tracing survey, contact examination and ensure the regularity the case under treatment. The OD level are continuously ordering the MDT , reaction drugs from Central Medical Store and manage the reaction patients. National program support the provincial and OD to prepare the yearly plan and improve the monitoring and evaluation the activity from each level.and all health deirector also to strengthen the process of integration of leprosy control activities into general health services, as part of the strategy to sustain leprosy services, to sustain leprosy awareness to staff working at referral facilities of general health services and motivate and encourage participation of staff working at referral facilities of general health services in leprosy control activities



6 - Prevention of disabilities and rehabilitation at Kean Khleang National Rehabilitation Centre

In 2012, KKRC carried out consultations for 1,715 people of which 909 were male and 611 female. Among those, 1,253 consulted for non leprosy related skin diseases, 33 newly leprosy-affected persons, 429 treated as leprosy out-patients and 226 hospitalized.

There were 43 beds in KKRC and occupancy rate was 67.59% and the average length of stay was 46.77 days.

67 patients were operated for reconstructive surgery, plastic by local and expatriate volunteer surgeons from Thailand and Vietnam and 57 for minor surgery.

Socio-economic rehabilitation is included in the program for two reasons. On the one hand, it helps leprosy-affected persons who do not have an accepted role in their communities to reintegrate into society and live self-supporting lives; on the other hand, many leprosy-affected persons are only able to take care of themselves successfully and avoid impairment or further impairment if they significantly change the way they live their lives.

(The detail achievement of KK as in Annex- 6)

D. Supervision activities:

Five supervisory teams from the national centre made 70 provincials visited, 105 operational districts visited and 380 health centers visited from January to December 2012. Besides, the provincial leprosy supervisors made visits every month to each district. Operational health district supervisors have initiated routine supervision of health center.

The National Leprosy Supervisors should supervise the staff carrying out the work and NOT DO THE WORK HIM OR HER SELF!

In case of deficiencies or problems he/she should discuss these with the staff and show them how to improve.

If performance is good, encourage and congratulate staff. Positive feedback such as this is very important for maintaining staff motivation.

National term to Province, Operational District (OD) and Health Centre (HC)

From January to December 2012

Province visited	OD visited	HC visited	Contact examine	Suspect examine	New case detected from contact and suspect case	
					PB	MB
70	105	380	210	60	5	18

New cases confirm: 87 cases but no wrong diagnosis case.

Reaction: 05 cases

187 health workers and 359 people in the communities were given leprosy awareness during field visited



Provincial supervisor to OD and HC 2012

OD visited	Contact visited	New case detected from contact		Suspect case examine	New case detected from suspect case	
		PB	MB		PB	MB
150	253	9	10	228	6	9

Operational district supervisor have initiated routine supervision of health center during 2012. During the visit OD supervisor will plan to:

- Visit to each health centre in OD once quarterly
 1. See suspected new cases.
 2. Diagnose and classify new cases
 3. Give treatment to those on MDT.
 4. Follow-up and re-examine those on MDT treatment at least once in six-months.
 5. Treat any reactions detected with steroids.

- Home visits to patients
 - 6. Contact examinations.
 - 7. Follow-up of MDT defaulters.

- Management

- 8. Ensure that there are always enough MDT/Steroids for the number and classification of patients.
- 9. Fill in the checklist.
- 10. Report to the NLEP every six months.

OD supervisor to HC 2012

HC visited	Contact visited	New case detected from contact		Suspect case examine	New case detected from suspect case	
		PB	MB		PB	MB
821	610	27	15	335	20	14





E. Training:

Training activities were undertaken to train NLEP staff, medical officers, new operational district supervisors and health centre staff as regular training and under special projects during 2012.

- 223 students from Nursing School
- 378 medical students from Faculty of medicine (University of Science)
- 55 medical students from Faculty of medicine (Military)
- 15 Physiotherapy students
- 30 provincial and operational district leprosy supervisors (Clinical of leprosy)
- 30 provincial and operational district leprosy supervisors (self care training)
- 100 health workers in diabetic unit from difference provinces (insensitive foot care management training in Kampong Chhnang province).

F. Support from participating agencies:

CIOMAL continued to provide funding agency for the program. CIOMAL also provided expert surgeons. All the activities related to supervision of province and OD supervisor to health centre, contact tracing survey, prevention and management of disabilities including reconstructive surgery and activity cost of central team were supported by CIOMAL and also provided stationary to run the office of national center.

Netherlands leprosy Relief supported to monitoring and supervision activities including transport maintenance and travel, ODs refresher training course and self case training course, case finding campaign, Information Education Communication materials, mass media campaign through local radio, provincial and operational district regional workshops and workshop on leprosy management skill.

WHO has provided support for implementation of integration of leprosy control activities into general health services as part of the Strategy to Sustain Leprosy Services following elimination in Asia and the Pacific, annual leprosy seminar to provincial health director and MDT drugs have been supplied free of cost throughout the year and global leprosy management meeting.

Sasakawa Menorial Health Foundation supported Dignity Regained workshop in February 2012

Ordre de Malta France supported the new building of Foot care unit in Battambang referral hospital 2012, Team for reconstructive surgery to Kien Khleang leprosy rehabilitation unit cooperation with Hospital of Dermato-venerology Hochiminh city, Vietnam and Insensitive foot care seminary.

G. Plan of Action and budget estimates for the year 2013:

The detailed plan of action with objectives, proposed activities and budget is enclosed (Annex 7).

Important items of work include

1. Enhancement of leprosy awareness in the community using selected local mass media campaign
2. Ensure IEC materials through health worker to village health support groups or to all health facilities.
3. Enhancement of central database and registration of cases,
4. Strengthening of strategy to sustain leprosy services following elimination and sustaining expertise at referral facilities, orientation to general health staff for integration of leprosy control activities into general health services and enhancement leprosy awareness in the community,
5. Continue to provide self care and prevention of disability courses for patients who have suffered leprosy related nerve damage
6. Continuation of support at provincial and operational district level
7. Contact tracing survey to Leprosy Affected people families last 10 years (2001 to 2010)
8. Empowering people affected by leprosy and building an environment in which they and their families can lead a dignified life

F. Conclusions:

All the activities planned for 2012 were successfully implemented as per schedule. Elimination of leprosy at provincial and OD level was reached in 21 out of 24 and 75 out of 77 by the end of 2012. Early case detection and treatment of all detected cases with MDT, continues to be a high priority. Work related to prevention of impairments and disabilities and rehabilitation of needy leprosy patients is receiving due attention. Efforts are being made to integrate leprosy control activities into general health services at various levels and aspects in a phased manner. However, some of the indicators show that there is still work to be done in sustaining an effective leprosy control service. With the continued support from participating agencies, we hope to achieve complete freedom from leprosy in the future although this will require a sustained effort for some years to come.

Diagram 1

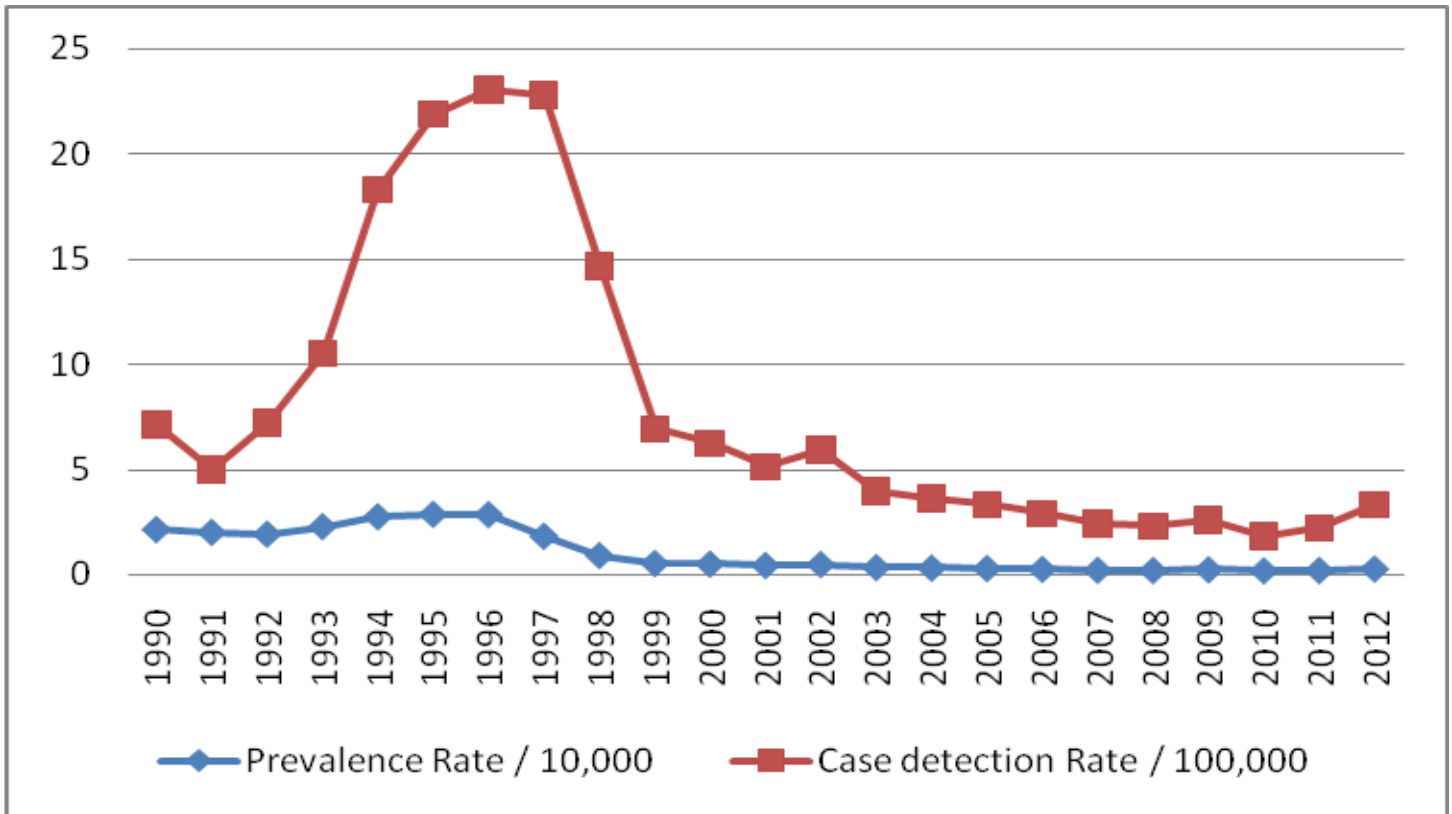


Diagram 2

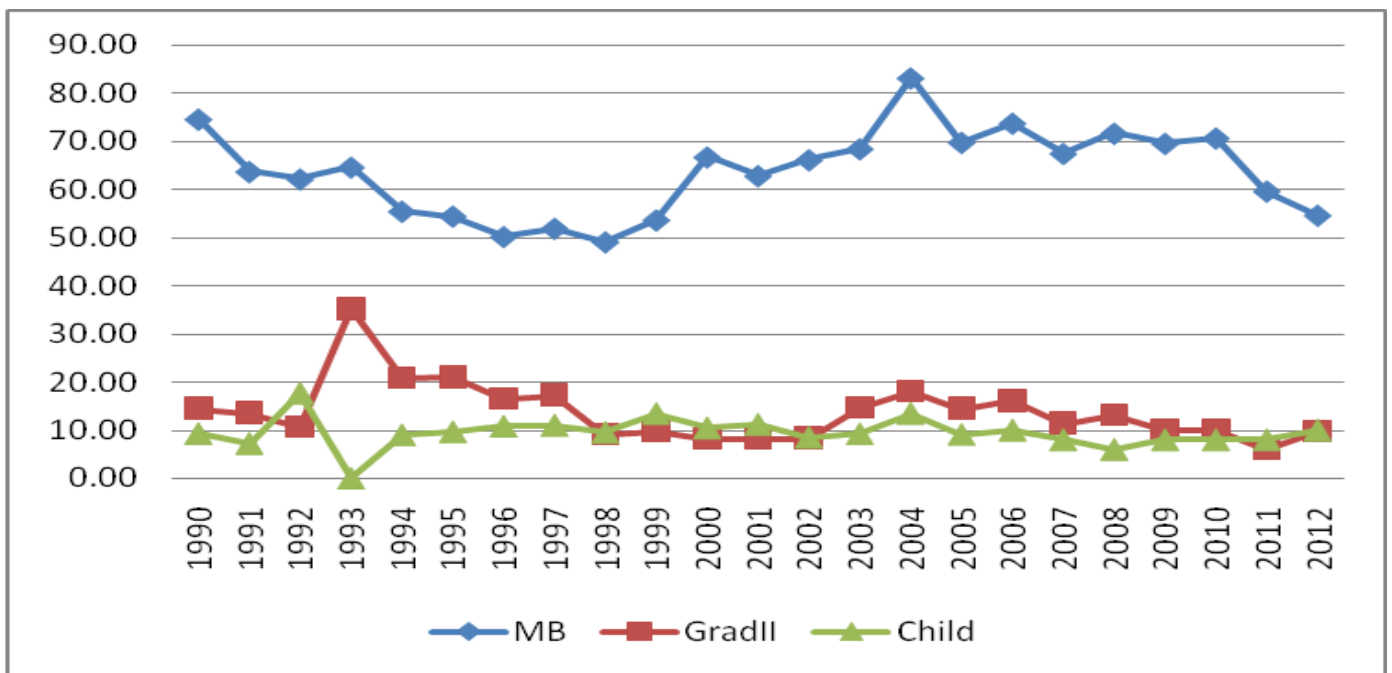
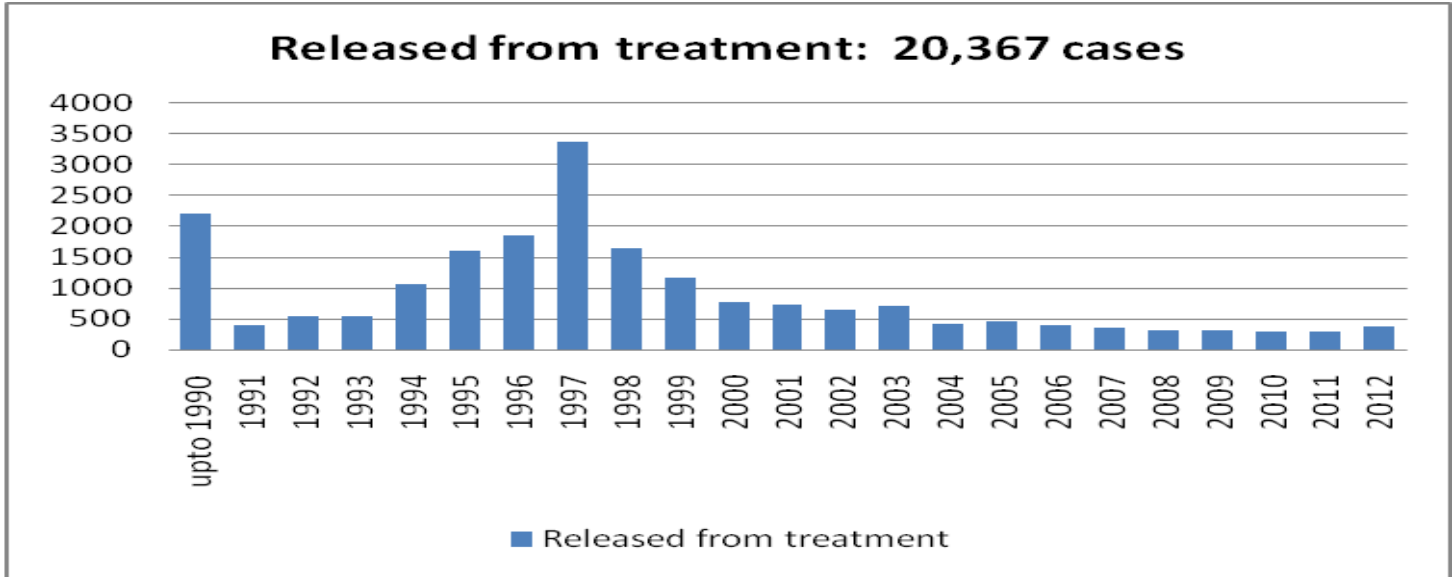
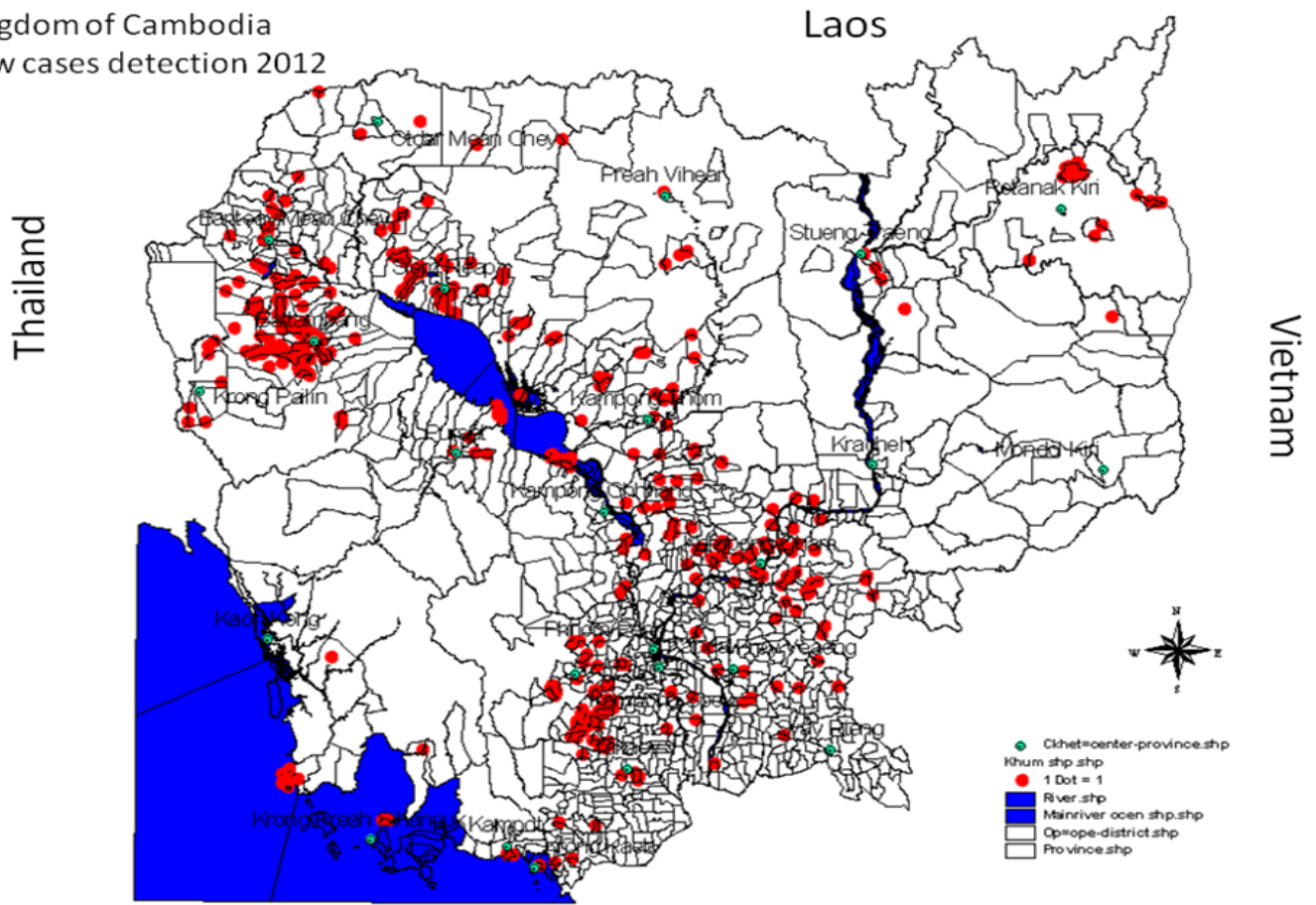


Diagram 3



Map -1

Kingdom of Cambodia
New cases detection 2012



Ministry of Health



Nation Religion King

National Center for Tuberculosis and Leprosy Control

Protocol for the Contact Survey of leprosy affected people's household members and neighbors.

I- Background

Since 1982, the ministry of health of Cambodia established the National Program for Leprosy Control within the national centre for Hygiene and Epidemiology and then in 1997, it was integrated within the National Centre for Tuberculosis and Leprosy Control. The program has worked on various expertises, including case detection/diagnosis/treatment, health education and Behavior Change Communication (BCC), the implementation of multi-drugs therapy protocol as well as rehabilitation of disable patients. Under the joint efforts of the Ministry of Health and other funding organizations, much has been achieved.

In addition to this achievement, further successes depend largely on early case detection and treatment, which requires a good level of medical expertise, as well as raising awareness of leprosy in some hot-spots of the community. This means that more efforts need to be undertaken to strengthen and improve early case detection, especially among household members and neighbours of leprosy-affected persons; on the other hand, the level of community awareness has to be enhanced and the stigma against leprosy patients significantly reduced.

II- Objectives

- **General Objective:** Leprosy-affected people are diagnosed and treated early; knowledge and awareness on leprosy issues are increased among the community.
- **Specific Project Objectives:**
 - a. Diagnose, in the project area, potential leprosy-affected persons (LAP) through Contact Tracing among the household members and neighbours of former leprosy-affected persons detected in the last 10 years (2001-2010).
 - b. Raise awareness on leprosy in the community through an Information Education and Communication campaign.
 - c. Improve expertise on leprosy diagnosis of the NLEP leprosy supervisors.

III- Contact Survey activities

- Phase A: Preparation of the Contact Survey (3 Months)
- Phase B: Implementation phase of the Contact Survey. (2 Months)
- Phase C: Data processing, analysis and report writing. (1 month)

A- Preparation phase of the Contact Survey:

- The Project Director, Dr. Lai Ky representing NLEP, is responsible to design the project proposal, as well as to manage the overall administration, finance and logistics and to provide necessary technical support to the project.
- The Project Advisor, namely CIOMAL, is to oversee the proposal development, budget review, project implementation, monitoring and Management.
- Project Monitors (PM), namely NLEP and CIOMAL, are to be involved in proposal development, planning, as well as monitoring of the project implementation and mobile theatre performances. In addition, PM also provide training on the survey methodology and expected outcomes of the Contact Survey.
- A short-term consultant will meet with the **National Survey Team (NST)**, composed of one to two **National Leprosy Supervisors** and one **CIOMAL** staff, to collect data, analyze them and produce the final report.
- The main role of the NST is to diagnose new leprosy cases, to see to it that they get the adequate treatment and to organize mobile theater performances, including pre and post-tests from the theater audience.
- **Sub-National Survey Teams (SNST)**, each consisting of one **Provincial Leprosy Supervisor**, one **Operational District Leprosy Supervisor** and several **Health Centre Staff**, in collaboration with Village Health Support Groups (VHSG), Commune Councils, and Village Chiefs, will play an important role in the examination of household members, as well as neighbors. The SNST are responsible to inform by telephone the household members and neighbours of the exact survey date; they are also responsible to identify the venue for the theater performances.
- The Community Participants Group (CP) consists of village health support groups, commune councils and village chiefs. Their task is to provide security during the theater performances, assist the SNST in identifying the venue for the performances and informing the household members and the neighbors about the schedule of the Survey team visit.
- The Sovana Phum Art Association is responsible for the theater representations; their role is, in close cooperation with NLEP, to produce a leprosy-related story with simple take-away messages about the early signs of leprosy, the free treatment and the problem of stigmatization and discrimination. The Sovana Phum troop will also inform the communities about the theater and the survey schedule, and will display posters and distribute leaflets among the communities.

B- Implementation phase of the Contact Survey:

- A detailed information session on the methodology and the expected outcomes of the Contact Survey will be organized, one day before the Survey, for the OD supervisors and the Health Center

staff ; this session will be conducted by the NLEP national supervisor, in collaboration with the provincial supervisor and CIOMAL

- Each of the two survey teams intends visiting some 10 houses per day and examine all household members present (20 to 25 minutes per house); surrounding neighbours' houses, within a 200 to 300 meters radius, will also be visited and its residents checked. The total visiting time should take some 45 minutes.
- During the house and neighbours visit, information concerning the absent members will be collected and the OD supervisor will, as far as feasible, check on those persons later or ask them to come to the nearest Health Centre.
- The survey teams should ask the ex-patients, the household contacts and the neighbours when they were last examined by leprosy health staff.
- The Health Centre staff, as well as the VHSG should inform the Survey teams about unregistered ex-patients living in the area, as well as about identified suspect cases; these persons have to be checked by the survey teams.
- At least one woman doctor will participate in the survey to avoid young women refusing to be examined by male staff.
- The reasons for reluctance or refusal to be examined should be noted down.
- MDT is available with the survey teams and treatment can start as soon as the diagnosis has been confirmed.
- Posters and leaflets are available with the survey teams to be distributed widely, accompanied by a simple core message on the real facts of leprosy.
- As there are two survey teams and only one theater troop, the theater performance will, as feasible, take place on the evening before the survey, but, in some locations, two to three days before.
- The survey teams should also ask for cases of relapse, whether real cases of relapse or whether caused by irregular MDT intake.

C- Data processing, analyzing and report writing:

- Analyze key data/information collected, as well as existing statistics
- Understand the causes of the key findings/results
- Identify the key constraints and weaknesses
- Provide relevant conclusions and recommendations that should improve NLEP efficiency.

IV- Expected outcome of the survey

- At least 80% of the former leprosy affected persons registered between 2001 and 2010, are visited and rechecked.
- At least 70% of the expected household members are visited and examined for possible leprosy signs.
- Future decrease in the percentage of disability grade II cases, as well as cases of children below 15 years.



Leprosy Active Case Finding “CONTACT SURVEY” Report
February – March 2012

I. Background

Since 1984, the ministry of health of Cambodia established the National Program for Leprosy Control Program under the management of the National Dermatology and STDs programs. Since then, the program has been working on various expertise, including case detection, diagnosis and treatment, health education and Behavior Change Communication, the implementation of multi-drugs therapy protocol, as well as rehabilitation services provided to disabled leprosy patients. Under the joint efforts of the Ministry of Health and external funding organizations, much has been significantly achieved regarding the national leprosy strategies. In addition to this achievement, further successes depend largely on early case detection and treatment, which requires a good level of medical expertise, as well as awareness promotion of leprosy on some hot-spots of the communities.

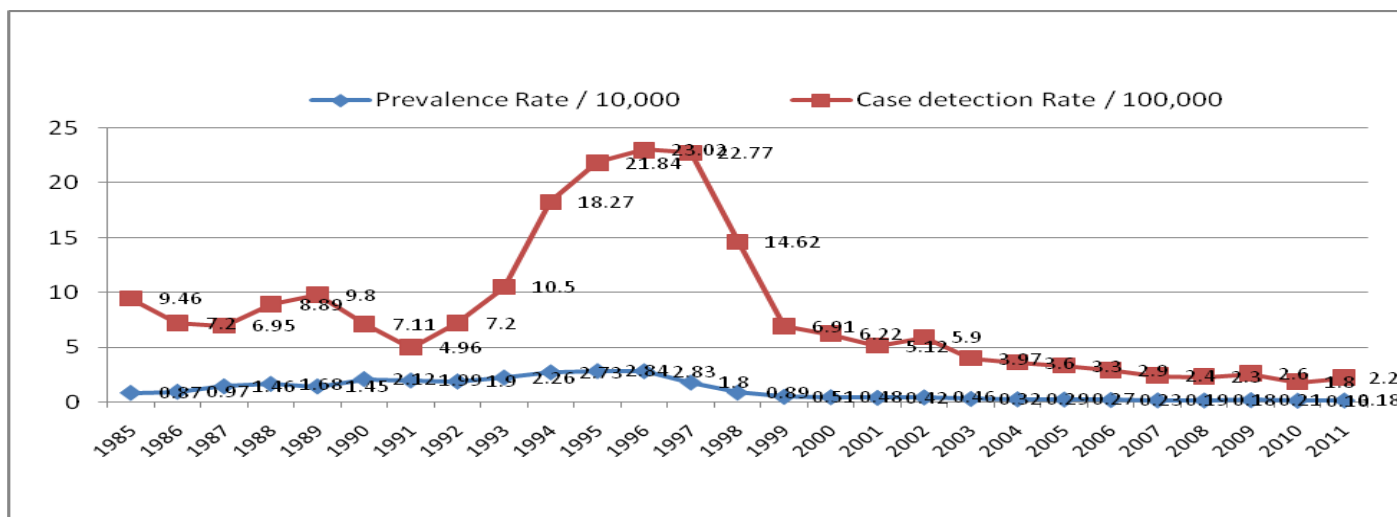
Despite achieving these results, more efforts are needed to strengthen and improve early case detection and to enhance the level of community awareness, as well as to reduce the stigma against leprosy patients.

The national leprosy program statistics show that the level of case-detection through ongoing activities has decreased gradually from 1995 (2,219 new cases) to 2009 (351 new cases), 2010 (262 new cases) and 2011 (314 new cases) respectively.

As presented on the below figure, the prevalence rate reached a high peak in 1996 at 2.84 cases per 10,000 inhabitants; since then, it decreased gradually to 0.18 per 10,000 inhabitants in 2011.

Leprosy trend from 1985 to 2011

Source: NLEP Health Information System 2010 Table 1



II. Rationale

The initiative of developing an approach of Contact Survey was started since 2009 ; new cases were indeed found and identified among contact people of former leprosy patients, namely 20% in 2009 and 30% in 2010. Following this result, the NLEP and CIOMAL explored a pilot project to be implemented in 2011, in order to find new leprosy cases that have failed to be detected through the supervision activities carried out by the national and provincial supervisors.

As a result, in the 2011 contact survey, 97 new leprosy cases were detected during the household contact tracing survey that was held in May and June 2011 and the majority (53%) of new cases detected were found to be Pauci-bacilliary and 46% multi-bacillary. Moreover, 70% were men, 30% women and 9% of grade II-disability cases. The contact survey was successful in identifying 91% of cases in their early stage, with no disabilities.

Therefore, the National Leprosy Elimination Program (NLEP), with the financial support from NOVARTIS, has launched another household contact tracing survey to be implemented in February and March 2012. The approach was identical to the 2011 survey and 10 Operational districts were selected on the basis of their high endemicity.

III. Contact Survey Arrangement

Under the leadership of the National Leprosy Program Manager, in close collaboration with CIOMAL and key NLEP staff, a meeting took place in January 2012, with key leprosy supervisors and an external consultant, in order to efficiently prepare the contact survey at field level.

The survey management team to oversee the process of the contact survey was composed of :

- The project director in charge of overall administration, management, finances and logistic management and providing necessary technical support for the project.
- Head Mission of CIOMAL, responsible for administration and finance.
- The project monitor and also involved in Contact Survey proposal development.

Contact Survey teams

There were four survey teams, each responsible for specific target areas located in an operational district and composed each of one national leprosy supervisor, one provincial leprosy supervisor, one operational district supervisor and one driver; these teams were supported by CIOMAL staff and health centre staff.

Media Awareness-raising and Theatre Performances on Leprosy

Prior to the start of the Contact Survey, the NLEP and CIOMAL launched a Media campaign through the Provincial Radio in order to promote and raise leprosy-related knowledge among the general population.

Also before and during the Contact Survey, the Sovanna Phum Theatre troop performed a total of 40 shows, telling a simple story on leprosy facts and realities, to raise leprosy awareness in villages of the 10 Operational Districts to be visited by the leprosy medical survey teams.

Before and after the theater show, Information, Education and Communication materials (IEC) were distributed.

Contact Survey coverage areas

Table 2: Leprosy Affected People (LAP) identified through the Data-Base and contact estimation

No	Provincial	OD	Population	Household member estimated (4.8)
1	Battambang	Battambang	317,075	523
2		Thmor Khol	217,375	422
3	Kampong Cham	Thboung Khmom	218,074	288
4		Kampong Siem	329,753	581
5	kampong Thom	kampong thom	302,661	495
6		Baray Santhok	261,155	312
7	Kampong chnang	kampong tralach	173,173	240
8	Kampong Speu	Kampong Speu	330,868	264
9	Siem Reap	Angkor chum	204,810	336
10		Soth Nikum	271,415	398
	Total		2,626,359	3,859

Table 2.

IV. Contact Survey objectives

Overall goal of the survey :

- Leprosy-affected people are diagnosed and treated at an early stage; knowledge and awareness on leprosy issues are increased in the community.

Contact Survey specific objectives:

- Diagnose potential leprosy-affected persons (LAP) through Contact Tracing survey among the households and neighbors of former leprosy-affected persons detected in the project area in the last 10 years (2001-2010).
- Raise awareness on leprosy in the community through distribution of Information, Education and Communication materials.
- Build/improve the capacity on leprosy diagnosis of the NLEP and leprosy supervisors in the project area.

Purpose of the Contact Tracing Survey Report

- To analyse key data, information collected as well as existing national statistics
- To understand the root causes of the key findings/results of the contact survey
- To identify the relevant constraints and weaknesses, as well as lessons learned
- To provide relevant conclusions and recommendations that should improve and strengthen the NLEP program's efficiency and effectiveness.

V. Methodology of the Report Writing

- The results of the contact survey have been used in accordance with the existing statistics of the NLEP.
- Three consultative meetings took place with the national program director, key NLEP staff and CIOMAL prior and after the field work, to explore lessons learned.

- Synthesis of key information/data and statistics are to be consolidated in the final report.

VI. Results of the contact survey

New leprosy cases diagnosed and identified in the 10 Operational Districts

Province	OD	Total New Cases Detected from survey			Total
		Female	Male	Child	
Battambang	Battambang	23	22	8	45
	Thmor Khol	18	14	2	32
Kampong Cham	Thbounng Khmom	1	9	3	10
	Kompong Siem	4	3	2	7
kampong Thom	kampong thom	4	6	0	10
	Baray Santhok	2	5	0	7
Kampong chnang	konpong tralach	2	4	1	6
Kampong Speu	Kampong Speu	6	3	0	9
Siem Reap	Angkor chum	2	10	2	12
	Soth Nikum	9	7	1	16
GrandTotal		71	83	19	154
Total	%	46.10	53.90	12.34	

Table 3.

Province	OD	Total New Cases Detected from survey				
		PB1	PB 2-5	MB	Total	D.Grad II
Battambang	Battambang	9	26	10	45	1
	Thmor Khol	7	19	6	32	0
Kampong Cham	Thbounng Khmom	0	8	2	10	1
	Kompong Siem	0	4	3	7	1
kampong Thom	kampong thom	2	2	6	10	0
	Baray Santhok	1	3	3	7	3
Kampong chnang	konpong tralach	0	2	4	6	1
Kampong Speu	Kampong Speu	1	5	3	9	1
Siem Reap	Angkor chum	0	3	9	12	3
	Soth Nikum	3	4	9	16	1
GrandTotal		23	76	55	154	12
Total	%					7.79

Table 4.

- Out of the 154 new leprosy cases detected during the contact survey, 64% were found to be Pauci-bacillary ; 8% of all new cases were detected with disability Grade II and 12% were children. The overall number of new cases detected from the 10 ODs selected is equal to almost half of the total cases detected per year during normal control activities.
- The results in the 10 ODs shows that new cases detection was higher in 3 ODs (OD-Battam Bang, Thmar Kol and Sotre Nikum ; *see table 4*) . This is reflected in the higher number of contacts and neighbors visited and checked in Battambang province (*see table 5*).

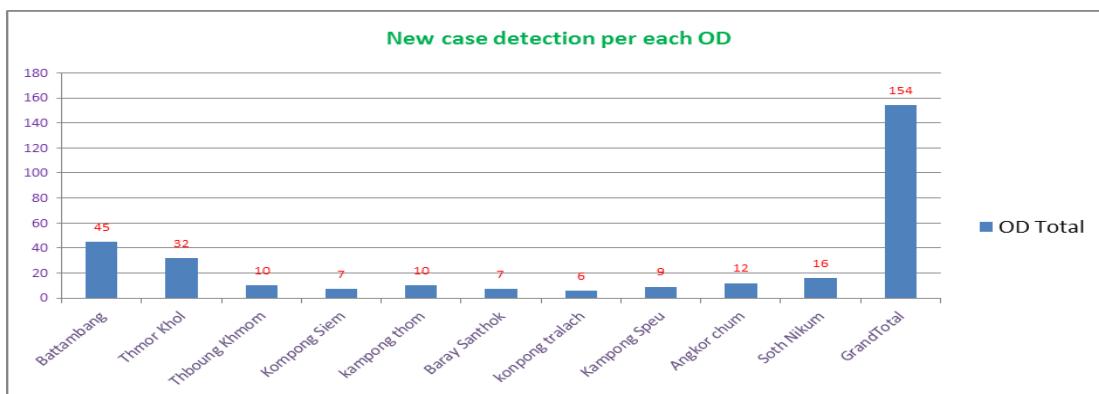


Table 5. New case detection per each operational district

Contact survey from February to March 2012									
Province	OD	LAP expected to be located	Listed LAP visited	Listed contacts	Unlisted LAP visited	Unlisted contacts examined	Total number of contacts checked	Neighbors examined	Total number of contacts/neighbours examined
Battambang	Battambang	109	101	273	10	30	697	394	697
	Thmor Khol	81	65	162	5	27	427	238	427
Kampong Cham	Thboug Khmom	60	36	41	15	12	152	99	152
kampong Thom	Kompong Siem	121	44	74	20	36	169	59	169
	kampong thom	103	48	152	20	98	335	85	335
Kampong chnang	Baray Santhok	65	45	156	16	30	387	201	387
	konpong Tralach	50	63	149	18	71	335	115	335
Kampong Speu	Kampong Speu	55	18	98	25	147	334	89	334
Siem Reap	Angkor chum	70	58	152	10	15	198	31	198
	Soth Nikum	83	64	147	27	49	275	79	275
	Total	797	542	1404	166	515	1919	1390	3309
	%		68.01				50.17		

Table 6.

- Out of an estimated 3,825 (797 LAP x 4.8) potential household contacts to be examined (average of 4.8 household contacts for each former LAP), 50% (1919) were examined. In addition, 1390 neighbours were also examined.
- 5.13% (154 New cases) of the total household contacts and neighbors examined (3,309) during the contact survey were found to have leprosy ; this unusually large percentage, as well as the specifically high detection rate in the 3 above-mentioned ODs, is presumably due to failing, insufficient supervision activities as well as to migration issues in these areas.
- 58% of all cases detected were women (46%) and children (12%); compared with statistics of recent years, the contact survey found an increased percentage of women, namely 46%.
- New cases detection among neighbour contacts of former patients stands at 33% of the total cases detected, whereas case detection from household contacts stands at 67%. Hence, one third of all new cases is to be found in the neighbourhood families.

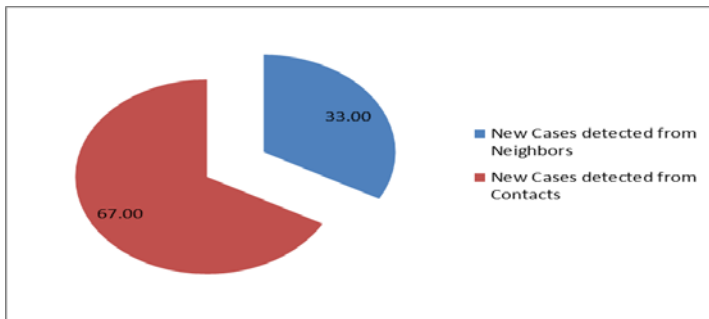


Table 7.

- During the survey, the teams identified 166 former patients that were detected before 2001 and hence did not appear on the list of former patients to be examined.

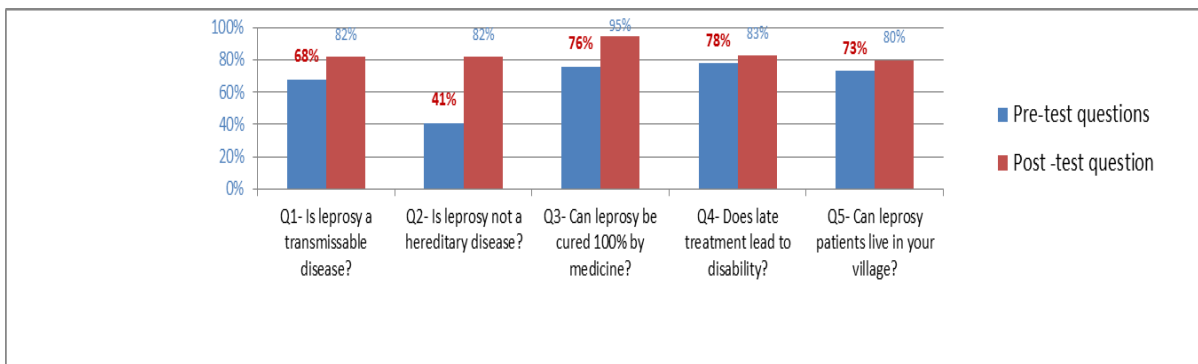


Table 8. Leprosy knowledge through interviews of theatre audience

Evaluation on leprosy knowledge through interviews of theater audience:

- According to the results of audience interviews who participated in the theatre shows, the comparison of pre-tests and post-tests answers to 5 key questions shows an improved knowledge concerning leprosy, in particular the fact that leprosy is a 100% curable disease.
- However, as far as questions 1, 4 and 5 are concerned, there is not much increase in knowledge; this may be due to insufficiently strong messages passed in the theatre show, as well as to still deep negative popular beliefs on leprosy rooted in Khmer society.
- From these results, we can assume that communities still fear leprosy patients who live in their vicinity; this raises the still unresolved issue of stigma and discrimination against leprosy patients and their families.

VII. Positive and negative aspects/constraints

Positive aspects:

- Many IEC materials including T-shirts, posters, leaflets and banners were disseminated during theatre shows.
- There were an average of over 500 audience per show
- Radio information on leprosy was spread at the provincial level.
- Increased awareness on leprosy diagnosis, treatment and stigmatization.
- Good collaboration with local authorities

- The dry-season is a good period to implement such project.
- High number of new cases detected from unlisted patients and neighbors.

Negative aspects:

- Some target areas were difficult to access by car, resulting in prolonged travel and delaying activities
- Many household contacts and neighbors had migrated to other places looking for a job or for other purposes.
- Ignorance or poor understanding about leprosy resulted in LAP not seeking available and free health services.
- New leprosy supervisors were not familiar with the location or the identity of LAP.
- Lack of technical capacity of provincial and OD supervisors that are unable to diagnose leprosy effectively
- The national planned activities of the NLEP are not thoroughly implemented at provincial and district level, due to factors such as low motivation of government staff, poor technical capacity, lack of transportation and leprosy services not being integrated into general infectious diseases services
- Lack of support and collaboration from some Village Health Volunteers
- Lack of information on survey schedule given to target authorities and patients.
- Limited budget to support Provincial supervisors per-diem and accommodation.
- Lack of information flow between Provincial Health Department, Operational District, Health Centre and villages.

VIII. Conclusions

- Even though Cambodia has reached the leprosy elimination goal, according to WHO standards, the results of this survey indicate that some part of the country still have a high-prevalence of leprosy.
- The results also indicate that case detection among household contacts/neighbors of LAP should be the priority of NLEP.
- Health seeking behavior of LAP and their families/neighbors towards public health services related to leprosy diagnosis and treatment still represents a huge challenge. In trying to resolve this obstacle is mainly due to ignorance, lack of education and knowledge of leprosy realities.
- Media campaigns and Community theatre shows, as well as distribution of IEC materials are very important factors to increase the detection of new cases.
- The findings from the contact survey, as well as from the consultation with key national staff and partners, indicate that the low technical capacity level is still a barrier that contributes to poor performance in leprosy diagnosis at health centre and operational district level.
- The National Leprosy Control Program should prioritize high endemic population pockets as high risk target to be followed-up for early diagnosis and treatment.
- Transmission still continues among children (12%)
- The transmission continues and hidden leprosy cases still exist in other places.
- According to these results, the NLEP should revise its national strategy in order to identify appropriate interventions.

IX. Key Recommendations

With regard to the overall identified findings, constraints and weaknesses and after consultation with key staff of the national leprosy program and with partners, the following recommendations are suggested:

- 1). Repeat “Contact Surveys” in other operational districts, particularly in priority operational districts (30-50 new cases detected between 2001 to 2010).

- 2). In the event of new “Contact Surveys”, make thorough administrative preparations and field arrangements that include better communication between organizers and local health authorities.
- 3). To continue a leprosy information campaign at national and community levels. One popular and attractive mean in Cambodia is the Mobile Theatre, including a play on leprosy, as well as music, dance and shadow puppets ; these theater performances should also be used to distribute Information, Education and Communication leprosy-related information (leaflets and posters) to the population.
- 4). To Organise technical capacity building events, related to leprosy management, for provincial and operational district leprosy staff.
- 5). The NLEP should revise and prioritise its national strategy.
- 6). Detailed information on future contact surveys should be given to Provincial health departments, operational districts, health centres and villages.



Report for Leprosy Active Case Finding “CONTACT SURVEY” in April - May 2012

I. Background

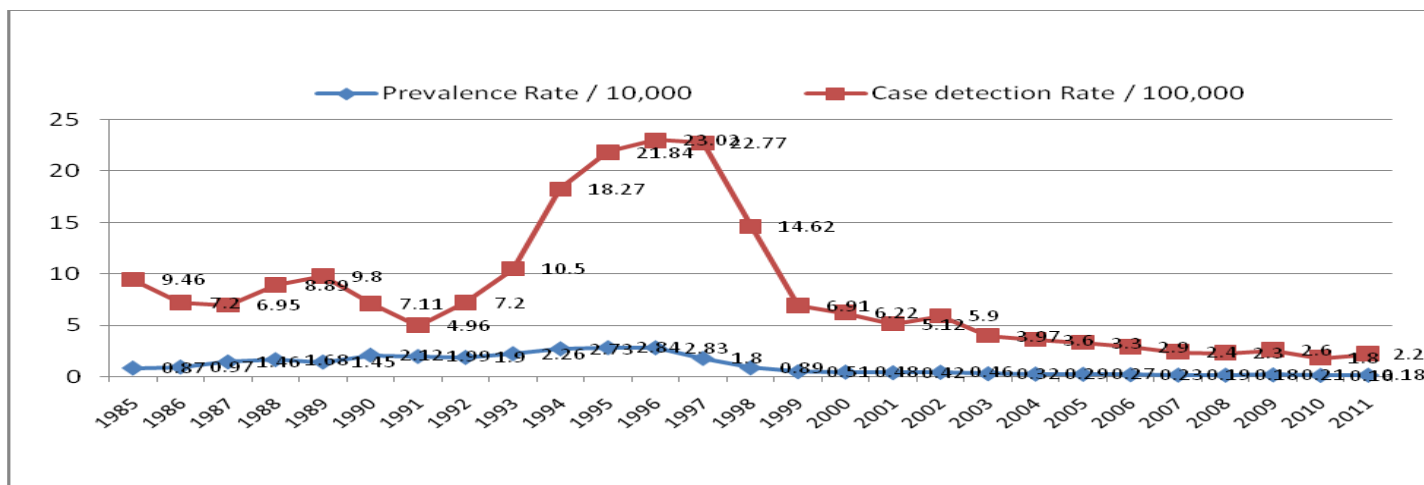
Since 1984, the ministry of health of Cambodia established the National Program for Leprosy Control Program under the management of the National Dermatology and STDs programs. Since then, the program has been working on various expertise, including case detection; diagnosis and treatment; health education and Behavior Change Communication; the implementation of multi-drugs therapy protocol as well as rehabilitation services provided to disabled leprosy patients. Under the joint efforts of the Ministry of Health and external funding organizations, much has been significantly achieved regarding the national leprosy strategies. In addition to this achievement, further successes depend largely on early case detection and treatment, which requires a good level of medical expertise, as well as awareness promotion of leprosy on some hot-spots of the communities.

Even though achieving these results, more efforts are needed to strengthen and improve early case detection and to enhance the level of community awareness, as well as to reduce the stigma against leprosy patients and detection of some emerging new cases.

The National Leprosy Elimination Program (NLEP) statistics show that the level of case-detection through ongoing activities has decreased gradually from 1995 at 2,219 new yearly cases to 2009, 2010 and 2011 at 351, 262 and 314 respectively.

As presented on the below figure, the prevalence rate reached a high peak in 1996 at 2.84 cases per 10,000 inhabitants; since then on, it decreased gradually to 0.18 per 10,000 inhabitants in 2011 (Table 1)

Leprosy trend from 1985 to 2011 Source: NLEP statistic information - Table 1



The initiative of developing an approach of Contact Survey was started since 2009. Due to the results of New Case detection was noticeably found and identified among Leprosy Affected Peoples (LAP) household contacts.

This has been indicated that new cases detected from leprosy affected Peoples household contacts at around 20% in 2009 and 30% in 2010. Following this result, the National Leprosy Elimination Programme (NLEP) and Campagne Internationale de l'Ordre de Malte contre la Lepre (CIOMAL) have explored a pilot project to be proposed and implemented in 2011, in order to screen for other hidden new cases that are failed to be detected through the routine supervision activities carried out by the national and provincial supervisors.

As a result, in 2011 contact survey in 10 operational districts, 97 new leprosy cases were detected during the household contact tracing survey that was held in May and June 2011 and the majority (53%) of new cases detected were found to be Pauci-bacillary and 46% is multi-bacillary form. Moreover, 70% were men, 30% women and 9% of grade II-disability. This means that the contact survey was successful in identifying 91% of cases with no disabilities in early diagnosis and treatment on time.

As a result, contact tracing survey in February to March 2012 in another 10 operational districts, 154 new leprosy cases with 12 disability grade II (7.79%) were detected during this contact survey, 99 (64%) cases for Pauci-bacillary form, 19 (12.34%) cases were children and 71 (46.10%) cases were woman.

Therefore, the National Leprosy Elimination Program (NLEP) plan, with the financial support from World Health Organization, has launched another household contact tracing survey project to be implemented in April to May 2012 in 5 Operational districts in rural area (Table -2).

III- Contact survey agreement:

Under the leadership and management from the National Leprosy Program Manager and collaboration with CIOMAL and key staff of NLEP, organized a meeting that took place in April 2012, with key leprosy supervisors at national and the consultant, in order to efficiently prepare the contact survey at field level, prior to its implementation in April to May.

Contact Survey teams

There were four survey teams, each responsible for specific target areas located by an operational district and composed of one national leprosy supervisor, one provincial leprosy supervisor, one operational district supervisor and one driver; these teams were supported by CIOMAL staff, health centre staff and village health support group.

Mass Media Promotion

Prior to the starting date of field work, the NLEP have launched a Mass Media through local radio in order to promote and raise leprosy-related knowledge among general population.

Contact Survey coverage areas

Table 2: Selection of LAPs identified through the Data-Based and contact estimation

No	Provincial	Operational District	Household member estimate
1	Rattanakiri	Rattanakiri	537
2	Odor Meanchey	Samrong	350
3	Banteay Meanchey	Thmor Puork	120
		Preak Net Preak	105
4	Pursat	Sampov Meas	360
	Total		1472

IV. Contact Survey objectives

The overall goal of the survey project is to:

- Leprosy-affected people are diagnosed and treated at an early stage; knowledge and awareness on leprosy issues are increased in the community.

The contact survey specific objectives were:

- Diagnose potential leprosy-affected persons (LAP) through Contact Tracing survey among the households and neighbors of former leprosy-affected persons screened in the last 10 years (2001-2010), in the project area.
- Awareness on leprosy is raised in the community through distributing the Information Education Materials and Communication campaign.
- Expertise on leprosy diagnosis of the NLEP and leprosy supervisors in the project area is improved.

Purpose of the Contact Tracing Survey Report

- To analyze key data, information collected as well as existing national statistics
- To understand the root causes of the key findings/results of the contact survey
- To identify the relevant constraints and weaknesses as well as lessons learned of the contact survey implementation
- To provide relevant conclusions and recommendations that should improve and strengthen the NLEP program's efficiency and effectiveness.

V. Methodology of the Report Writing

- The results of the contact survey have been used in accordance with the existing statistics of the NLEP.
- 2 Consultative meetings took place with the national program director, key NLEP staff the field work to exchange experience.
- Synthesis of key information/data and statistics into final report.

VI. Results of the contact survey

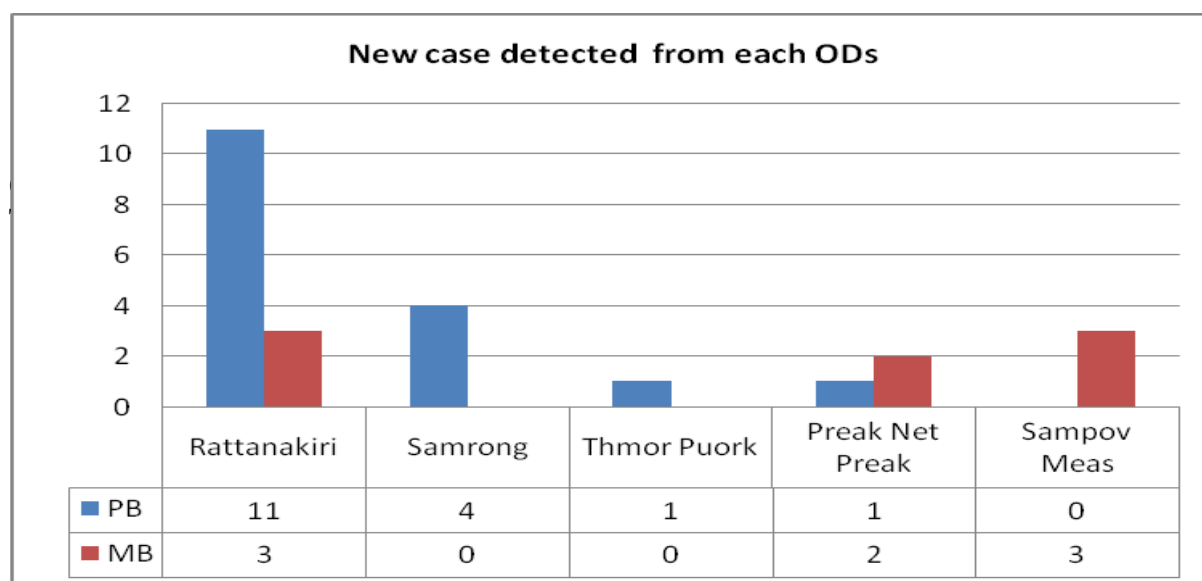
New leprosy cases diagnosed and identified in the 5 Operational Districts

Table - 3:

Province	OD	Total New Cases Detected from survey						
		F	Child	PB1	PB	MB	Total	D. Grad II
Rattanakiri	Rattanakiri	9	1	3	9	3	15	1
Odor Meanchey	Samrong	3	1	1	3	0	4	0
Banteay Meanchey	Thmor Puork	0	0	0	1	0	1	0
	Preak Net Preak	2	0	0	1	2	3	0
Pursat	Sampov Meas	2	0	0	0	3	3	0
	GrandTotal	16	2	4	14	8	26	1

- 26 new leprosy cases were detected during this contact survey, 18 (69.23%) cases for Pauci-bacillary and only once case with disability grade II (3.84%). 16 (61.53%) cases were woman and 2 (7.69%) cases were children (Table - 3).
- The results of the 5 ODs; shown that new cases detection was higher in Rattanakiri operational district, compared with the other 4 and in Samrong OD was detected 4 PB cases and Sampov Meas OD was detected 3 MB cases without disability (Table - 4).

Table – 4: New cases detected from each operational district (ODs)



Province	OD	LAP expected to be located by ODs	household member estimate	listed LAP visited	listed Contact examine (1)	unlisted LAP visited	unlisted contact examine (2)	Neighbors examine (3)	Total (1-2-3)
Rattanakiri	Rattanakiri	144	537	56	139	15	46	217	473
Odor Meanchey	Samrong	81	350	69	141	9	25	25	269
Banteay Meanchey	Thmor Puork	27	120	17	40	10	55	69	191
	Preak Net Preak	22	105	18	60	11	58	81	228
Pursat	Sampov Meas	75	360	50	123	0	0	25	198
	Total	349	1472	210	503	45	184	417	1359

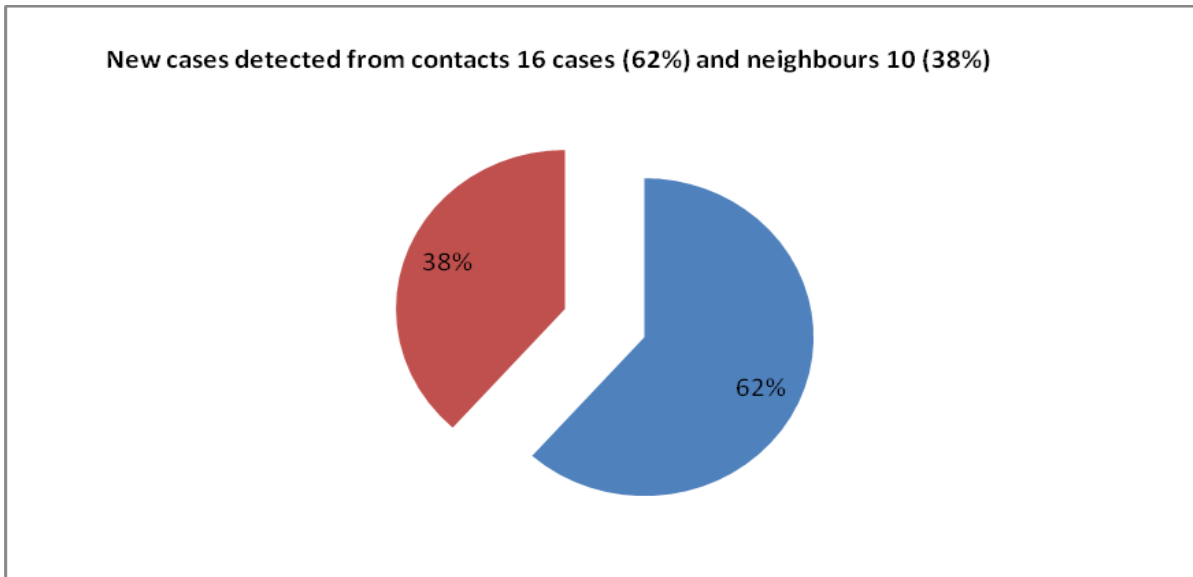
- Out of an estimated 1,472 potential household contact members to be examined, only 46.67% (687) of contacts could be identified and examined for a leprosy-check. Additionally, 417 neighbours were also check during the survey (Table – 5).
- For this survey, the team could identify 45 (12.89%) unlisted LAP of total estimated patients (349) (Table – 5).

Table - 6: New cases detected from contact and neighbours.

Province	OD	New cases detected from contact							D.Grad II	Reaction
		F	Child	PB1	PB	MB	Total			
Rattanakiri	Rattanakiri	4	0	3	4	1	8	1	0	
Odor Meanchey	Samrong	3	1	1	3	0	4	0	0	
Banteay Meanchey	Thmor Puork	0	0	0	1	0	1	0	0	
	Preak Net Preak	0	0	0	0	0	0	0	0	
Pursat	Sampov Meas	2	0	0	0	3	3	0	0	
	Total	9	1	4	8	4	16	1	0	

Province	OD	New cases detected neighbors							D.Grad II	Reaction
		F	Child	PB1	PB	MB	Total			
Rattanakiri	Rattanakiri	5	1	0	5	2	7	0	0	
Odor Meanchey	Samrong	0	0	0	0	0	0	0	0	
Banteay Meanchey	Thmor Puork	0	0	0	0	0	0	0	0	
	Preak Net Preak	2	0	0	1	2	3	0	0	
Pursat	Sampov Meas	0	0	0	0	0	0	0	0	

Total	7	1	0	6	4	10	0	0
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- More importantly, we could indicate that 38% new cases detection among Neighborhood of the total new cases detected, whereas case detection from household contacts stands at 62%. Hence, more than one third of all new cases are still hidden in the neighborhood families (Table – 6).

VII. Conclusion and recommendation:

Based results of contact tracing patient household survey in 5 operational districts in rural area from April to May 2012, the following strengths and weaknesses were identified:

Strengths:

- 1- Many Information Education Communication (IEC) materials including T-shirts, posters, leaflets were disseminated directly to people in the communities during the survey.
- 2- Increased awareness on leprosy diagnosis, treatment to operational district and provincial leprosy supervisors.
- 3- Decrease stigmatization for people in the communities
- 4- Improve knowledge of leprosy to health worker and village health support group
- 5- Early detection leprosy cases from household in listed or unlisted target LAPs and neighbours.
- 6- Information leprosy's service was available and MDT was free in all health facilities.

Weakness/constraint:

- 1- Some target areas were difficult to access by car, resulting in prolonged travel and delaying activities
- 2- Many household contacts and neighbors were migrating to other places looking for a job or for other purposes.
- 3- New leprosy supervisors were not familiar with the location or the identity of LAP.
- 4- More LAPs were moving to another province or other place to finds the job.

- 5- Lack of technical capacity of some operational district leprosy supervisors that are unable to diagnose leprosy effectively
- 6- Lack of transportation to inform on survey schedule reached to target patients and health worker
- 7- Leprosy's awareness still limited to health worker.
- 8- Referral system of leprosy still not working well.
- 9- Collaboration still limited from some Village Health Support Group.

Conclusions:

It is clear from the results of contact tracing household survey in 5 operational districts in rural area:

- 1- Even though the leprosy epidemic in Cambodia has reached the elimination goal, according to WHO standards.
 - The results of this survey indicate that some part of the country still have new case hidden not early detected in the communities.
 - The results also indicate that case detection among household contacts/neighbors of LAP should be an NLEP priority.
- 2- Health seeking behavior of LAP and their families/neighbours towards public health services related to leprosy diagnosis and treatment still represents a huge challenge. In trying to resolve this obstacle, mainly due to ignorance, lack of education and leprosy knowledge. Mass Media campaigns and IEC materials disseminated is very important factor to increase the new case detection.
- 3- The findings from the contact survey, as well as from the consultation with key national staff and partners, indicated that the low technical capacity level is still a barrier that contributes to poor performance in case detection at health centre and operational district level.
 - The National Leprosy Elimination Program should prioritize LAPs household and neighbours as high risk target to be follow-up for early diagnosis and treatment.
 - Transmission is still being continued among children (7.69%)
 - This contact survey is providing a good result of an earlier detection without Grade II-Disability (96.15%) with an overall new case detection (69% was PB).

Recommendations

With regard to the overall identified findings, constraints and weaknesses and after consultation with key staff of the national leprosy program and with partners, the following recommendations are suggested:

- 1). Repeat "Contact Surveys" in operational districts, particularly in more new cases detected between 30 – 50 new cases from 2001-2010.
- 2). In the event of new "Contact Surveys", make thorough administrative preparations and field arrangements that include better communication between organizers, local health authorities and target LAPs member of household contact and neighbours.
- 3). Continue a leprosy information campaign to health facilities and the community level. Local radio broadcast, Education and Communication leprosy-related information (leaflets and posters) to rural area.

- 4). Improve technical capacity building events, related to leprosy management, for provincial and operational district leprosy staff.
- 5). Ensure to maintain leprosy awareness in the community for timely detection and decrease the stigma in general population.
- 6). Improve referral system of leprosy
- 7). Provide high quality services to people affected by leprosy.



Leprosy Active Case Finding “Contact Survey of leprosy affected people’s household members and neighbors with IEC campaign” Report December 2012

I. Background

In 1982, the Ministry of Health of Cambodia established the National Program for Leprosy Control Program under the management of the National Centre for Hygiene and Epidemiology and in 1997, it was integrated within the National Centre for Tuberculosis and Leprosy Control. Since then, the program has been working on various expertise, including case detection, diagnosis and treatment, health education and Behavior Change Communication, the implementation of multi-drugs therapy protocol as well as rehabilitation services provided to disabled leprosy patients.

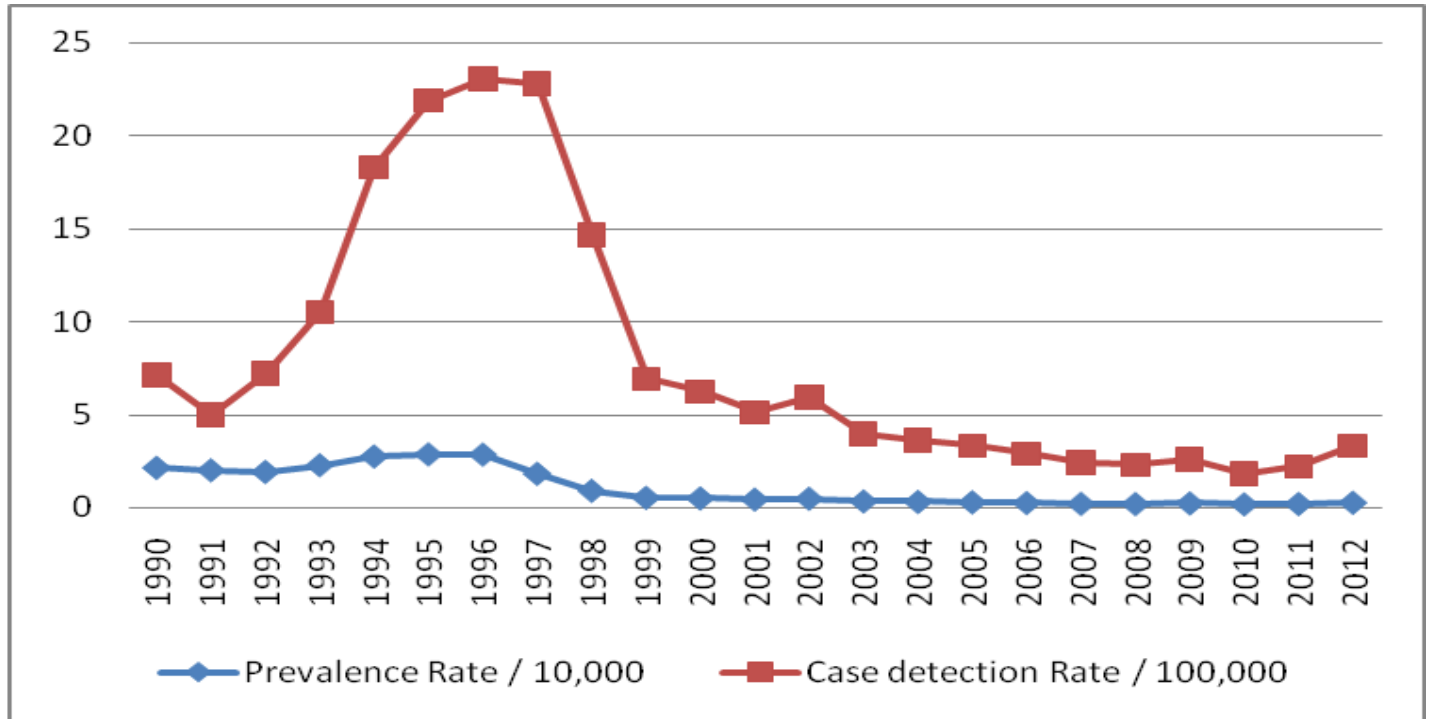
Under the joint efforts of the Ministry of Health and external funding organizations, much has been achieved regarding the national leprosy strategies. Further successes depend largely on early case detection and treatment, which requires a good level of medical expertise, staff motivation as well as awareness raising activities on some hot-spots of the communities.

More efforts are needed to strengthen and improve early case detection and to enhance the level of community awareness, as well as to reduce the stigma against leprosy patients.

The national leprosy statistics show that the level of case-detection through ongoing activities has decreased gradually from 1995, at 2,219 new cases, to 2009 and 2010 at 351 and 262 respectively; a new increase was noticed in 2011 and 2012, with 314 and 475 cases respectively.

As presented on the below figure, the prevalence rate reached a high peak in 1996 at 2.84 cases per 10,000 inhabitants; since then, it decreased gradually to 0.17 per 10,000 inhabitants in 2010; in 2011 and 2012, it increased to 0.18 and 0.25 respectively.

Graph 1: Leprosy trend from 1990 to 2012
Source: NLEP Health Information System 2012



II. Rationale

The initiative of developing a Contact Survey approach was started in 2011. New Cases detected were noticeably found and identified among contact people of former leprosy patients and their neighbors. Indeed, the percentage of new cases being detected from former patients' household members stood at around 20% in 2009 and 30% in 2010. Following this result, the NLEP and CIOMAL started a pilot project in 2011, in order to screen other hidden new cases that have failed to be detected through the routine supervision activities carried out by the National Programme.

In May and June 2011, a first contact survey, conducted in 10 operational districts, detected 97 new leprosy cases; the majority (53%) were found to be Pauci-bacilliary and 46% Multi-bacillary. Moreover, 70% were men, 30% women, and 9% for Disability-grade II cases (DG II), as well as children below 15.

In February and March 2012, in a new survey conducted in 10 operational districts, 154 new cases were detected, of which 64% PB, 36% MB, 54% men, 46% women, 7.8% DG II and 12% children below 15; in May 2012, in 5 operational districts, 26 new cases were detected, of which 70% PB, 30% MB, 38% men, 62% women, 3.8% DG II and 8% children below 15.

The National Leprosy Control Program, with the financial support from NOVARTIS, launched another contact survey to be implemented in December 2012. During this survey, 5 Operational districts were selected on the basis of their high endemicity.

III. Contact Survey Arrangement

Under the leadership and management of Dr. Lay Ky, National Leprosy Program Director, in close collaboration with CIOMAL and staff of NLEP, a series of meetings that took place in October 2012, with key leprosy supervisors, in order to efficiently prepare the contact survey at field level, prior to its implementation in December 2012.

The survey management team to oversee the Contact Survey proposal development and its overall process was composed of:

- Dr. Lay Ky, project director in charge of overall administration, management, finances and logistic management, as well as technical support for the project.
- Mr. Harald Schmid de Grunec, responsible for administration and finance.
- Mr. Bou Sophal, project monitor.
- A short-term consultant met with the National Survey Team (NST), composed of one to two National Leprosy Supervisors and CIOMAL staff, to collect data, analyze them and produce the final report.
- Sub-National Survey Teams (SNST), each consisting of one Provincial Leprosy Supervisor, one Operational District Leprosy Supervisor and several Health Centre Staff, in collaboration with Village Health Support Groups (VHSG), Commune Councils, and Village Chiefs, played an important role in the examination of household members, as well as neighbors. The SNST were responsible to inform by telephone the household members and neighbours of the exact survey date; they were also responsible to identify the venue for the theater performances.

Contact Survey teams

There were two survey teams, each responsible for specific target areas and composed of one or two national leprosy supervisors, one provincial leprosy supervisor, one operational district supervisor and one driver; these teams were supported by CIOMAL staff.

Mass Media and Community Theatre Promotion

Prior to the starting date of field work, the NLEP and CIOMAL launched a Mass Media through the Provincial Radio in order to promote and raise leprosy-related knowledge among the general population. One to three days before the arrival of the survey team, the Sovann Phum theatre troops performed a play on leprosy to raise awareness among surrounding villages ; in total, 22 performances took place during the December 2012 Contact Survey.

IEC material and evaluation questionnaires were distributed to the audience.

Operational districts covered and registered Leprosy Affected Person (LAP) identified through the central Data-Base (see table 1)

Table 1:

Operational district	Population	Registered LAPs 2001-2010*	LAP expected to be located**
Sangke	200,372	72	70
Ponhea Krek	208,903	78	60
Prey Chhor	213,395	66	56
Siem Reap	261,712	134	125
Kong Pisey	259,961	90	90
Total	1,144,343	440	401
Percentage			91.14
*Registered LAPs between 2001-2010, according to the central data base.			
**LAP expected to be located, according to information from OD supervisors			

Table 2:

No	Provincial	OD	Population	New cases detected between 2001-2010	DG II cases diagnosed 2001-2010	LAP expected to be located by ODs	Villages	Health Centres	Household members estimate (4.8 per household)
1	Battambang	Sangke	200,372	72	17	70	60	14	336
	Kampong Cham	Ponhea Krek	208,903	78	8	60	40	13	288
2		Prey Chhor	213,395	66	6	56	35	12	269
3	Siem Reap	Siem Reap	261,712	134	13	125	49	20	600
4	Kampong Speu	Kong Pisei	259,961	90	15	90	52	19	432
	Total		1,144,343	440	59	401	266	78	1,925

IV. Contact Survey objectives

Overall goal of the Contact Survey:

- To see that Leprosy-affected persons are diagnosed and treated at an early stage and that knowledge and awareness on leprosy issues have increased in the community.

Contact Survey specific objectives:

- Diagnose potential leprosy-affected persons (LAP) through Contact Survey among the households and neighbors of former leprosy-affected persons screened in the last 10 years (2001-2010), in the project area.
- Awareness on leprosy is raised in the community through the distribution of Information and Education materials and Communication campaigns.

- Expertise on leprosy diagnosis of the NLEP and leprosy supervisors in the project area is improved.

Purpose of the Contact Survey Report

- To analyse key data, information collected as well as existing national statistics
- To understand the root causes of the key findings/results of the Contact Survey;
- To identify the relevant constraints and weaknesses as well as lessons learned through the Contact Survey implementation;
- To provide relevant conclusions and recommendations that should improve and strengthen the NLEP program’s efficiency and effectiveness.

V. Methodology of the Report Writing

- The results of the Contact Survey have been used in accordance with secondary data and the NLEP existing statistics.
- Two consultative meetings took place with the national program director, key NLEP staff and CIOMAL prior and after the field work to explore lessons learned.
- Key information, data and statistics were synthesized in the final report.

VI. Results of the Contact Survey

Table 3: Status of LAPs, Household members and neighbors examined during the survey

Operational district	Former LAP visited	Unlocated LAPs	Unlisted LAP visited*	HHs examined	Total Neighbors examined
Sangke	63	7	15	237	736
Ponhea Krek	60	6	10	158	692
Prey Chhor	60	6	10	192	1085
Siem Reap	118	7	4	259	580
Kong Pisey	83	0	7	184	487
Total	384	26	46	1030	3580
Percentage	87.27	5.91		53.51	

*Those unlisted LAP were registered before 2001

- Out of an estimated 1925 potential household contact members to be examined (401 LAPs located multiplied by an average of 4.8 household contacts for each former LAP equals to 1925), only 53% (1,030) of the total located contacts could be identified and examined for a leprosy-check. While the survey was able to visit 87% of the registered LAPs, only 53% of the potential household contacts in the 5 Operational Districts were visited, compared with our 70% goal. One main reason for this unachieved goal is the great mobility of the young Cambodian working force, who leaves not only for the capital Phnom Penh, but also for Korea, Thailand and Malaysia to look for work; as a result, many of the younger household members were absent during the Contact survey.

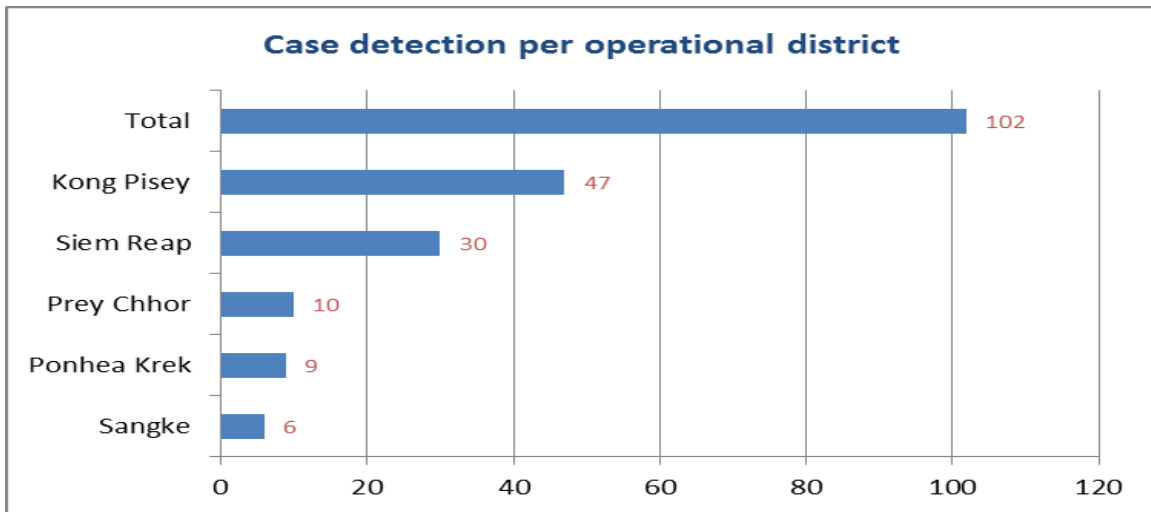
- 2.2% of the total household contacts and neighbors examined (4610) during the contact survey were found to have leprosy ; this unusually large percentage, as well as the specifically high detection rate in the 5 above-mentioned OD, is presumably due to failing, insufficient supervision activities.
- Around 6% of the registered former LAPs, namely 26, could not be located and examined during the contact survey. However, 46 unlisted former LAPs, registered before 2001, were identified and visited.

Table 4: New leprosy cases diagnosed and identified in the 5 Operational Districts

Province	Operational district	Female	Male		PB1	PB2-5	MB	Total		DII	Child
Battam Bang	Sangke	3	3		1	3	2	6		1	0
Kampong Cham	Ponhea Krek	4	5		2	5	2	9		1	1
	Prey Chhor	5	5		3	3	4	10		0	2
Siem Reap	Siem Reap	9	21		7	9	14	30		0	1
Kampong Speu	Kong Pisey	21	26		5	18	24	47		2	7
Total		42	60		18	38	46	102		4	11
		%	41.18	58.82			45.10			3.92	10.78

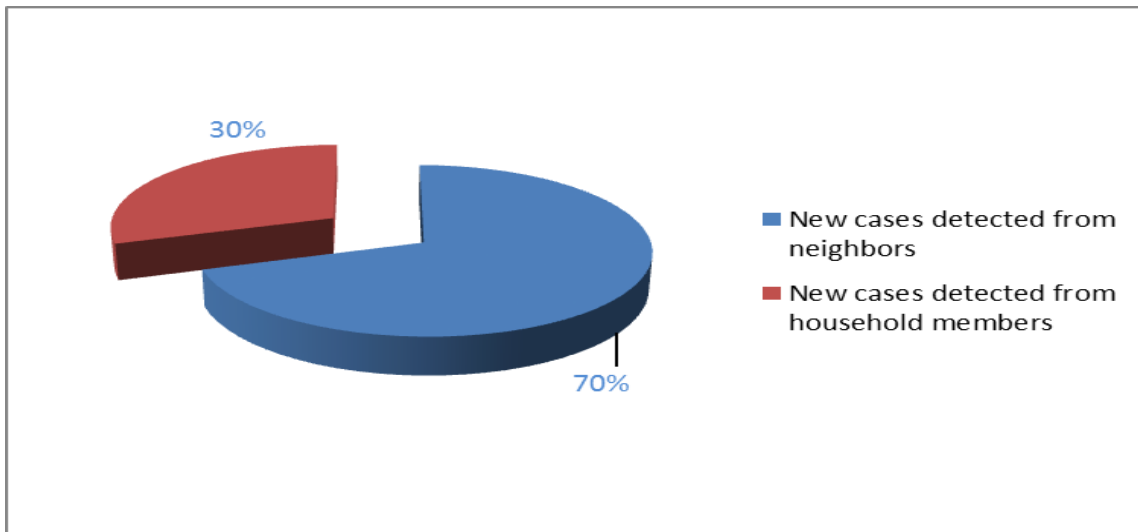
- A total of 102 new cases were detected during this contact survey; 55% were PB, 45% MB, 59% male, 41% female, 10,8% children below 15 and 3,9% had Disability Grade II.
- This result shows that 96% of all new cases were detected at an early stage, with no disabilities and 3,92% were diagnosed late and consequently suffered Disability Grade II; also noticeable was the high percentage (10,78%) of children below 15.
- The results in the 5 ODs shows also that new cases detected were higher in 2 ODs (OD: Siem Reap and Kong Pisey), compared with the other 3 ODs; one possible reason of this higher detection rate may be due to the poor socio-economic, hygiene and housing condition of the population.

Graph: 2:

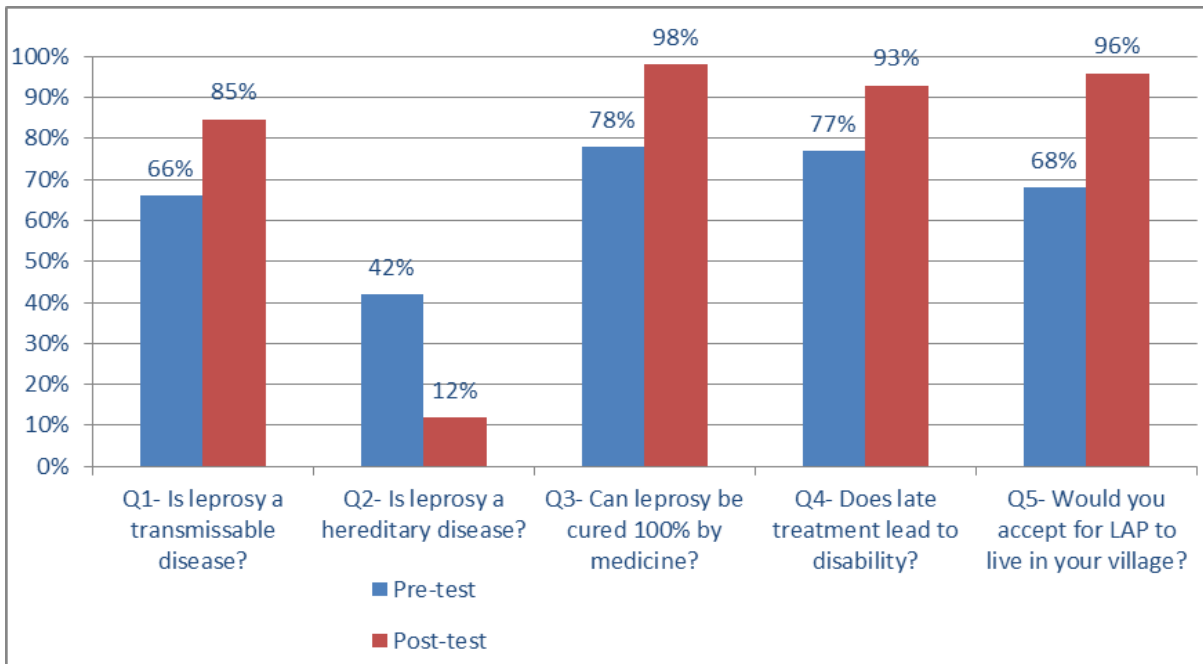


- Another important indication is the fact that among the 102 new cases detected, 70% were neighbours of the former LAPs and only 30% were household members.

Graph 3:



Graph 4: Results of the evaluation performed after the theatre performances



- Leprosy awareness-raising through theatre performances seems to be a successful vehicle to pass key messages, enhance the population’s knowledge and reduce stigma.
- According to the results of the audience interviews who participated in the theatre shows, the comparison of pre-test and post-test answers indicates that there is an improvement of knowledge on each of the 5 key questions asked related to leprosy, in particular regarding leprosy treatment that can be cured 100% and LAPs that could live together with villagers.
- From these results, we can assume that theatre shows and IEC materials distribution are important in order to reduce stigma and increase leprosy knowledge.

VII. Strengths and constraints:

Strengths:

- Gain in efficiency related to numbers of new cases detected early, capacity building of leprosy supervisors and knowledge enhancement of the local communities visited.
- Stigma reduction
- Improved IEC campaign, including more attractive theater performances.
- Good collaboration with local authorities.

Constraints:

- Administrative preparations still need improvement
- Several former LAPs and many household contacts and neighbors migrated to other places looking for a job or for other reasons.
- Some locations were difficult to access by car, resulting in prolonged travel and delayed activities.
- New leprosy supervisors were not familiar with the location or the identity of LAP.
- Lack of support and collaboration on leprosy matters from Village Health Support Groups.

VIII. Conclusions

- Even though the leprosy epidemic level in Cambodia has reached the elimination goal, according to WHO standards, the results of this survey indicate that some parts of the country have a higher prevalence than indicated by the statistic.
- The results also indicate that a higher importance should be given to case detection among neighbors of LAPs (70% neighbors' cases vs. 30% household members' cases).
- Health seeking behavior of LAP, their families and neighbors towards leprosy health services still represents a challenge. Resolving this obstacle, mainly due to ignorance, lack of education and leprosy discrimination, requires more leprosy awareness raising, particularly through IEC activities.
- Mass Media campaigns and Community theatre shows are successful factors to raise general knowledge on leprosy and reduce discrimination towards LAPs.
- The National Leprosy Control Program should prioritize high endemic population pockets for early diagnosis and treatment.
- Transmission still continues among children (10.78%), indicating late detection.

IX. Key Recommendations

With regard to the overall findings, strengths and constraints and after consultation with key staff of the national leprosy program and with partners, the following recommendations are suggested:

1. Achieve “Contact Surveys” in all Cambodian operational districts.
2. For any new “Contact Survey”, improve administrative preparations and field arrangements that include better communication between NLEP and field.
3. It is suggested to continue a leprosy information campaign at national and community level. One popular and successful mean in Cambodia is the Mobile Theatre presenting a scenario on leprosy and including music and dance; these theater representations should also be used to display banners and distribute Information, Education and Communication leprosy-related information (leaflets and posters).

Activities during contact survey





Leprosy Awareness in Garment Factories Date: March 26th, 2012

1. MONITORING AND EVALUATION INDICATOR/ OUTPUT DATA

A. Report of Leprosy Awareness in Garment Factories

This report related to leprosy awareness activities, as scheduled in work plan. The report below showing main activities that were achieved during the period of March 26th -April 3th 2012.

Aim: Majority of women working in Garment Factories are participated and disseminated of leprosy awareness.

<u>Intervention Objectives/ Activities</u>	Indicators of achievement (process or Input)	Achievement or Output
Objective One: To select the Garment Factory based in Phnom Penh and Provinces		
1.1. Identify and select Garment Factory in Phnom Penh, Takeo, Kampot, Kg Speu and Kandal provinces	12 factories	12 Garment factories were selected, Phnom Penh 4, Kandal 4, Takeo 2, Kampot 1, Kg Speu 1.
Objective Two: To reform and print the IEC material with the NLEP		
2.1. Correct the leaflet & poster by changing color and background and require numbers of printing for using in the whole campaign	30000 leaflets 360 posters	Leaflets is green color and background and 30000 leaflets and 360 posters were printed with design by NLEP
2.2. Request the T-shirts with logos to NLEP	50 T-shirts	NLEP supported 50 T-shirts
2.3. TV & DVD player request from CIOMAL office	TV & DVD player sets	CIOMAL office had supported TV & DVD player sets.
2.5. Prepare the key words to explain about the true leprosy sign with short and clear.	# Lectures	500 lectures are produced for training labors union
Objective Three: To implement the leprosy awareness campaign in the factories		
3.1. Implement the leprosy awareness campaigns in the garment factories which had selected by the team	6 Garment factories	6 Factories had implemented the leprosy awareness campaign
3.2. Organize the labors to participate in the campaign and groups discussion in the factory.	# labors estimated in 6 factories are 10500	12700 labors had participated in the campaign
3.3. Organize direct training for the member of labors union, nurses and volunteers in the factory about early sign of leprosy and TV show on leprosy spot	labors union/ nurse and volunteers	Trained 210 labors in 6 factories. -9 nurses/ medical assistant (minus from 210) -37 volunteers (minus from 210)
3.4. Distribute the leprosy leaflets to individual labors in the factories.	leaflets	11100 leaflets distributed to the labors in the factories.
3.6. Display the leprosy posters at the information board in the factories	posters	279 posters were fixed and disseminated in 6 factories

Table 1
Report IEC used in 6 factories, 2012 for second stage

Name factory	Number of leaflets & posters distributed		
	Number of labors	#leaflets	#posters
Direct Route	1200	1200	51
Asia Dragon	2600	2400	45
Chim Ly	3400	2500	42
G-Foremore	1700	1500	38
Interhopewell	1100	1000	51
Moha	2700	2500	52
Total	12700	11100	279

Date: September 25Th, 2012

2. MONITORING AND EVALUATION INDICATOR/ OUTPUT DATA

A. Report of Leprosy Awareness in Garment Factories

This report related to leprosy awareness activities, as scheduled in work plan. The report below showing main activities that were achieved during the period of September, 25th -5th October, 2012.

Aim: Majority of women working in Garment Factories are participated and disseminated of leprosy awareness.

<u>Intervention Activities</u>	<u>Objectives/</u>	<u>Indicators of achievement (process or Input)</u>	<u>Achievement or Output</u>
Objective One: To select the Garment Factory based in Phnom Penh and Provinces			
1.1. Identify and select Garment Factory in Phnom Penh, Takeo, Kampot, Kg Speu and Kandal provinces		12 factories	12 Garment factories were selected, Phnom Penh 4, Kandal 4, Takeo 2, Kampot 1, Kg Speu 1.
Objective Two: To reform and print the IEC material with the NLEP			
2.1. Correct the leaflet & poster by changing color and background and require numbers of printing for using in the whole campaign		30000 leaflets 360 posters	Leaflets is green color and background and 30000 leaflets and 360 posters were printed with design by NLEP
2.2. Request the T-shirts with logos to NLEP		50 T-shirts	NLEP supported 50 T-shirts
2.3. TV & DVD player request from CIOMAL office		TV& DVD player sets	CIOMAL office had supported TV & DVD player sets.
2.5. Prepare the key words to explain about the true leprosy sign with short and clear.		# Lectures	500 lectures are produced for training labors union
Objective Three: To implement the leprosy awareness campaign in the factories			
3.1. Implement the leprosy awareness campaigns in the garment factories which had selected by the team		6 Garment factories	6 Factories had implemented the leprosy awareness campaign
3.2. Organize the labors to participate in the campaign and groups discussion in the factory.		# labors estimated in 6 factories are 16700	21250 labors had participated in the campaign
3.3. Organize direct training for the member of labors union, nurses and volunteers in the factory about early sign of leprosy and TV show on leprosy spot		labors union/ nurse and volunteers	Trained 214 labors in 6 factories. -6 nurses/ 2 medical doctors (minus from 214) -40 volunteers (minus from 214)
3.4. Distribute the leprosy leaflets to individual labors in the factories.		leaflets	19300 leaflets distributed to the labors in 6 factories.
3.6. Display the leprosy posters at the information board in the factories		posters	145 posters were fixed and disseminated in 6 factories

Table 1
Report IEC used in 12 factories, 2012

Name factory	Number of leaflets & posters distributed		
	Number of labors	#leaflets	#posters
Golden Gain Shoes	4150	4000	30
South Bay	2100	2000	29
Sky Nice	2300	2100	28
The one (Cambodia)	2700	2500	28
Sang Woo	7000	6000	30
YD & RF	3000	2700	00
Total	21250	19300	145

Activity of fixing the posters



Activity of training



Team work and volunteers are distributing the leaflets with explanation





MINISTRY OF HEALTH



**NATIONAL CENTRE FOR TUBERCULOSIS AND LEPROSY CONTROL
NATIONAL LEPROSY ELIMINATION PROGRAMME**

Annual Report Self Care 2012

Achieved from 01 January to 31 December 2012

Gold objective: Capacity building, knowledge and awareness on leprosy issues have increased among health professional, leprosy-affected persons and communities.

Activities to achieve the gold objective:

- A. Organize 14 self-care courses for leprosy-affected persons and the health's staff.
- B. Train 350 leprosy-affected people on how to take care of themselves.
- C. Train 70 Health staff on health care to leprosy-affected persons.
- D. Follow-up self-care training.

Result: Self-care training courses and prevention of disability build-up the awareness and knowledge on leprosy among leprosy-affected persons.

Leprosy-affected persons with nerve damage are at risk of physical harm simply by carrying out normal daily activities. The risk can be reduced by appropriate self-care. The training courses are delivered locally to groups of twenty to twenty five People affected by leprosy over three consecutive days. Each course is also attended by 4 or 5 local health staff, as part of their own continued training program.

A self-care course covers appropriate physical exercises, wound care and safe ways to carry out daily living activities, such as cooking and gardening. It includes:

- A physical assessment by a physiotherapist.
- Instruction and observed practice in Self-care exercises relating to the eyes, hands, and feet.
- Practice in the use of tools and utensils that are needed in daily living activities, to avoid injury.
- Distribution of appropriate shoes and other materials(gloves and glasses) for Self-care.
- Each participant receives a picture book summarizing the information that he keeps for future reference.

Activities A: In the activities have a 13 self-care courses were organized 13 operational Districts of 11 provinces.

Table A: Location and schedule of self-care courses

Province	Operational District	Date
Rattanakiri	Banlung	18-01-2012
Siem Reap	Siem Reap	28-02-2012
Kratie	Kratie	27-03-2012
Kos Kong	Sre Ambel	24-04-2012
Kandal	Ang Snuol	23-05-2012

Kampot	Chouk Kampot	02-07-2012 05-07-2012
Kampong Cham	Oreang Ov Chamkar Leu	16-06-2012 19-06-2012
Kampong Thom	Stong	14-08-2012
Prey Veng	Prey Veng	11-09-2012
Battambang	Battambang	23-10-2012
Takeo	Kirivong	13-11-2012
Total: 11	13	

Activities B: In the activities have 325 Peoples affected persons were trained on how to take care of themselves.

Table B: Location and schedule for Peoples affected persons

Province	Operational District	LAPs
Rattanakiri	Banlung	25
Siem Reap	Siem Reap	25
Kratie	Kratie	25
Kos Kong	Sre Ambel	25
Kandal	Ang Snuol	25
Kampot	Chouk Kampot	25 25
Kampong Cham	Oreang Ov Chamkar Leu	25 25
Kampong Thom	Stong	25
Prey Veng	Prey Veng	25
Battambang	Battambang	25
Takeo	Kirivong	25
Total: 11	13	325

Activities C: In the activities have a 64 health staff were trained on self-care during training of trainers the course and 30 health workers selected in 18 Operational district in Takoe , Kampot and Kandal provinces receive self care courses training.

Table C: Self-care courses for ODs, Province and health staff

Province	Operational District	Health Center staff	Total
Rattanakiri 1	Banlung 1	3	5
Siem Reap 1	Siem Reap 1	3	5
Kratie 1	Kratie 1	3	5
Kos Kong 1	Sre Ambel 1	3	5
Kandal 1	Ang Snuol 1	4	6
Kampot 1	Chouk 1 Kampot 1	3 3	5 4
Kampong Cham 1	Oreang Ov 1 Chamkar Leu 1	3 3	5 4
Kampong Thom 1	Stong 1	3	5
Prey Veng 1	Prey Veng 1	3	5
Battambang 1	Battambang 1	3	5
Takeo 1	Kirivong 1	3	5
Total: 11	13	40	64

Activities D: In the activities have a 262 of 325 Peoples affected persons were followed up at home. As a result, 228 of them had regularly soaked their hands and feet and practice their daily exercises; 34 did not practice soaking

exercise and referred to Kien Kleang Rehabilitation center, 15 for ulcer, 6 for leprosy reaction and 13 for reconstruction surgery.

All of activities this program is jointly by NLEP and CIOMAL staff

Table D: Self-care follow-up

Description	Number	%
Soaking/exercise	228	87.02
No soaking/exercise	34	12.98
Total	262	100

Activities with picture : Activities A

Organized:



Training



Follow-up





CIOMAL

“Campagne Internationale de l’Ordre de Malte contre la Lèpre”

CIOMAL 2012 Annual Report

January 2013

CIOMAL 2012 Annual Report

Results of the 2012 planning

Result I: Capacity building and knowledge on leprosy care have increased among health professionals and awareness on leprosy issues among leprosy-affected people and communities has built up.

Page 2-8

Result II: Access to medical rehabilitative leprosy services has improved. Page 9-12

Result III: A range of socio-economic rehabilitation/reintegration opportunities have been made available to former leprosy-affected persons. Page 13-17

Result IV: Encouraged by support workers, themselves former leprosy-affected persons, in-patients increased their self confidence during their stay at the Kien Khleang Rehabilitation Centre. Page 18

Result V: Regular joint monitoring field visits continued, in coordination between NLEP and CIOMAL. Page 18

Result VI: Adequate management was ensured. Page 19-21

CIOMAL 2012 Annual Report

Results achieved from 1st January to 31st December 2012.

RESULT I: Capacity building and knowledge on leprosy care have increased among health professionals, as has awareness on leprosy issues among leprosy-affected persons and communities

Activities:

- 1.1. Organize 14 self-care training courses for leprosy-affected persons and the Ministry of Health's staff.
- 1.2. Train 350 leprosy-affected people on how to take care of themselves.
- 1.3. Train 70 Ministry of Health staff on health care to leprosy-affected persons.
- 1.4. Follow-up 262 of the 325 leprosy-affected persons who attended the Self-Care courses in 2012.
- 1.5. Conduct 2 awareness campaigns on leprosy in 12 garment factories.
- 1.6. Distribute leaflets concerning leprosy to 30,000 women working in garment factories.
- 1.7. Train 396 garment factories' union leaders, on the basic facts of leprosy.
- 1.8. Evaluate the impact of the factory awareness campaigns on early detection.
- 1.9. Train 350 medical students and physiotherapist students on 'Leprosy Clinical Techniques'
- 1.10. Train 40 Ministry of Health's staff on 'Leprosy Clinical Techniques'.

OUTPUT 1: Self-care and prevention of disability training courses build-up the awareness and knowledge on leprosy among leprosy-affected persons

Leprosy-affected persons, with nerve damage, are at risk of physical harm simply by carrying out normal daily activities. The risk can be reduced by appropriate self-care. The training courses are delivered locally to groups of twenty to twenty five leprosy-affected persons over three consecutive days. Each course is also attended by 4 to 5 local health staff, as part of their own continued training program.

A Self-care course covers appropriate physical exercises, wound care and safe ways to carry out daily living activities, such as cooking and gardening. It includes :

- a physical assessment by a physiotherapist;
 - instructions and observed practice in Self-care exercises relating to the eyes, hands and feet;
 - practice in the use of tools and utensils that are needed in daily living activities, to avoid injury;
 - distribution of appropriate shoes and other materials (gloves, glasses) for Self-care;
 - each participant receives a picture book summarizing the information that he keeps for future reference.
-

1.1. **Thirteen** self-care training courses were organized in 13 Operational Districts of 11 provinces (see table 1).

Table 1. Location and schedule of Self-Care courses

Province	Operational District	Date
Rattanakiri	Banlung	18.1.2012
Siem Reap	Siem Reap	28.2.2012
Kratie	Kratie	27.3.2012
Koh Kong	Sre Ambel	24.4.2012
Kandal	Ang Snoul	23.5.2012
Kampot	Chhouk	2.7.2012
	Kampot	5.7.2012
Kampong Cham	Oreang Ov	16.7.2012
	Chamkar leu	19.7.2012
Kampong Thom	Stong	14.8.2012
Prey Veng	Prey Veng	11.9.2012
Battambang	Battambang	23.10.2012
Takeo	Kirivong	13.11.2012
Total: 11	13	

1.2. **325** leprosy-affected persons were trained on how to take care of themselves (see table 2).

Table 2. Location and Self-Care courses for leprosy-affected persons

Province	Operational District	Participants
Rattanakiri	Banlung	25
Siem Reap	Siem Reap	25
Kratie	Kratie	25
Koh Kong	Sre Ambel	25
Kandal	Ang Snoul	25
Kampot	Chhouk	25
	Kampot	25
Kampong Cham	Oreang Ov	25
Kampong Thom	Chamkar leu	25
	Stong	25
Prey Veng	Prey Veng	25
Battambang	Battambang	25
Takeo	Kirivong	25
Total: 11	13	325

1.3. Sixty-four health staff were trained on leprosy self-care, during training of trainers courses (see table 3)

Table 3. Self-Care courses for ODs, Provincial and Health Center staff

Provincial supervisor	OD Supervisor	Health Centre Staff	Total
Rattanakiri	Banlung	3	5
Siem Reap	Siem Reap	3	5
Kratie	Kratie	3	5
Koh Kong	Sre Ambel	3	5
Kandal	Ang Snoul	4	6
Kampot	Chhouk	3	5
	Kampot	3	4
Kampong Cham	Oreang Ov	3	5
	Chamkar leu	3	4
Kampong Thom	Stong	3	5
Prey Veng	Prey Veng	3	5
Battambang	Battambang	3	5
Takeo	Kirivong	3	5
Total: 11	13	40	64

1.4. Follow-up sessions on leprosy self-care were conducted with the trained leprosy affected persons.

262 of the a/m 325 leprosy-affected persons were followed up at home. As a result, 228 had regularly soaked their hands and feet and practiced their daily exercises and 34 did neither soaking nor exercises and were referred to the Kien Khleang Rehabilitation Centre : 15 for ulcers, 6 for leprosy reaction and 13 for reconstructive surgery (see table 4).

The Self-care follow-up programme was jointly conducted by CIOMAL and NLEP.

Table 4. Self-Care follow-up / evaluation

Description	Number	%
Practiced soaking and exercises	228	87.02
Practiced neither soaking nor exercises	34	12.98
Total	262	100

OUTPUT 2: Leprosy awareness campaigns in garment factories build awareness on leprosy issues in the communities

Raising awareness events were conducted in 6 garment factories in the weeks leading up to the Khmer New Year holidays in April and a further 6 before the Pchum Ben holidays in October, when the factories close and the staff go back to their home villages.

At each factory, leaflets and posters, describing the signs and symptoms of leprosy and including photographs of skin lesions, were distributed to the employees, who were then supposed, within their community, to encourage people with signs and symptoms of leprosy to come forward and go to a health centre.

The CIOMAL team, which was accompanied during those raising awareness events by staff of the Ministry of Social Affairs, Veterans and Youth Rehabilitation (MoSVY) and the National Leprosy Control Program (NLEP), remained available to answer questions to many thousands garment factory workers.

1.5. Two awareness campaigns were organized in 12 garment factories, of which 4 garment factories in Phnom Penh, 4 in Kandal, 1 in Kampot, 2 in Takeo and 1 in Kompong Speu provinces (see table 5).

Table 5 Garment factories visited

Province	Name of factory	Date
Phnom Penh	Inter Hope Well	3.4.2012
	Moha	4.4.2012
	Golden Gain Shoe	25.9.2012
	The One Cambodia	28.9.2012
Kandal	South Bay	26.9.2012
	Sky Nice	27.9.2012
	Chimly	30.3.2012
	G-Foremost	2.4.2012
Kg Speu	Sang Woo	2.10.2012
Takeo	Asia Dragon	27.3.2012
	YD&RF	3.10.2012
Kampot	Direct Route	28.3.2012
Total:	5	12

1.6. Leaflets and posters distribution

30,000 leaflets were distributed to employees working in garment factories and 360 posters were displayed in the garment factories compound (see table 6)

Table 6 leaflets and posters distribution

Name of factory	Number of leaflets distributed	Number of posters displayed
Inter Hope Well	1000	30
Moha	2500	30
Golden Gain Shoe	4000	30
The One Cambodia	2500	30
South Bay	2000	30
Sky Nice	2100	30
Chimly	2500	30
G-Foremost	1500	30
Sang Woo	6000	30
Asia Dragon	2000	30
YD&RS	2700	30
Direct Rouge	1200	30
Total	12	360

1.7. Labour unions' leaders participation in the campaigns

407 leaders of labour unions and 17 health workers were educated on the basic facts of leprosy to brief their colleagues and communities (see table 7).

Table 7 Participation in the campaigns

Name of factory	Number of leaders of labor unions	Health Workers	Total
Inter Hope Well	34	1	35
Moha	35	1	36
Golden Gain Shoe	34	1	35
The One Cambodia	32	2	34
South Bay	33	1	34
Sky Nice	32	1	33
Chimly	32	2	34
G-Foremost	32	2	34
Sang Woo	48	2	50
Asia Dragon	35	1	36
YD&RS	27	1	28
Direct Route	33	2	35
	407	17	424

1.8. Impact evaluation of the awareness campaign in garment factories

The leprosy awareness and early case detection evaluation was conducted by interviewing factory workers, community members and new cases detected. Summary of the results :

- **450 garment factory workers were interviewed** : 90.44% of them read the leprosy leaflet distributed during the campaign, 94% realized that leprosy is contagious, 99.11% recognised the basic signs and symptoms of leprosy, 100% knew where to go for leprosy treatment, 84.22% realized the treatment for leprosy is free of charge and 86% brought the leaflet back home. (see table 8)

Table 8 Impact of the campaigns on factory employees (450 samples)

Description of questionnaires	Number	%
Have read leaflet	407	90.44
Realise leprosy is a contagious disease	423	94
Recognise signs of leprosy	446	99.11
Know where to go for treatment	450	100
Realize the leprosy treatment is free of charge	379	84.22
Have taken the leprosy leaflet back home	387	86

- **150 people living in the communities**, whose family members were working in the garment factories, were interviewed on their understanding of leprosy : 70% of them received the leaflet from their relative, 88% realized that leprosy is contagious, 92.66%

recognised the basic signs and symptoms of leprosy, 100% knew where to go for leprosy treatment and 68% realized the treatment for leprosy is free of charge. (see table 9)

- **36** new cases detected between 2009 to 2011 were interviewed to find out through which channel they were detected. Out of these, 9 cases (25%) were registered for their treatment at the Kompong Trach, Kampot and Ankor Chey operational districts of Kampot province and were either garment factory workers or relatives of those workers.

Table 9 Impact on people in communities (150 samples)

Description of questionnaires	Number	%
Have received the leaflet from their daughter/son	105	70
Understand leprosy is a contagious disease	132	88
Recognize signs of leprosy	139	92.66
Know where to go for treatment	150	100
Realise the treatment of leprosy is free of charge	102	68

OUTPUT 3: Students and health staff trained on ‘Leprosy clinical techniques and practical activities’ increase awareness, capacity and knowledge on leprosy issues among the medical and para-medical community.

In collaboration with the University of Health and Sciences, the Leprosy Clinical Techniques and Practical Activities (learning by doing) were integrated into the University of Health and Sciences’ curriculum. It is required that all fifth year medical students and physiotherapy students attend the course for at least 10 days (3 hours per day).

In addition, the leprosy supervisors at district and provincial level are also trained on the above subject at KKRC. Approximately 20 to 30 medical and physiotherapy students, as well as leprosy supervisors attend each training course. The Leprosy Clinical Techniques and Practical Activities include the following:

- Pre-test
- Consultation with outpatients; differences between leprosy lesions and other dermatology lesions
- Leprosy diagnosis, classification and treatment
- Leprosy complications: Reaction type I, type II and Dapsone reaction
- Treatment of reactions
- Nerves function
- Nerves damage
- Physiotherapy treatment
- Ulceration prevention
- Dressing procedures
- Post test

1.9. Results of training:

- **338** medical, **26** physiotherapy and **13** prosthetic-orthotic students were trained on ‘Leprosy Clinical Techniques, physiotherapy treatment and Practical Activities’
- **4** Operational District leprosy supervisors were also trained on ‘Leprosy Clinical Techniques and Practical Activities’ in the framework of their training at the National Leprosy Control Program
- In addition, **56** Operational District and Provincial Leprosy Supervisors were also trained one day on the practice of ‘Leprosy Clinical Techniques’, during their Leprosy Training Workshop (see table 10).

Table 10. Training

Description	Gender		Total
	Male	Female	
5 th year medical student	224	114	338
Physiotherapy student	12	14	26
Prosthetic Orthotic student	11	2	13
Leprosy Supervisor	4	0	4
Total	251	130	381

RESULT II: Access to medical rehabilitative leprosy services has improved.

Activities:

- 2.1. Detect leprosy patients coming to KKRC and treat them with MDT.
- 2.2. Treat leprosy patients who have complications as in/out patients.
- 2.3. Dressing, wound care, soaking and scraping of patients who have palm and/ or plantar ulcer as in/out patients.
- 2.4. Collect and send specimens for analysis at Pasteur and Biomet laboratory.
- 2.5. Provide physical therapy, plaster cast treatment and self care classes to in/out patients.
- 2.6. Provide medical rehabilitation aid appropriate to the needs of patients.
- 2.7. Provide plastic and reconstructive surgery for eyes, hands and feet.
- 2.8. Conduct evaluation of post reconstructive surgery

OUTPUT 2: KKRC is the only leprosy reference centre in Cambodia and treats free of charge leprosy complications affecting persons throughout the country.

The KKRC operates as a National Referral Center for complicated leprosy cases and also provides consultations to suspected leprosy cases. All services are free of charge.

The reasons for admission to the KKRC include surgery, physiotherapy for improving the physical function and appearance, ulcer treatment, the management of leprosy reactions and the provision of protective or assistive devices (prosthetics, crutches, protective shoes and gloves, etc).

While patients stay at the centre, they are trained to care for their hands, feet and eyes in order to prevent any further disabilities. They are also taught by three social assistants (themselves former leprosy patients) to regain confidence by setting realistic objectives for themselves and by participating in different social activities organized by the center.

The KKRC has a capacity of 43 beds, but, in case of need, can accommodate up to 50 patients.

- 2.1.** KKRC carried out **1,253** consultations for outpatients with non leprosy related skin diseases; **33** new leprosy cases were detected (PB=8, MB=25) and **429** leprosy complications treated.
In total, **1,715** people benefitted from the center care, including **999** male, **716** female and **195** children below the age of 15 years (see table 11).

Table 11. Consultation services

Description	Adults		Children		Total
	Male	Female	Male	Female	
Skin Disease	570	489	89	105	1253
New Leprosy cases	21	12	0	0	33
Leprosy complication	318	110	1	0	429
Total	909	611	90	105	1715

2.2. 226 inpatients were treated including 3 for reaction type I, 11 for type II, 2 for reaction DDS, 11 for neuritis, 141 for plantar ulceration, 8 for prosthesis and 50 for reconstructive surgery (see table 12).

All inpatients were tested for possible hearing problems; they were treated and fitted with hearing aids in case of need. These specific services were provided by the **All Ears Cambodia** organisation.

The bed occupancy rate was **67.596%** and the average length of stay was **46.775** days.

Table 12. Hospitalization services (inpatient)

Description	Adult		Child		Total
	Male	Female	Male	Female	
Reaction I	2	1	0	0	3
Reaction II	11	0	0	0	11
Reaction DDS	1	1	0	0	2
Neuritis	10	1	0	0	11
Ulceration	106	34	1	0	141
Prosthesis	6	2	0	0	8
Physiotherapy	0	0	0	0	0
Reconstructive Surgery	31	19	0	0	50
Total	167	58	1	0	226

2.3. 236 outpatients were treated including 135 with MDT, 22 for reaction type I, 40 for reaction type II, 8 for ulcer care and 31 came for follow up (see table 13).

Table 13. Leprosy affected persons treated as outpatient

Description	Adult		Child		Total
	Male	Female	Male	Female	
MDT	97	38	0	0	135
Reaction I	15	7	0	0	22
Reaction II	35	5	0	0	40
Ulceration	8	0	0	0	8
Follow up	23	8	0	0	31
Total	178	58	0	0	236

2.4. 6,004 medical acts including 5,282 dressing, 231 for wound care and 491 for soaking/scraping (see table 14).

Table 14. Medical acts

Description	Dressing	Wound Care	Soaking/Scraping	Total
In-patients	226	226	226	
Medical acts	5,282	231	491	6,004

2.5. 146 specimens were sent for radio-pathology analysis including 69 for X-ray, 34 for blood tests, 13 for stool exam, 1 urine test and 29 for skin smears at the Pasteur Institute, Biomet and Calmette laboratories (see table 15).

Table 15. Specimen analysis

Description	X-Ray	Blood Test	Stool Exam	Biopsies	Urine Exam	Ultra Sound	Skin Smear	Total
In-patients	226	226	226	0	226	0	226	
Services provided	69	34	13	0	1	0	29	146

2.6. 462 in/outpatients were treated and educated including 400 for physical therapy treatments, 134 for plaster cast treatments and 270 for self-care education (see table 16).

Table 16. Physical therapy, plaster casts and self-care classes

Description	Physical Therapy	Plaster cast	Self-care	Total
In/outpatients	462	462	462	
Services provided	400	134	270	804

2.7. 462 in/outpatients received rehabilitative aid, including 150 sunglasses, 25 splints, 19 crutches, 155 protective gloves, 160 protective shoes, 41 adapted shoes, 33 anti-drop foot, 10 mold shoes, 9 artificial limb and 46 liters of skin oil. In additional, 311 device aids were provided to leprosy-affected persons at provinces, such as Treung center of Kompong Cham province and Foot-Care unit in Battambang Hospital (see table 17).

Table 17. Medical rehabilitative aid for KKRC/Provinces

Description	Number/KKRC	Number/Province
Sun Glasses	150	97
Splints	25	
Crutches	19	
Protective Gloves	155	97
Protective Shoes	160	117
Adapted Shoes	41	
Anti-drop foot	33	
Mold Shoes	10	
Artificial Limb	9	
Skin oil	46 liters	6 liters
Total	602 aid devices	311 aid devices

2.8. The mobile Vietnamese surgical team (Dr. Nguyen Kim Khoa, Mrs. Nguyen Thi Hoang Ly nurse, Mrs. Nguyen Thi Minh Chanh physiotherapist), jointly with a local surgical team (Dr. Ry Sinna, Dr. Hang Sochivik, Dr. Van

Vichhay, Mr. Khun Leak) operated **13** leprosy patients on 13th to 17th February 2012, **17** leprosy patients on 21st to 24th May 2012 and **14** leprosy patients on 3rd to 6th December 2012 at KKRC.

Dr. Scott Murray Thomas, a British volunteer reconstructive surgeon, the mobile Vietnamese surgical team and a local surgical team operated 20 leprosy patients from 4 to 7 September 2012 at KKRC. (see table 18).

Table 18. Reconstructive and minor surgery

Description	Techniques	Gender		Patients	Cases
		Male	Female		
Reconstructive Surgery					
Eyes	TMT	4	1	5	6
	Tarsoraphy	3	0	3	3
Hands	Webplastie	0	0	0	0
	EFxT-Lasso	4	6	10	10
	Opponens	2	2	4	5
Feet	TPT	12	3	15	15
	Arthrodesis	0	2	2	3
	Tenodesis	0	0	0	0
	Toes amputation	6	1	7	7
	B/K amputation	3	2	5	5
	Fore-foot amputation	0	0	0	0
Rhinoplasty		2	1	3	3
Cataract		5	2	7	7
Eye brow		0	0	0	0
Skin Graff		3	0	3	3
Total		44	20	64	67
		Male	Female	Patients	Case
Minor Surgery	Bone trim	32	13	45	48
	Minor surgery	7	2	9	9
Total		39	15	54	57

2.2. The evaluation on post reconstructive surgery was conducted by interviewing **49** former beneficiaries of reconstructive surgery and by measuring their “Range of Movement” improvement (muscle strength and flexing/bending of the tendon), with the following results:

- **4** persons had eye surgery with very good outcome
- **20** persons had hand surgery with 18 very good outcome and 2 satisfactory outcome
- **25** persons had foot surgery with 19 very good outcome and 6 satisfactory outcome

RESULT III: A range of socio-economic rehabilitation/reintegration opportunities have been made available to former leprosy-affected persons.

Activities:

- 3.1. Provide interest-free loans to 70 leprosy-affected persons to set up their own business.
- 3.2. Provide financial support to 30 leprosy affected persons who are their family's sole earner, whilst they receive reconstructive surgery.
- 3.3. Provide financial to 20 destitute disabled persons are unable to participate in income generation project.
- 3.4. Constructing the house for destitute disable persons.
- 3.5. Continue sponsorships to 6 leprosy-affected persons to study at university. (1st Group)
- 3.6. Continues sponsorships to 4 leprosy-affected persons to study at university (2nd Group)
- 3.7. Continues sponsorships to 4 leprosy-affected persons to study at university (3rd Group)
- 3.8. Provide sponsorships to 20 leprosy-affected persons to start or continue their education at primary or high school.
- 3.9. Provide sponsorships to leprosy-affected persons to follow vocational training skills courses; train KKRC in-patients in basic Khmer literacy and computer typing.

OUTPUT 3: Loans help former leprosy-affected persons to reintegrate into their communities and live self-supporting lives.

Socio-economic rehabilitation is included in the program for two reasons. On the one hand, it helps former leprosy-affected persons who do not have an accepted role in their communities to reintegrate into society and live self-supporting lives ; on the other hand, many leprosy-affected persons are only able to take care of themselves successfully and avoid impairment or further impairment if they significantly change the way they live their lives.

For leprosy-affected persons, we provide either a loan to start a small business, or sponsorship for vocational training or sponsorship to continue their education at the primary, secondary school or university.

- 3.1.** Loans, with yearly interests of 1,5%, were provided to **67** former leprosy affected persons for starting their micro-business, agricultural or animal raising project (see table 19).

Between 100-250 USD were provided to each client, for a total of USD 12,200. The clients are supposed to reimburse within a period of 2 years.

In 2012, clients repaid to CIOMAL a total of 6,510 USD.

An SER Team compose of two to three CIOMAL staff conducted 20 field trip missions to identify beneficiaries, make assessments, deliver loans, collect repayments and monitor/follow-up clients.

Table 19. LOANS: Location and type of businesses supported

Location/ Province	Livestock	Gardening	Grocery shop	Motorbike repairing shop	Recyclin g business	Motorbike taxi-driver	Fishing	Total
Kg Chhnang	0	2	1	0	0	0	0	3
Kg Thom	4	0	2	1	0	0	1	8
Kg Cham	4	4	7	0	11	0	1	27
Kandal	2	0	0	0	0	0	0	2
Preh Vihear	1	0	0	0	0	0	0	1
Takeo	1	0	1	1	0	0	0	3
Prey Veng	4	0	2	2	0	0	0	8
Siem Reap	0	0	1	0	0	0	1	2
Kampot	1	0	0	0	0	0	0	1
Kg Speu	6	0	1	0	1	1	1	10
Kratie	0	0	0	1	0	0	0	1
Battambang	1	0	0	0	0	0	0	1
Total	24	6	15	5	12	1	4	67

3.2. As they were the family's sole earner, 16 former leprosy-affected persons received a financial support to enable them to undergo reconstructive surgery at KKRC (see table 20)

3.3. 43 destitute disabled persons received food allowance for their daily living (see table 20).

3.4. 6 small houses were built for six families, two in Pursat province (Mr. Hun Voeun, Mrs. Hun Mom), two in Kg Speu (Mr. Mom Seth, Mrs. Ouk Vy) and two in Kg Cham (Mr. Ly Phorn, Mrs. Thoek Van). In addition, one toilet was constructed for Mrs. Lak Kiri's family and their neighbours in Kg Chhnang province. Two houses were renovated for Mrs. You Ly's family in Kompong Chhnang and Mrs. Hun Nhor in Kg Cham province (see table 20).

Table 20. Support to destitute disabled persons

Description	Number
Support patients to undergo reconstructive surgery	16
Support destitute disabled persons	43
Build houses for destitute disabled persons	6
Build a toilet for disabled persons	1
Renovate houses for disabled persons	2
Total	68 persons

3.5 Education sponsorships (*Project 2009-2013*) (tuition fee, accommodation, living allowance and student's uniform) were provided to a 1st group of 6 students affected by leprosy or whose parents were affected by leprosy, in order to continue their education at the university. In 2012, they finished the 4th year of their university education (see table 21).

Table 21. Name, medical history, study subject and scores of the 1st group

N	Name	Sex	Age	Medical History	Major	Starting Date	Score
1	Ngeth Bunsopheak	M	1990	Child of leper	Information Technology	20.2.09	C
2	Porn Seyha	M	1991	Child of leper	Business Management	27.2.09	B
3	Kouch Soknai	F	1987	Child of leper	Accountant/ Finance	24.8.09	C+
4	YoungBunthouen	M	1985	Former leper	English Literature	1.10.09	B

5	Ven Malin	F	1991	Former leper	Accountant/ Finance	1.10.09	C
6	Ann Srey Neth	F	1989	Former leper	Finance/Banking	1.10.09	C

3.6 Education sponsorships (*Project 2011-2015*) (tuition fee, accommodation, living allowance and student's uniform) were provided to a 2nd group of 4 students in order to continue their education at the university. They are now starting the 2nd year of their university education (see table 22).

Table 22. Name, medical history, study subject and scores of the 2nd group

N	Name	Sex	Age	Medical History	Major	Starting Date	Score
1	Choeun Ith	M	1988	Former leper	Marketing	01.9.11	C
2	Ka Laksmi	F	1993	Child of leper	Finance/Banking	04.9.11	C
3	Bao Vanna	F	1992	Child of leper	Account/ Finance	04.9.11	B-
4	Keu Sarath	F	1990	Child of leper	English Literature	12.12.11	B-

3.7 Education sponsorships (*Project 2012-2016*) (tuition fee, accommodation, living allowance and student's uniform) were provided to a 3rd group of 3 students for their 1st year university education. (see table 23)

Financial support was provided to all students to visit their family during Khmer New Year, Phchum Ben Day and Year End break.

Students were invited twice to the Kien Khleang Rehabilitation Centre (KKRC) and once to the Treung leprosy village in Kg Cham province, to help leprosy-affected persons in their daily works, such as cleaning houses, washing clothes and gardening.

In one year, each student was monitored and followed up twice at the university and twice at their living place.

Table 23. Name, medical history, study subject and scores of the 3rd group

N	Name	Sex	Age	Medical History	Major	Starting Date	Score
1	Horm Manich	F	1994	Child of leper	Accountant/Finance	24.10.12	N/A
2	Nak Rasy	M	1990	Child of leper	English Literature	28.10.12	N/A
3	Poeu Pao	M	1992	Former leper	Economic	13.10.12	N/A

3.8 Education sponsorships (Study material, student's uniform, school fees and food) were provided to **20** students affected by leprosy in order to continue their education at primary and secondary school. **16** of them were studying at secondary school (grade 7-12) and **4** at primary school (grade 1-6). (see table 24)

In 2012, 4 students, Miss **Num Channa**, Miss **Horm Manich**, Mr. **Nak Rasy** and Mr. **Poeun Pao** successfully completed their high school exam. Three received CIOMAL sponsorships to study at the university (*they are the 3rd above-mentioned university group 2012-2016*). The fourth student, Miss. **Num Channa**, received a sponsorship from the Youth Union.

Four new students, Miss **Sam Chantha**, Mr. **Thol Bunthoeun**, Miss **Pun Chanthea** and Miss **Chheang Sreynith** received CIOMAL sponsorships to continue their study at primary and secondary school. Those 4 students replaced the 4 students who started university.

Two bicycles and helmets were provided to Miss. **Sam Chantha** and Mr. **Orn Chheang Houth**, whose home was far away from school.

Every year, each student is monitored and followed-up 4 times at school or at home.

Table 24. Name, medical history, study grade and location (primary level)

N	Name	Sex	Age	Medical History	Study Grade	Sponsorship from	Province
1	Chea Tong	M	12	Child of leper	7	26.11.2010	Kg Chhnang
2	San Vicheth	M	14	Former leper	6	26.11.2010	Kg Chhnang
3	Chheang Sreynith	F	12	Child of leper	2	19.12.2012	Kg Cham
4	Pun Chanthea	F	11	Child of leper	5	3.11.2012	Kg Cham

Table 25. Name, medical history, study grade and location (secondary level)

N	Name	Sex	Age	Medical History	Study Grade	Sponsors date	Province	Remark
1	Keu Srey Pao	F	17	Child of leper	9	06.05.2011	KgChhnang	Bicycle
2	Neth Huo	F	16	Former leper	8	23.06.2011	KgChhnang	Bicycle
3	Chan Neth	M	19	Former leper	9	19.05.2010	Kampot	
4	Thol Bun Theoun	M	14	Child of leper	7	3.11.2012	Kampot	
5	Khan Sok Nan	F	15	Former leper	9	11.05.2010	Kg Cham	
6	Hou Kea Ley	M	20	Child of leper	11	23.11.2012	Battambang	
7	Sam Chantha	F	16	Child of leper	8	26.10.2012	Pursat	
8	OunChheang Houth	M	16	Former leper	11	30.11.2010	Kg Cham	
9	Meas Srey Neang	F	15	Child of leper	11	17.11.2010	Battambang	
10	Soeun Kai	F	18	Former leper	8	14.10.2011	Siem Reab	Bicycle
11	Youn Yi	M	18	Former leper	12	15.12.2010	Prey Veng	Bicycle
12	Chhom Thearoth	M	18	Child of leper	10	20.04.2010	Kg Cham	
13	Chom Cheng	M	16	Former leper	11	06.04.2010	Kg Thom	
14	Phal Sophy	F	16	Child of leper	12	08.04.2010	Battambang	
15	Nhem Tith	M	16	Child of leper	8	29.9.2010	Kampot	
16	Hun Sa Em	F	14	Child of leper	8	22.12.2010	Pursat	

3.9 105 former leprosy-affected persons were trained, including 56 on Khmer literacy, 23 on computer basic typing skills, 1 on tailoring, 7 on mechanics and 1 on agriculture at KKRC's Activities Room or at a Vocational Training Center. (see table 26)

Table 26. Literacy skills and vocational training

No	Description	Gender		Total
		Male	Female	
1	Khmer literacy	52	31	83
2	Computer basic typing skills	28	4	32
3	Tailor	0	04	04
4	Mechanic	02	0	02

5	Motorbike Repairing	06	0	06
	Total	88	39	127

RESULT IV: Encouraged by support workers, themselves former leprosy-affected persons, in-patients increase their self confidence during their stay at KKRC.

Activities:

- 4.1 Assist/support in-patients in developing their daily living skills, self confidence and plan their own future.
- 4.2 Enable in-patients to participate in social activities.
- 4.3 Enable in-patients to participate in the International Disabled Day's events.
- 4.4 Organize, at KKRC, the World Leprosy Day celebration on the last Sunday of January

OUTPUT 4: In-patients at KKRC, through the example of the 3 KKRC support workers and with the help of the medical and para-medical staff, realise that there is a life after leprosy and the majority of them envisage a brighter future.

The leprosy-affected persons were empowered by support-workers to take responsibility for their daily living activities, participate in social gatherings and plan for their own future.

- 4.1. 226 former leprosy-affected persons were trained on Daily Living Skills during their stay at KKRC. (see table 27)
- 4.2. 115 former leprosy affected persons participated in social activities, such as visiting museums, exhibitions, shopping and attending movies. (see table 27)
- 4.3. 40 former leprosy affected persons participated in the events of the International Day for Disabled Persons, held on 3rd December 2012 at Koh Pich City. The event was organised by the Ministry of Social Affairs, Veterans and Youth rehabilitation. (see table 27)
- 4.4. 60 leprosy-affected persons were invited to participate in the World Leprosy Day celebration, organised by CIOMAL on 27th January 2012 at the Kien Khleang Leprosy Rehabilitation Center. (see table 27)

Table 27. Daily living skills, participation and self confidence

Description	Gender		Total
	Male	Female	
Training in daily living skills	169	57	226
Participating in social activities	65	50	115
Participating in the International Day for Disabled persons	26	14	40
Participating in the World Leprosy Day	45	15	60
Total	305	136	441

RESULT V: Regular joint monitoring field visits continue, in coordination between NLEP and CIOMAL.

Activities:

5.1 To supervise the implementation of the leprosy program, participate in some 50% of the field monitoring visits organized by the NLEP.

OUTPUT 5: On top of ensuring implementation of the leprosy program, the monitoring field visits build the capacity and knowledge of health workers, thereby facilitating the early detection of leprosy cases.

5. CIOMAL staff joined **16** NLEP monitoring missions in **11** provinces (out of 24 provinces), **48** Operational Districts (out of 76 ODs) and **142** health centers (out of 956 HCs).
Finally, **187** leprosy-affected persons were visited in their home villages

Table 28 **Join NLEP supervision visit**

Missions	Provinces	Operational Districts	Health Centers	Visited patients at their villages
16/70	11/24	48/76	142/956	187

RESULT VI: Adequate management is ensured.

Activities:

- 6.1 Organize monthly management meetings
 - Coordination with NLEP for teaching/training programmes
 - Prepare the 2013 plan of action and budget.
 - Produce regular reports
- 6.2 Purchase drugs and rehabilitation aids for KKRC
- 6.3 Supply materials for dressing to the Foot-Care Unit in Battambang Hospital and Treung Health Centre
- 6.4 Train and supervise the health staff working in Battambang and Treung
- 6.5 Pay incentives to the health staff working in the Foot-Care Unit of the Battambang Hospital and the Treung Health Centre.

OUTPUT 6: Effective and efficient management result in quality services to leprosy affected persons and satisfaction among staff.

6.1. A monthly management meeting took place to discuss technical issues with the participation of key persons in KKRC and field staff. The meeting was chaired by Dr. Khoun Ngoun Heng, technical director, and the minutes were circulated to all participants.

- A plan of action and budget for 2013 were developed.
- Reports were produced for CIOMAL, ANESVAD, NOVARTIS, SOLIDARITE INTERNATIONALE, PETER DONDEERS and RAOUL FOLLEREAU Foundations.

6.2. Pharmaceutical and aid devices

Parts of the drugs and medical equipments needed for the treatment of patients were purchased 4 times per year ; other drugs were supplied by the Central Store of the Ministry of Health.

403 pairs of protective shoes, 250 sunglasses and 250 pairs of hand gloves were purchased from the local market to be distributed to patients with loss of sensation or nerve damage.

In addition, 265 plaster rolls were purchased from Vietnam

6.3. Supplies to Battambang Foot-Care Unit and Treung Health Center

Materials for dressing were supplied to the Foot-Care unit of Battambang Hospital and to the Treung Health Centre.

Foot-wear and materials for soaking were supplied to the Foot-Care Unit of Battambang Hospital and to the Treung Health Centre.

6.4. Capacity-building

A mobile KKRC medical team visited once every two months the Foot-Care Unit in Battambang and the Treung Health Centre to train and monitor the medical and para-medical staff.

Two medical doctors (Dr. Hem Samphy, Dr. Un Vanthan) attended a four weeks training course on “Leprosy complications management and minor surgery” (April and May 2012) in the Ho-Chi-Minh Dermatology hospital. Two nurses were also sent to attend a one week training course on “Wound Dressing Skills and Sterilizations procedure” in the same hospital (April and May 2012).

One medical doctor working in the Kien Khleang Centre (Dr. Dam Molyva) is now following a two years course (October 2011 to September 2013) at the Medical University in Ho-Chi-Minh, specialising in dermatology.

6.5. Incentives for motivation

Monthly incentives were provided to 5 Health staff working in Treung health centre and to 5 more staff in the Foot-Care Unit of the Battambang Provincial hospital.

Additional monthly incentives, meant to encourage individual commitment, were provided to 3 officials in the Ministry of Social Affairs, Veterans and Youth rehabilitation (MoSVY), to facilitate the organisation of the leprosy awareness campaigns in garment factories.

KKRC maintenance

The roofs of the operation theatre and physiotherapy room were renovated because they were leaking during the rainy season. Other small elements were changed or added, like lockers, shelves, rails, beds and windows. In addition, the entry road to the center was rehabilitated with reinforced concrete and grass was planted all around.

Staff movement

KKRC staff participated in meetings of the Disability Action Council and the Cambodian Physiotherapist Association and shared information on the KKRC Leprosy Rehabilitation services.

Mr. Bou Sophal, jointly with the French Order of Malta, visited the leprosy program in LAO PDR on 26 to 30th March 2012, to evaluate the possibility for launching a CIOMAL SER project.

Ten key staff participated in and facilitated the Insensitive Foot Care Seminary which was held on 22nd to 23rd November, 2012 at the Battambang Referral Hospital. The seminary was organised by the National Leprosy Control Programme and supported by the French Oder of Malta.

Five senior CIOMAL staff joined an NLEP team and participated in the Contact Survey project in February, March, May and December 2012.

Visitors

In January 2012, **H.E. Prof. Eng Hout**, Secretary of State of the **Ministry of Health** and **H.E. Sem Sokha**, Secretary of State of the **Ministry of Social Affairs, Veterans and Youth rehabilitation** visited KKRC, where they presided over the World Leprosy Day.

In March 2012, **Mr. Arnaud de Vivies**, Director in the **French Order of Malta** and his colleagues visited KKRC to discuss programme planning.

In April 2012, **Mrs. Benedicte de Charette**, representative of the Raoul Follereau Foundation visited KKRC to discuss a contribution to the socio-economic rehabilitation project.

Mrs. Indira, from the ANESVAD Foundation, visited CIOMAL in May 2012 to discuss on the new ANESVAD financial system and format of reporting.

In October 2012, **Ms. Chrystel Dayer**, Secretary general of the **CIOMAL** visited **KKRC** and socio-economic rehabilitation projects in the field.

OBJECTIVES FOR THE NATIONAL LEPROSY PROGRAMME YEAR 2013

OBJECTIVES FOR THE NATIONAL LEPROSY PROGRAMME AND LEPROSY REHABILITATION 2013

Objective 1: The case management of the leprosy control program is improved

Objective 2: Improved early case detected (case finding on time)

Objective 3: Leprosy-affected people have easier and effective access to medical and socio-economic rehabilitation services.

Objective 4: Capacity building, knowledge and awareness on leprosy issues are increased among affected persons, health professional and communities.

Objective 1: The case management of the leprosy control program is improved.

- 1.1 Operational district supervisors implement the defined package of activities covering diagnosis, treatment, management of reactions, contact tracing and follow-up.
- 1.2 Operational district supervisors educate health centre staff to achieve the integration of case detection into routine health centre activities.
- 1.3 NLEP/ Provincial Leprosy supervisors provide training and technical support to the operational district supervisors (ODs) by regular follow-up and confirmation of reports and strengthening of leprosy surveillance system.
- 1.4 Ensure that data are collected regularly and accurately entered into the central database and cohort analysis for the PB patients in year 20011 and MB patients in year 20010 and analysis all new case reporting
- 1.5 Provide capacity building for NLEP and provincial staff on monitoring and evaluation skills.
- 1.6 Strengthen activity in high endemic province and reduce it in low endemic province where the average number of new cases was less than 90 in the last 6 years (2006-2011)

Objective 2: Improved early case detected (case finding on time)

- 2.1 Ensure qualities of leprosy service are available at all levels
- 2.2 Contact tracing survey to leprosy affected people from 2001to 2010 in 15 operational districts selected.
- 2.3 Contact tracing survey in leprosy low endemic area selected to ensure no new case of leprosy in their community

Objective 3: Leprosy-affected people have easier and effective access to medical and socio-economic rehabilitation services.

- 3.1 Continue support foot-care unit in Battambang referral hospital in Battambang Province and Treung Health Centre in Kampong Cham province.
 - 3.2 Provide 250 in-patient admissions and 1000 out-patient consultations at Kien Khleang Centre.
 - 3.3 Provide 100 in-patient admissions and 200 out-patients consultation at Foot Care unit in Battambang referral hospital
 - 3.4 Provide 1000 out-patients consultation at leprosy ward in CENAT
 - 3.5 Continue to provide self care and prevention of disability courses for patients who have suffered leprosy related nerve damage.
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- 3.6 Continue to work with other government and non-government rehabilitation organizations to improve the availability of information and services.
- 3.7 Continue to provide, at the Kien Khleang Centre, clinical placements for undergraduate health students, including assessment against learning objectives agreed with the relevant university departments.
- 3.8 Improve the standard of living for 70 new clients through micro-enterprise and livestock projects.
- 3.9 Refer 20 new clients to vocational training centre and continue to seek new alliances with other vocational training suppliers in order to give clients as wide a range of opportunities as possible.
- 3.10 Provide income and material support to 20 people who are unable to participate in micro-enterprise, livestock projects or vocational training.
- 3.11 Provide scholarships for youths affected by leprosy or youths of families affected by leprosy.

Objective 4: Capacity building, knowledge and awareness on leprosy issues are increased among affected persons, health professional and communities.

- 4.1 Carry out awareness campaigns in 6 garment factories in the period leading up to Khmer New Year (April) and a further 6 factories before Pchum Ben (October).
 - 4.2 Provincial and operational district leprosy supervisors disseminate the information about leprosy and access to treatment through *Village Health Support Groups*, local NGOs and other appropriate organizations or individuals.
 - 4.3 Produce up-to-date ‘‘*Information Education Communication*’’ (IEC) materials.
 - 4.4 Provide leprosy awareness training to staff working in referral facilities of the general health services.
 - 4.5 Disseminate information through mass media through channels selected locally based radio programmes in all available provinces to improve leprosy awareness and knowledge of locally based leprosy services.
 - 4.6 Organize insensitive foot care workshop to health staff surrounding to Battambang province
 - 4.7 Organize plantar ulcer healing campaign in Battambang province.
 - 4.8 Organize leprosy awareness to referral hospital staff to improve the integration of case detection into routine health centre activities.
 - 4.9 Provide two workshops (annual workshop / workshop review activity plan and plan for next year activity) for leprosy provincial supervisors and operational district leprosy supervisors selected.
 - 4.10 Organize two training courses on self-care and prevention of disability for 20 operational district leprosy supervisors.
 - 4.11 Organize two leprosy training courses for 20 operational district leprosy supervisors.
 - 4.12 Organize 14 self-care and prevention of disability training courses for leprosy-affected persons with management of simple plantar ulcer and health centre’s staff, at the Health Centres’ or at community’s level.
 - 4.13 Participate in the Ministry of Health project to introduce care of neuropathic limbs in provincial referral hospitals
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NLEP's MATRIX 2013

	Descriptive Summary	Objective verifiable indicators	Source of verification
Goal	The goal of the National leprosy elimination Programme Strategic plan is to ensure that Leprosy Affected people are diagnosed early and treated rehabilitated effectively	<ul style="list-style-type: none"> -Decreased Grad II disability cases -Decreased number of children below 15 years cases -Increased number of PB cases 	-NLEP's annual progress report
OUTPUTS	1-Improve the quality of leprosy control programme and management	<p>1.1-At least 300 newly detected leprosy-affected persons complete MDT treatment on time,</p> <p>1.2-At least 90% of the newly detected leprosy-affected persons and household members are followed-up by ODs routine activities.</p> <p>1.3-At least 50% of the newly detected cases are re-confirmed by NLEP.</p> <p>1.4-100% of the planned 50 supervision missions lasting 5 days are implemented</p> <p>1.5-100% of the OD and provincial due reports are timely submitted to NLEP</p> <p>1.6-90% of newly detected patient's records are entered into the central database.</p> <p>1.7-Cohort analysis of PB treated in 2011 & MB treated in 2010 are published in the annual report.</p>	<ul style="list-style-type: none"> -NLEP's annual progress report - Database - Cohort analysis reports -NLEP's annual report -Patient card's record -Provinces and ODs checklist report -NLEP's annual progress report -NLEP supervision report -NLEP's annual progress report -NLEP supervision report -Provinces and ODs checklist report -Count of reports submitted -Complete Database is available -Cohort analysis reports -NLEP's annual progress report

		1.8-Strengthen activity in high endemic provinces and reduce it in low endemic provinces where the average number of new cases was less than 90 in the last 6 years (2006-2011)	-NLEP's annual progress report -NLEP supervision report -Provinces and ODs checklist report
OUTPUTS	2-Improve early diagnosis (case finding)	2.1-Quality leprosy services are available at all levels 2.2-At least 50% of household contacts of newly detected leprosy affected persons are examined by ODs. 2.3- Contact tracing surveys, in 17 ODs, of household members of leprosy-affected persons detected in the last 10 years (2001 to 2010) are implemented 2.4-Contact tracing pilot survey in leprosy low endemic areas, selected to ensure that there is no new case in their community, is implemented.	-NLEP's annual progress report. -Patient card record -ODs checklist report -NLEP's annual progress report -Contact tracing survey report -NLEP's annual progress report -Contact tracing survey report -NLEP's annual progress report
	3-Leprosy-affected people have easier and effective access to medical and socio-economic rehabilitation services.	3.1-At least 250 leprosy-affected persons will be treated in KKRC for leprosy complications. 3.2-At least 250 leprosy-affected KKRC in patients will receive medical rehabilitative services appropriate to their leprosy complications. 3.3- At least 100 Leprosy-affected persons with complications, as well as diabetic patients with insensitive foot complications are treated at the BBRH Foot-Care Unit 3.4- At least 3000 out patients consult as out-patients at CENAT, KKRC and BBRH Foot-Care Unit. 3.5- At least 160 Leprosy-affected	-NLEP's annual progress report. -KKRC's annual report -NLEP's annual progress report. -KKRC's annual report -NLEP's annual progress report. -Battambang referral hospital's report. -NLEP's annual progress report -KKRC's annual report -Battambang referral hospital's report. -NLEP's annual

		<p>persons or children of leprosy-affected persons increase the livelihood through socio-economic rehabilitation and education sponsorships programs.</p>	<p>progress report. -KKRC-SER's report.</p>
	<p>4-Capacity building, knowledge and awareness on leprosy issues are increased among affected persons, health professionals and communities.</p>	<p>4.1-At least 350 medical students approve the course on leprosy clinical techniques and acquire the knowledge to provide an efficient health care to leprosy-affected persons.</p> <p>4.2- 20 provincial or OD supervisors attend the training or refresher training course on leprosy clinical techniques and management.</p> <p>4.3-20 provincial and ODs supervisors attend the self-care and prevention of disability training course to manage simple ulcers during field activities.</p> <p>4.4-The yearly annual workshop held in March for provincial health directors and provincial and Operational District leprosy supervisors (progress report) and the 9 months review workshop, held in October, take place as scheduled</p> <p>4.5-70 health staff (HC staff and Provincial and OD supervisors) participates in self-care and prevention of disabilities training courses with leprosy affected persons; they acquire, as a result, knowledge on leprosy self-care and prevention of disabilities and are able to provide an efficient health care to leprosy-affected persons.</p> <p>4.6-At least 350 former leprosy-affected persons having attended a self-care course are able to take care of themselves.</p> <p>4.7-Two leprosy awareness campaigns in 12 garment factories result in 30,000 women working there, having some basic knowledge on leprosy and its clinical signs.</p>	<p>-NLEP's annual progress report. -KKRC training report.</p> <p>-NLEP's annual progress report. -NLEP training report.</p> <p>-NLEP's annual progress report -NLEP training report.</p> <p>-NLEP's annual progress report</p> <p>-NLEP's annual progress report -Self-care training report.</p> <p>-NLEP's annual progress report -Self-care training report.</p> <p>-NLEP's annual progress report -Garment factory campaign reports</p> <p>-NLEP's annual</p>

		<p>4.8- The plantar ulcer healing campaign in Battambang province is held as scheduled.</p> <p>4.9-Posters & leaflets (IEC) are available at NLEP level to be distributed to health facilities and to communities.</p> <p>4.10-Disseminate information on leprosy, through mass media, via locally selected channels and radio programmes, in 4 selected provinces.</p> <p>4.11-Participate in the Ministry of Health project to introduce care of neuropathic limbs in provincial referral hospitals.</p> <p>4.12-An International Insensitive foot care workshop is organized for health staff from the 6 north-western provinces</p> <p>4.13- 50% of health workers and village health support groups visited by NLEP during supervision activities are educated on basic facts of leprosy.</p>	<p>progress report - Plantar ulcer healing campaign report</p> <p>-NLEP's annual progress report</p> <p>-NLEP's annual progress report</p> <p>-NLEP's annual progress report</p> <p>-NLEP's annual progress report</p> <p>-NLEP's annual progress report -Battambang referral hospital's report.</p> <p>- NLEP's annual progress report -Province and OD checklist</p>
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NLEP Budget Plan 2013

Outputs	Activities	MOH	CIOMAL	WHO	NLR	OMF	SMHF	TOTAL
1-Improve the quality of leprosy control programme and management	1.1-At least 300 newly detected leprosy-affected persons complete MDT treatment on time,	*	*		*			80,000\$
	1.2-At least 90% of the newly detected leprosy-affected persons and household members are followed-up by ODs routine activities.	*	*		*			
	1.3-At least 50% of the newly detected cases are re-confirmed by NLEP.	*	*		*			
	1.4-100% of the planned 50 supervision missions lasting 5 days are implemented	*	*		*			
	1.5-100% of the OD and provincial due reports are timely submitted to NLEP	*	*		*			
	1.6-90% of newly detected patient's records are entered into the central database.	*	*		*			
	1.7-Cohort analysis of PB treated in 2011 & MB treated in 2010 are published in the annual report.	*	*		*			
	1.8-Strengthen activity in high endemic provinces and reduce it in low endemic provinces where the average number of new cases was less than 90 in the last 6 years (2006-2011)	*	*		*			

2-Improve early diagnosis (case finding)	2.1-Quality leprosy services are available at all levels	*	*	*	*	*	*
	2.2-At least 50% of household contacts of newly detected leprosy affected persons are examined by ODs.	*	*		*		*
	2.3- Contact tracing surveys, in 17 ODs, of household members of leprosy-affected persons detected in the last 10 years (2001 to 2010) are implemented		*				45,000\$
	2.4-Contact tracing pilot survey in leprosy low endemic areas, selected to ensure that there is no new case in their community, is implemented.		*				10,000\$
3-Leprosy-affected people have easier and effective access to medical and socio-economic rehabilitation services.	3.1-At least 250 leprosy-affected persons will be treated in KKRC for leprosy complications.	*	*			*	250,000\$
	3.2-At least 250 leprosy-affected KKRC in patients will receive medical rehabilitative services appropriate to their leprosy complications.	*	*			*	
	3.3- At least 100 Leprosy-affected persons with complications, as well as diabetic patients with insensitve foot complications are treated at the BBRH Foot-Care Unit	*	*			*	
	3.4- At least 3000 out patients consult as out-patients at CENAT,	*	*			*	

	<p>KKRC and BBRH Foot-Care Unit.</p> <p>3.5- At least 160 Leprosy-affected persons or children of leprosy-affected persons increase the livelihood through socio-economic rehabilitation and education sponsorships programs.</p>		*					
<p>4-Capacity building, knowledge and awareness on leprosy issues are increased among affected persons, health professionals and communities.</p>	<p>4.1-At least 350 medical students approve the course on leprosy clinical techniques and acquire the knowledge to provide an efficient health care to leprosy-affected persons.</p>	*	*					*
	<p>4.2- 20 provincial or OD supervisors attend the training or refresher training course on leprosy clinical techniques and management.</p>				*			8,000\$
	<p>4.3-20 provincial and ODs supervisors attend the self-care and prevention of disability training course to manage simple ulcers during field activities.</p>				*			5,000\$
	<p>4.4-The yearly annual workshop held in March for provincial health directors and provincial and Operational District leprosy supervisors (progress report) and the 9 months review workshop, held in October, take place as scheduled</p>				*			25,000\$

	<p>4.5-70 health staff (HC staff and Provincial and OD supervisors) participates in self-care and prevention of disabilities training courses with leprosy affected persons; they acquire, as a result, knowledge on leprosy self-care and prevention of disabilities and are able to provide an efficient health care to leprosy-affected persons.</p> <p>4.6-At least 350 former leprosy-affected persons having attended a self-care course are able to take care of themselves.</p> <p>4.7-Two leprosy awareness campaigns in 12 garment factories result in 30,000 women working there, having some basic knowledge on leprosy and its clinical signs.</p>		*					20,000\$
	<p>4.8- The plantar ulcer healing campaign in Battambang province is held as scheduled.</p> <p>4.9-Posters & leaflets & T-shirts (IEC) are available at NLEP level to be distributed to health facilities and to communities.</p> <p>4.10-Disseminate information on leprosy, through mass media, via locally selected channels and radio programmes, in 4 selected provinces.</p> <p>4.11-Participate in the</p>	*	*		*			15,000\$
		*	*		*			30,000\$
		*			*			10,000\$

	Ministry of Health project to introduce care of neuropathic limbs in provincial referral hospitals.	*	*			*		*
	4.12-An International Insensitive foot care workshop is organized for health staff from the 6 north-western provinces					*		15000\$
	4.13- 50% of health workers and village health support groups visited by NLEP during supervision activities are educated on basic facts of leprosy.	*	*	*				*
MDT Drugs				*				*
Administrations		*	*					25,000\$
Transportations		*	*	*	*	*		69,000\$
Consultancies			*	*	*	*		*
Salaries		*						*
Total		*	279,000\$	*	65,000\$	*		622,000\$