With the understanding that health action must primarily occur at the country level, WHO initiatives in communicable diseases control, elimination and eradication are in support of, and guided by, national priorities and needs. These include technical support for formulation of national policy and strategy as well as in programme planning, implementation, and monitoring and evaluation.

WHO initiatives at the regional level focus on normative functions such as development of guidelines, best practice approaches, and training materials; providing a forum for information exchange and sharing of country experiences; advocacy; and mobilizing rapid response to disease outbreaks and health emergencies when needed.

As the threat of communicable diseases increases, this profile highlights the work of the Department of Communicable Diseases in the WHO Regional Office for South-East Asia.
Department of Communicable Diseases:

Profile and Vision

CDS Department
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<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>3DF</td>
<td>Three Diseases Fund</td>
</tr>
<tr>
<td>ACT</td>
<td>Artemisinin-based combination therapy</td>
</tr>
<tr>
<td>ADL</td>
<td>Acute adeno-lymphangitis</td>
</tr>
<tr>
<td>ART</td>
<td>Antiretroviral therapy</td>
</tr>
<tr>
<td>BSL</td>
<td>Biosafety level</td>
</tr>
<tr>
<td>CC</td>
<td>Collaborating Centre (of WHO)</td>
</tr>
<tr>
<td>CDC</td>
<td>Communicable Disease Control</td>
</tr>
<tr>
<td>CDS</td>
<td>Department of Communicable Diseases, WHO-SEARO</td>
</tr>
<tr>
<td>COMBI</td>
<td>Communication for Behavioural Impact</td>
</tr>
<tr>
<td>CSR</td>
<td>Communicable disease surveillance, outbreak alert and response Department</td>
</tr>
<tr>
<td>DALY</td>
<td>Disability-adjusted life year</td>
</tr>
</tbody>
</table>
Department of Communicable Diseases: Profile and Vision

DEC    diethylcarbamazine
DHF    dengue haemorrhagic fever
DOTS   Directly Observed Treatment, Short-course
DSE    disease surveillance and epidemiology
EBS    event-based surveillance
EMS    event management system
EPR    epidemic preparedness and response
EQAS   external quality assessment schemes
EWARS  early detection, warning, alert and response to outbreaks
FET    Field Epidemiology Training
FETP   field epidemiology training programme
FLUNET Influenza Network: FluNet is a global tool for influenza virological surveillance
GFATM  Global Fund to Fight AIDS, TB and malaria
GIS    geographical information system
GLP    Global Leprosy Programme
GSK    GlaxoSmithKline
HIV/AIDS human immunodeficiency virus/acquired immunodeficiency syndrome
HMIS   health management information system
IDRPCP integrated diarrhoeal diseases and acute respiratory infections prevention and control programme
IEC    information, education and communication
IHR    International Health Regulations
ILI    influenza-like illness
IRS    indoor residual spraying
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN</td>
<td>insecticide-treated nets</td>
</tr>
<tr>
<td>IVM</td>
<td>integrated vector management</td>
</tr>
<tr>
<td>LF</td>
<td>lymphatic filariasis</td>
</tr>
<tr>
<td>LLINs</td>
<td>long-lasting insecticidal nets</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
</tr>
<tr>
<td>MDA</td>
<td>mass drug administration</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
</tr>
<tr>
<td>MDR</td>
<td>multidrug-resistant</td>
</tr>
<tr>
<td>MDT</td>
<td>multidrug therapy</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>MoU</td>
<td>Memorandum of Understanding</td>
</tr>
<tr>
<td>NGO</td>
<td>nongovernmental organization</td>
</tr>
<tr>
<td>NMCP</td>
<td>National Malaria Control Programme</td>
</tr>
<tr>
<td>NTD</td>
<td>neglected tropical diseases</td>
</tr>
<tr>
<td>PCT</td>
<td>preventive chemotherapy</td>
</tr>
<tr>
<td>PEPFAR</td>
<td>The President’s Emergency Plan for AIDS Relief</td>
</tr>
<tr>
<td>PKDL</td>
<td>post-kala-azar dermal leishmaniasis</td>
</tr>
<tr>
<td>PLHIV</td>
<td>people living with HIV</td>
</tr>
<tr>
<td>PMDT</td>
<td>Programmatic Management of Drug Resistant Tuberculosis</td>
</tr>
<tr>
<td>PMTCT</td>
<td>prevention of mother-to-child transmission</td>
</tr>
<tr>
<td>PRE-SCH</td>
<td></td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>RDT</td>
<td>rapid diagnostic test</td>
</tr>
<tr>
<td>RPRG</td>
<td>Regional Programme Review Group</td>
</tr>
<tr>
<td>RRC</td>
<td>Research Review Committee</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>---------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>SARI</td>
<td>severe acute respiratory infection</td>
</tr>
<tr>
<td>SARS</td>
<td>severe acute respiratory syndrome</td>
</tr>
<tr>
<td>SCH</td>
<td></td>
</tr>
<tr>
<td>SEAR</td>
<td>South-East Asia Region</td>
</tr>
<tr>
<td>SOP</td>
<td>standard operational procedure</td>
</tr>
<tr>
<td>STH</td>
<td>soil-transmitted helminthiasis</td>
</tr>
<tr>
<td>STI</td>
<td>sexually transmitted infection</td>
</tr>
<tr>
<td>TAG</td>
<td>Technical Advisory Group</td>
</tr>
<tr>
<td>TB</td>
<td>tuberculosis</td>
</tr>
<tr>
<td>TDR</td>
<td>Special Programme for Research and Training in Tropical Diseases</td>
</tr>
<tr>
<td>TF</td>
<td>trachoma follicular</td>
</tr>
<tr>
<td>TRA</td>
<td>trachoma rapid assessment</td>
</tr>
<tr>
<td>TT</td>
<td>trachoma trichiasis</td>
</tr>
<tr>
<td>VCRC</td>
<td>Vector Control Research Centre</td>
</tr>
<tr>
<td>VL</td>
<td>visceral leishmaniasias</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>WPRO</td>
<td>Western Pacific Regional Office</td>
</tr>
<tr>
<td>XDR</td>
<td>extensive drug-resistance</td>
</tr>
</tbody>
</table>
“Communicable diseases are not only major health problems but they also have a serious socioeconomic impact. Controlling these diseases requires scaling up preparation and response mechanisms, strengthening the public health infrastructure, building partnerships, and involving all sections of society, including the poor and vulnerable.”

Dr Samlee Plianbangchang
Regional Director
South-East Asia
Preface

The brunt of the global burden of communicable diseases is borne by the South-East Region of the World Health Organization (WHO). Besides diseases such as HIV/AIDS, tuberculosis, malaria, leishmaniasis, dengue etc., the Region is also faced with new and emerging diseases which are challenging public health as never before. Unfortunately, many of these diseases affect the poor and marginalized sections of society, and contribute not only to ill health and poverty at micro-level but also have serious socioeconomic implications at the macro-level.

Combating communicable diseases is, therefore, one of the topmost priorities for WHO. The WHO Regional Office for South-East Asia is striving to focus efforts, in close collaboration with other departments in the Regional Office and, most importantly, with our country offices, to assist Member States of the Region in responding effectively and efficiently to these challenges.
This document provides an overview of the Department of Communicable Diseases and the various initiatives underway as well as those being planned to support activities in the Member States. These include preparing and responding rapidly to emerging infectious diseases; preventing and controlling HIV/AIDS, TB and malaria; and targeting communicable diseases for eradication and/or elimination.

We firmly believe that working together, in partnership with all stakeholders is essential for controlling communicable diseases in the Region and in significantly reducing the global disease burden.
A patient with tuberculosis.

Photo: Gary Hampton/WHO-SEARO
Communicable diseases continue to be one of the most important public health problems in the WHO South-East Asia Region (SEAR), causing about half of all deaths in many countries. The burden of diseases like HIV/AIDS, TB and malaria remain disproportionately high, while age-old diseases such as leprosy, visceral leishmaniasis and lymphatic filariasis continue to tax the poor and the socially marginalized populations. In addition, new and emerging diseases such as pandemic A H1N1 (2009), severe acute respiratory syndrome (SARS), avian influenza and Nipah virus disease are a cause for national and international concern. The 2009 pandemic resulted in 76 302 cases and 2054 deaths in the Region. Sporadic avian influenza outbreaks due to the H5N1 strain continue, with the potential to cause widespread health and socioeconomic disruption. Diseases such as dengue are not only expanding geographically, but are also becoming more pathogenic.
Apart from causing a large number of deaths, communicable diseases can result in disability and disfigurement. Some examples of permanent disabilities are the severely deformed limbs resulting from lymphatic filariasis (LF) and facial erosion and scarring caused by leprosy. The threat of these infections becoming resistant to drugs is another growing concern. While the arsenal of antimicrobial drugs is not increasing, the spread of antimicrobial drug resistant infections is rapidly narrowing the windows of opportunity for the control of communicable diseases.

There are, however, several success stories. They demonstrate that if effective approaches are scaled up both in coverage and quality, and reinforced by high-level commitment and political will, these problems could be overcome. For example, smallpox and guinea worm disease have been eradicated from the countries of the Region. Leprosy has been eliminated at the national levels. Poliomyelitis is on the verge of eradication. Significant progress has been made towards increasing access to Directly Observed Treatment, Short-course (DOTS) for TB at the community level. Many countries have achieved global TB targets and others are on the way to doing so. The highest level of commitment has been expressed by all affected countries for the elimination of visceral leishmaniasis (kala-azar). The progress in elimination of LF is also encouraging.

In recent years, political commitment, participation of academic institutions, networking, intercountry cooperation and planning have contributed to the emerging success. Partnerships among diverse organizations to tackle communicable diseases are expanding and this cooperative trend must be sustained. Partnership with the pharmaceutical industry, in particular, has been very encouraging, as the increasing access of the common man to life-saving generic drugs is gradually changing the prognosis of diseases such as AIDS from a virtual death sentence to a chronic, manageable condition. Considerable success has also been achieved by Member States in mobilizing substantial funds from the Global Fund to Fight AIDS, TB and malaria (GFATM) for scaling up their response against
these three diseases. These events are a cause for optimism in the Region’s continual fight against communicable diseases.

Against this background, the vision of the WHO Regional Office for South-East Asia (SEARO) is to assist Member States in reversing the trend of communicable diseases, reducing morbidity and mortality, and improving the quality of life, thereby contributing towards achieving the Millennium Development Goals (MDGs) and reducing poverty in the coming decade.

To translate this vision into reality, the Communicable Diseases (CDS) Department of WHO-SEARO has been organized to deal with three main objectives:

1. to enhance preparedness for tackling the threat of emerging diseases through strengthened epidemiological surveillance, outbreak alert and response;
2. to intensify control of priority communicable diseases such as HIV/AIDS, TB and malaria in an integrated manner; and
3. to eliminate/eradicate diseases such as leprosy, yaws, kala azar and LF.

In addition, there are cross-cutting areas, such as laboratory support, data management and capacity-building activities including training, which also fall within the purview of the vision. The Department works in collaboration with other WHO programmes in the Regional Office and with the Country Offices, which are now primarily responsible for providing technical support to Member States. Partnerships are being forged with various stakeholders such as governments, academic institutions, civil society, and multi- and bilateral agencies who share the common goals of alleviating human suffering, reducing morbidity and mortality, and improving the quality of life, particularly of the poor and disadvantaged sections of society. Equitable access to health services and protection of vulnerable populations by scaling up effective interventions are other principles that guide the actions of the CDS Department.
This document presents the profile and vision of the CDS Department, the principles that guide its work, and the strategies and broad activities that the Department plans to undertake through various programmes. Since the health situation is dynamic and evolving, the document will be updated periodically to reflect the changing scenario and shifting priorities, internationally and within WHO, over time.
A health worker in Indonesia provides information on HIV/AIDS.
Burden of communicable diseases in the South-East Asia Region

The SEA Region which has 25% of the world’s population, and 30% of the world’s poor, suffers heavily from the burden of communicable diseases. For instance, the Region bears 80% and 40% of the global burden of leprosy and tuberculosis (TB), respectively, and has the highest rate of drug-resistant malaria cases. An estimated 2.9 million deaths in the Region are caused by infectious and parasitic diseases and an estimated 89 million disability-adjusted life years (DALYs) are lost as a result. Each year, 76 000 children die of measles and close to half a million people die of TB in South-East Asia. The Region has more than 3.5 million people living with HIV/AIDS. A population of 1.3 billion are at risk for contracting malaria. Furthermore, epidemics of infectious diseases occur frequently and in new areas; many of them are predictable but some take the health system by surprise. Outbreaks of SARS, avian influenza, Nipah virus disease and the H1N1 (2009) pandemic are recent examples of such unexpected events which are capable
of causing enormous socioeconomic hardship extending beyond national borders. Dengue/dengue haemorrhagic fever (DHF) and new strains of cholera are spreading to areas where they were not common in the past. Age-old diseases such as leprosy, LF and kala-azar continue to cause considerable suffering and psychosocial disruption in the Region.

Increasing drug resistance of many infectious disease-causing organisms is an emerging threat faced by all disease control programmes. Some countries of the Region are becoming epicentres of antimalarial drug resistance, putting more than 30% of the populations of these countries at risk. Drug resistance in Shigella dysentery, enteric fever and sexually transmitted infections (STIs) is increasing. Resistance to chloramphenicol prescribed for enteric fever and to penicillin for gonococcal infection is a matter of grave concern. Drug-resistant TB is also on the rise and threatens to overturn progress in TB control; drugs for the treatment of multidrug-resistant (MDR) TB are over 100 times more expensive than medicines used to treat drug-sensitive pulmonary TB. Fortunately, however, MDR levels remain low in the Region, due in part to well-performing TB programmes. Nevertheless, the threat of XDR TB (extensive resistant TB) looms large, which may make TB virtually an incurable disease.

Moreover, infectious diseases often take a heavy toll on human productivity by causing disability and disfigurement. Severe and sometimes permanent disabilities affect an estimated population of one billion globally, according to the *Global Defense against the Infectious Diseases Threat* (2003). These disabilities include impaired cognitive development, retarded mental
growth, deformed limbs (due to elephantiasis) and facial erosion (due to leprosy), as well as many other related physical problems.

The interplay between communicable diseases, poverty and undernutrition adversely affects socioeconomic development in the countries. Evidence also links the occurrence of cancer and some degenerative diseases to infectious causes. For example, infection with hepatitis B and C viruses can to lead to the subsequent development of liver cancer.

The scenario of infectious diseases is shaped by two factors. First, there is a real and immediate threat of resurgence of infectious diseases, which can be attributable to the natural history of microbes. Pathogens and microbes constantly evolve through processes of multiplication, mutation, migration and adaptation, eventually attaining resistance to commonly used medicines and insecticides. Second, cultural aspects such as close animal–human contact in a common habitat also play an important role in the spread of zoonotic communicable diseases such as avian influenza, SARS and Nipah virus disease. During the past few decades, the arsenal of antimicrobial drugs has not expanded, but the appearance and spread of antimicrobial resistance has been on the increase, thereby narrowing the limited number of means available for the control of infectious diseases. The spectre of the continual emergence of drug-resistant microbes threatens to undermine the gains achieved in reducing morbidity and mortality due to infectious diseases.
A kala-azar patient in Bangladesh.

Photo: S. Shahid/WHO Bangladesh
Communicable Diseases Department: vision and guiding principles

The vision and guiding principles of the Department are clearly spelt out in the following statement: “By the end of the 2015, reverse the trend of communicable diseases, reduce morbidity and mortality, and improve the quality of life, thereby contributing towards achieving the Millennium Development Goals and poverty reduction.”

The task ahead is by no means easy, for it demands high levels of commitment and resolve from all partners. The context of involvement becomes even more challenging keeping in mind that the Region has approximately 30% of the population living below an income of US$ 1 (one) per day, and the interactions between infectious diseases, poverty and undernutrition pose a complicated challenge to the effective control of these diseases. Due to epidemiological transition, countries of the Region are faced with the burden of noncommunicable diseases in addition to that of infectious diseases. This
cumulative burden places a heavy strain on the fragile and overstretched health systems of the countries.

Based on experience and given the ground realities, the following principles have been identified to guide action:

- **Prioritization**
  - selection of priority communicable diseases on which to focus the limited resources and capacity available, with a view to ensuring maximum impact on health and socioeconomic development;
  - continuing and strengthening WHO’s role of enlisting political commitment to solve health problems;
  - mobilizing additional resources by using advocacy plans and implementing them in countries.

- **Clear strategic framework and evidence-based planning**
  - developing and refining regional strategic plans that would guide the work of the CDS Department and could be a framework for action at country level, leading to a country-specific plan of action;
  - identifying interventions that are practical and cost effective, and scaling them up for the control of communicable diseases;
  - enhancing research capacity to address problems with the help of WHO Collaborating Centres (WHO CCs) and national centres of excellence.

- **Consensus building**
  - regional technical advisory groups have been established to provide technical guidance to countries for control, elimination and eradication programmes, and for monitoring activities.
• **Emphasis on an integrated and collaborative approach**
  – promoting and supporting intercountry collaboration and horizontal cooperation among countries;
  – encouraging interdepartmental collaboration, which is critical to the effective control of communicable diseases;
  – harmonizing such collaboration, especially among the departments involved, for the elimination and eradication of diseases preventable by vaccination, and control of childhood communicable diseases;
  – increasingly adopting, where relevant, an integrated approach with an increased focus on addressing crosscutting issues, strengthening public health laboratories and containing antimicrobial drug resistance;
  – supporting the preparation of harmonized work plans and tracking progress through regular monitoring and evaluation.

• **Focusing on results**
  – identifying some key outcome and impact indicators as well as targets for each programme area, indicating how (or by what methods) the targets will be measured, and systematically measuring the progress towards the targets;
  – if progress is not on track, finding ways to identify bottlenecks to successful implementation, and devising correctional measures to overcome them.

• **Communication**
  – placing increased focus on communication, media interaction and information technology as important tools for risk communication and management.
An Indonesian boy plays with poultry. Indonesia has the highest number of cases of human infection with avian influenza in the WHO South-East Asia Region.

Photo: Budhi Chandra/WHO Indonesia
Objectives, strategies and activities

4.1 Disease surveillance and epidemiology (DSE)

Present situation and challenges

Outbreaks of infectious diseases have the potential to seriously threaten public health, to cause large-scale mortality and morbidity, and result in significant negative social and economic impact, particularly in low-resource, developing countries. The past three decades have witnessed the emergence of many new infectious diseases including SARS and Avian Influenza A/H5N1, as well as the re-emergence of others such as chikungunya. The outbreak of SARS, resulted in schools, hospitals, and borders being closed, the quarantining of thousands
Department of Communicable Diseases: Profile and Vision

A public health official conducts surveillance in Indonesia. Photo: Budhi Chandra/WHO Indonesia.

of individuals and a greater than 60% drop in international travel and hotel occupancy.\(^1\) It is therefore essential that all countries have strong systems in place for the prevention and control of outbreak-prone infectious diseases.

The WHO South-East Asia Region is particularly vulnerable to such outbreaks. Research on 335 infectious diseases that emerged between 1940 and 2004 indicates that countries in the Region, particularly along the Gangetic Plain and the Mekong River Basin, are highly susceptible to such emergence events.\(^2\) In the past five years alone, the Region has witnessed outbreaks of diseases with high morbidity and mortality, including Nipah virus encephalitis and Crimean-Congo Haemorrhagic fever (CCHF). The Region was also severely affected by pandemic influenza, which is believed to have resulted in as many as 234,050 cases between 2009 and 2010 in Thailand alone (with 47,433 laboratory-confirmed cases and 347 associated deaths).

Outbreaks of other communicable diseases such as dengue are also challenging health systems as never before. The Maldives, for example, reported its worst outbreak of dengue in five years in 2011, with over 2432 cases and 12 deaths. For the first time in the country, dengue cases were not

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limited to the capital, Male but were reported from the islands. While some Member States have a strong surveillance that can detect dangers early and ensure a rapid response, many still need to strengthen national and sub-national capacities to ensure a robust, reliable and responsive surveillance, risk assessment and response system. This requires the formulation of sound policies, the development and implementation of feasible strategies and the strengthening of core capacities in epidemiology and laboratory diagnosis.

The adoption of The International Health Regulations (IHR, 2005) by Member countries presents an opportunity to strengthen such core capacities at all levels of the public health system, while at the same time strengthening links with agencies responsible for other threats to public health, including zoonoses, food, chemical and radiological safety. The bi-regional SEARO / WPRO Asia Pacific Strategy for Emerging Diseases (2005) and its associated workplan have been developed to align strongly with requirements for IHR core capacity development and therefore provide a framework for the development of national implementation plans.

IHR focuses on eight core capacities:

- national legislation, policy and financing
- coordination and National Focal Point (NFP) Communications
- surveillance
- response
- preparedness
- risk communication
- human resources
- laboratory
In addition, the following areas are defined:

- development of capacities at Points of Entry;
- development of capacities to prepare for, detect and respond to four IHR-relevant hazards (zoonotic, food safety, chemical, radiological and nuclear).

**DSE objectives and strategies**

The overall objective of the DSE Unit is to facilitate all countries to acquire the minimum core capacities required for preparedness, rapid detection, risk assessment and response to epidemic threats. Therefore, the work of DSE SEARO will focus on the following specific objectives:

- strengthening national capacities in laboratory and epidemiological surveillance, and outbreak response;
- enhancing country preparedness and response capacity for public health events, and other requirements of the revised IHR, including public health legislation and Points of Entry;
- addressing laboratory biosafety, biosecurity and infection prevention and control;
- strengthening expert networks and inter-institutional collaboration.

**Current status of IHR implementation in the SEA Region**

The information obtained from the annual State Party Reports in 2011 indicate that the overall combined (average) level of IHR implementation for SEA Region countries is 63%. However, levels of IHR implementation vary from 40 to 91% among SEA Region countries. It is also evident that implementation is uneven across capacities, with the lowest implementation rates being seen for human resource development (56%) and for chemical (33%) and radio-nuclear hazards (35%).
Activities planned to support strengthening of IHR core capacities

Figure 1: Levels of IHR core capacity compliance in the SEA Region, 2011

<table>
<thead>
<tr>
<th>Core capacity</th>
<th>Compliance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiological</td>
<td>35</td>
</tr>
<tr>
<td>Chemical</td>
<td>33</td>
</tr>
<tr>
<td>Food Safety</td>
<td>65</td>
</tr>
<tr>
<td>Zoonosis</td>
<td>84</td>
</tr>
<tr>
<td>Points of Entry</td>
<td>67</td>
</tr>
<tr>
<td>Laboratory</td>
<td>67</td>
</tr>
<tr>
<td>Human Resources</td>
<td>56</td>
</tr>
<tr>
<td>Risk Communication</td>
<td>68</td>
</tr>
<tr>
<td>Preparedness</td>
<td>58</td>
</tr>
<tr>
<td>Response</td>
<td>74</td>
</tr>
<tr>
<td>Surveillance</td>
<td>69</td>
</tr>
<tr>
<td>Coordination</td>
<td>68</td>
</tr>
<tr>
<td>Legislation</td>
<td>63</td>
</tr>
</tbody>
</table>

Strengthening national legislation, policy and financing

Reviewing and strengthening national public health legislation is considered a high priority by the South-East Asia Regional Office of WHO. A number of guidelines to support assessments of legislation are available and will be distributed to IHR Focal Points. In addition, the Regional Office is committed to providing support by identifying and mobilizing the required expertise to support assessments if requested by any Member State.
Department of Communicable Diseases: Profile and Vision

**Strengthening coordination and National Focal Point (NFP) communications**

The 4th Regional meeting on the implementation of the International Health Regulations (IHR 2005) will provide an opportunity to provide updates, discuss roles and facilitate networking between SEA Region National IHR Focal Points. All available resources to support IHR Focal Points will also be made available on the WHO-SEARO web site. WHO-SEARO will also support any request for a review of Terms of Reference.

**Strengthening surveillance and risk assessment**

WHO-SEARO currently has plans to assess and support strengthening of integrated disease surveillance in three Member States in early 2012. Participation will also be requested from SEARO Member States in a global ‘Training of Trainers’ in Risk Assessment in 2012, to be followed up by a Regional workshop on Event Based Surveillance and Risk Assessment.

**Strengthening response**

A consultation of SEA Regional Outbreak Response partners will be undertaken and followed up by a regional meeting on outbreak response and Field Epidemiology and by training on international outbreak response. A guideline on healthcare facility preparedness for infectious disease outbreaks will also be finalized; training materials developed and training delivered. Much of the focus of this initiative will be on arrangements for Infection Prevention and Control.

**Strengthening preparedness**

A regional consultation to gather lessons learnt from the response to pandemic influenza 2009 is proposed. This work is also expected to establish
a foundation for future work to support the development of national ‘all-hazard’ preparedness and response plans. Simulation exercises will also be held to test the operational functionality of such plans.

**Strengthening risk communication**

In 2012, work will continue on reviewing and mapping existing risk communications systems and resources in the Region. Regional examples of Best Practices and Strategies for Risk Communications will also be developed and shared, based on lessons learnt from previous health emergencies. Another initiative will be the development of communication SOPs, including media response, monitoring and analysis. Work will also be continued to strengthen media capacity for outbreak prone/emerging infectious diseases in the Region and to identify appropriate communications technologies for risk communications in the Region (e.g. social media and mobile technologies). Information material for outbreak-prone and emerging infectious diseases will also be developed to supplement existing resources.

**Strengthening human resources**

For the Regional Office, the priority for strengthening human resources in the SEA Region is to enhance capacity for Field Epidemiology Training (FET); including support for existing Programmes, as well as the development of new ones. A regional workplan for FET is being developed that aims to systematically strengthen training in all countries based on identified need by harnessing existing regional resources as well as the support of partners. Assessments in several priority counties are currently being planned.

**Strengthening laboratory services**

Current work being undertaken by WHO-SEARO aims to strengthen national laboratory systems through advocacy and technical support to countries for
formulation and implementation of national policy and plans, based on the framework laid out in the Asia Pacific Strategy for Strengthening of Health Laboratories. Work that is proposed in 2012 includes a Regional ‘Training of Trainers’ workshop for diagnosis of Emerging Infectious Diseases (EIDs), support for the evaluation and dissemination of new diagnostic tools, supply of essential reagents for the early diagnosis of EIDs and a Regional ‘Training of Trainers’ workshop in the use of a Quality Management Toolkit.

Development of capacities at Points of Entry

Work will continue on 2012 to support national assessments of Points of Entry as requested by countries in the SEA Region using an assessment tool developed by the Regional Office. Strengthening capacity in this area of work presents a significant challenge and advocacy for the mobilisation of partner support will continue.

Development of capacity for zoonotic events

Work undertaken by WHO will aim to enhance existing mechanisms for surveillance, risk assessment, information sharing and response, as well as strengthening operational research and facilitating the sharing of best practices. SEARO has developed a regional strategic framework for the elimination of human rabies transmitted by dogs and technical support will be provided or its implementation. A guideline for the prevention and control of Nipah virus infection has also been developed and training of laboratory professionals on Nipah virus diagnosis in a WHO Collaborating Centre is proposed. There are also plans to develop a regional strategic framework for surveillance, diagnosis, case management and control of leptospirosis. Member countries will be supported to estimate the burden of priority zoonoses and implement pilot projects, operational research and training on zoonoses of national importance.
Development of capacity for food safety, chemical safety and radiological safety

DSE SEARO will collaborate with related departments in the Regional Office to strengthen capacities in these important areas of work. Other DSE activities include the following:

Regional preparedness and response

Standard Operating Procedures for Regional Event Surveillance, Risk Assessment and Response will be updated and tested with simulation exercises. Use of the WHO Global Event Management System (EMS) will be strengthened in Regional and Country Offices to support documentation of actions as well as coordination of communications and field operations.

Strategic policy development and implementation

Work will be undertaken to implement a regional strategic framework for the “integrated diarrhoeal diseases and acute respiratory infections prevention and control programme” (IDRCP), and a regional strategy for the control of viral hepatitis will also be developed.

Road map for 2011–13

- Advocate and implement the Asia Pacific Strategy for Emerging Diseases (2010), so that all Member States will meet minimum core requirements for 50% of IHR indicators, covering eight core capacity areas. This will be achieved by:
  - strengthening national legislation, policy and financing;
  - strengthening coordination, National Focal Point Communications;
  - strengthening surveillance and risk assessment;
  - strengthening response;
  - develop capacity at points of entry and for zoonotic events.
4.2 Prevention and control of priority communicable diseases: HIV/AIDS, TB and malaria (HTM)

HIV/AIDS

Present situation and challenges

The global HIV epidemic continues to remain a serious public health problem with an estimated 34 million people currently living with HIV. After sub-Saharan Africa, the WHO SEAR has the second highest burden of HIV in the world with 3.5 million people living with HIV even though the overall adult prevalence is below 1%.

While there is much diversity in the HIV epidemic among countries of the Region, unsafe sex and injecting drug use are the main drivers. Sexual transmission accounts for the majority of the cases in Bhutan, India, Myanmar, Sri Lanka, Thailand and Timor-Leste. HIV epidemics among people who inject drugs are significant in Indonesia, Myanmar, Nepal, Thailand, some regions of India and the capital of Bangladesh. Maldives has a growing threat of HIV epidemic due to injecting drug use.

The magnitude of HIV infection differs greatly between countries in the Region. Five countries account for a major proportion of the burden, namely India, Indonesia, Myanmar, Nepal and Thailand. No case has been reported from DPR Korea. The remaining five countries, Bangladesh, Bhutan, Maldives, Sri Lanka and Timor-Leste, together represent less than 1% of the total HIV burden in the Region. The estimated number of people living with HIV (PLHIV) ranges widely from <100 in Maldives to 2.4 million in India.
A majority of the countries in the Region have low-level or concentrated epidemics; however, adult HIV prevalence above 1% is noted in Thailand, north-east India, and in the Papua province in Indonesia.

However, there are encouraging signs of reduction in the burden of HIV in the Region. Overall, the estimated number of PLHIV both male and female, is decreasing in the Region (Figure 2) within countries, HIV prevalence is higher among urban than rural areas. A 31% reduction in the number of new infections, from 320 000 to 220 000 was seen between 2001 and 2010.

**Figure 2: Estimated number of new HIV infections in South-East Asia Region, 1990–2010**

Note: Number of new infections estimated by Spectrum model using surveillance data reported by national AIDS programmes, Member countries, South-East Asia Region.
Department of Communicable Diseases: Profile and Vision

The South-East Asia Region accounts for nearly 15% of the global burden of new HIV positive TB cases. Overall HIV prevalence among new TB patients is 5.7%, but varies widely among countries.

Of the 448 million cases of sexually transmitted infections present globally in 2005, 71 million were in the South-East Asia Region. Sexually transmitted infections are disproportionately high among most-at-risk populations, particularly among female sex workers and their clients, and men who have sex with men due to a high turnover of partners.

**Goals, targets and strategies**

The Regional Health Sector Strategy on HIV 2011-2015 based on the Global Health Sector Strategy on HIV 2011-2015 was endorsed by the 64th Regional Committee. The vision of this strategy is Zero new HIV infections, zero AIDS-related deaths and zero discrimination in a world where people living with HIV are able to live long, healthy lives. The goals and targets are as follows:

**Goals**

1. to achieve universal access to comprehensive HIV prevention, treatment and care; and
2. to contribute to the achievement of MDG 6 (Combat HIV/AIDS, malaria and other diseases) and other health-related goals (MDGs 3, 4, 5 and 8) and associated targets.
Targets to achieve by 2015

(1) reduce incidence of HIV in young people (15-24 years) by 50% (compared with the 2009 baseline);

(2) reduce new HIV infections in children by 90% (compared with the 2009 baseline);

(3) reduce HIV-related deaths by 25% (compared with the 2009 baseline); and

(4) reduce tuberculosis-related deaths among HIV-positives by 50% (compared with the 2009 baseline).

To reach the above goals and targets, four strategic directions are set out in the Regional Strategy:

(1) **Optimizing HIV prevention, care and treatment outcome**

Ensures that combined HIV-specific interventions are strengthened and expanded. These core programmes on prevention, treatment and care aim to enhance the quality, effectiveness and coverage of HIV interventions and approaches, and to identify new HIV interventions.
(2) **Strengthening strategic information systems for HIV and research**

Strategic information guides health policy, planning, resource allocation, programme management, service delivery and accountability. It is essential for action at all levels of the health system. As countries scale up their HIV responses towards universal access, there is an increasing recognition of the need to invest in strategic information to guide programme planning and sustain national and international commitment and accountability.

(3) **Strengthening health systems for effective integration of health services**

Ensures that the expanded response to HIV will build effective, efficient and comprehensive health systems in which HIV and other essential services are available, accessible and affordable. The systems needed to be maximized to create broad synergies and better health outcomes.

(4) **Fostering a supportive environment to ensure equitable access to HIV services**

Links between programmes and integration of HIV into other key health services have the potential to improve the efficiency and effectiveness of both HIV-specific and broader health investments. Collaboration between HIV and other health programmes will facilitate programme coordination and align programme targets, guidelines, services and resources.
Activities

Some of the activities are as outlined in the 2012-13 road map.

<table>
<thead>
<tr>
<th>Road map 2011–2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Support Member States to provide quality HIV/STI care through primary health care services.</td>
</tr>
<tr>
<td>• Support countries to work towards elimination of new pediatric HIV infections and congenital syphilis.</td>
</tr>
<tr>
<td>• Provide support to countries for strengthening the capacity for surveillance of HIV/STI/Risk behaviour in all Member States.</td>
</tr>
<tr>
<td>• Support countries to develop National Strategies and costed operational plans for the health sector response to HIV/AIDS.</td>
</tr>
<tr>
<td>• Advocate for higher commitment to optimize HIV treatment for all those in need.</td>
</tr>
<tr>
<td>• Support countries to strengthen capacity of HIV and TB programmes for enhanced surveillance, diagnosis and management of TB-associated HIV.</td>
</tr>
<tr>
<td>• Support countries to mobilize and implement donor funds (GFATM, 3DF, PEPFAR, CDC).</td>
</tr>
</tbody>
</table>

Tuberculosis

Current situation

The WHO South-East Asia (SEA) Region, with an estimated 5 million prevalent and about 3.5 million incident cases in 2010, carries about 40% of the global burden of tuberculosis. Five of the 11 Member countries in the Region are among the 22 high-burden countries, with India alone accounting more than 25% of the world’s incident cases.

Most cases continue to occur in the most productive age group of 25–34 years, with males being disproportionately affected. Although the death
rates due to TB have declined after the introduction of DOTS in the Region, the disease continues to claim about half a million lives each year.

Countries in the WHO South-East Asia (SEA) Region have made significant progress towards the TB-related Millennium Development Goals (MDGs). The estimated incidence of all forms of TB, estimated prevalence of all forms of TB and the estimated TB mortality all continue to show a downward trend. The treatment success rate among new smear positive pulmonary TB cases has remained above 85% since 2005, and was 88% in 2010.

Most countries in the Region have been observing an incrementing or stabilizing trend of smear positive case notifications, and nationwide prevalence surveys have been identifying that TB burden in most countries is much bigger than what was previously estimated. The findings of the recently completed national survey in Myanmar are challenging, however point the way forward to improve the TB care and control of tuberculosis (MDR TB)

A growing number of MDR-TB diagnosis and treatment sites are being established in the Region, and in 2010, almost 4000 MDR-TB patients have been put on treatment. However, this represents only a fraction of the estimated 105 000 MDR-TB cases in the Region.

**TB-HIV**

The collaboration between TB and HIV control programmes is improving. However, this collaboration needs further strengthening to ensure universal HIV counseling and testing for all TB patients, the availability of co-trimoxazole preventive therapy and ART for all eligible TB patients
co-infected with HIV as well as INH prophylaxis, and airborne infection control in health care facilities.

**Funding**

The fragile funding situation, health system constraints and critical unmet capacity needs for universal access to high quality care for all people with TB, including children, introduction of new/rapid diagnostics for TB, taking TB control beyond the health sector, scaling up civil society involvement and addressing TB-diabetes and other co-morbidities all pose major challenges to TB control programmes.

To enable the scale up of interventions, there is an urgent need to advocate for additional financial resources. In the whole Region, domestic funding for TB control continues to account for about 55% of the funding for national TB control programmes; the Global Fund accounts for about
40% of funding for TB activities. In addition, nine Member states benefit from funds from other development partners and donor governments with the exception of Bhutan and Maldives, where the only external funds are provided through WHO country budgets. Despite funding available through government and various donors, in the Region, there is 20% funding gap for the budget of TB control programmes estimated for 2012.

National TB programmes and partners are engaged in carrying forward several operational research projects. Research proposals in the area of TB are being supported through SEA Regional Office and TDR funding. Several other research projects are supported by WHO Country Offices through funds available at country level. However, research has been observed still to be a weak area in the Region and in the year ahead efforts have to be made to strengthen this through regional training and technical support.

Substantial progress has been made so far in our endeavour to implement the Stop TB Strategy which aims to “dramatically reduce the global burden of TB by 2015” but there is still a long way to go to eliminate TB regionally as well as globally. Sustainable efforts are required for continued commitment, enhanced advocacy, strengthened health system and adequate resources for national TB control programmes for several more years.

**Objectives and strategies**

Developing comprehensive national plans for urgently scaling up diagnostic and case-management capacity to detect and treat all TB cases, including MDR-TB cases, conforming to internationally recommended protocols, and mobilizing the necessary resources to do so, are critical.

The following interventions are called for:

1. **Urgently pursue within national TB control plans the means to ensure:**
   - Adequate technical and management capacity to improve programme performance.
• **Laboratory capacity** for diagnosis of all forms of TB including MDR-TB and use of new, rapid diagnostics for universal case detection.

• **Uninterrupted supplies of first- and second-line drugs** meeting international prequalification or national regulatory standards.

• **Wider involvement and accreditation of health care providers in other sectors** to ensure a uniform quality standard of care and rational use of drugs.

• **Stronger collaboration between national TB and HIV programmes** to address TB/HIV.

• **Expansion of community-based initiatives** for TB detection and care.

• **Infection control measures** to limit transmission of TB in health care and other settings.

(2) **Take advantage of opportunities provided by GFATM, donors, and increase national investments in health systems to:**

• Enhance health infrastructure, procurement and supply management systems.

• Strengthen public and private laboratory services.

• Ensure rational use of drugs, through stricter regulation and pharmacovigilance.

• Improve national Health Management Information Systems, surveillance mechanisms.

(3) **Secure the required external funding and technical assistance both in the medium and long term.**

(4) **Functionalize Regional Green Light Secretariat to scale up Programmatic Management of Drug Resistant TB (PMDT).**
Challenges

While considerable progress continues to be made, national TB control programmes face a number of challenges, some of which are as follows:

- **Overstretched national public health care systems**: gaps in human resources, surveillance and monitoring, procurement and logistics management systems. The recent funding cuts by the Global Fund pose a serious threat to maintain the gains.

- **Inadequate national laboratory capacity** including for TB cultures, drug sensitivity testing, and deployment of newer, faster diagnostics.

- **Limited capacity for programme management, particularly** of drug-resistant TB and TB/HIV.

- **Provision of health care in other sectors not yet fully linked** to national programmes.

- **Low community awareness and utilization** of services.

- **Unregulated over-the counter sales of TB drugs in many countries.**

- **Limited availability of quality assured second-line drugs**; small number of pre-qualified manufacturers; delays in procurement.

- **Uncertain long-term funding**, particularly for MDR-TB; the Region lacks an estimated one third of funding required for TB control until 2015.

- **Inadequate attention in addressing the social**, economic and behavioural determinants that impact TB.

Activities

Some activities are outlined in the 2012–2013 road map.
Road map for 2012–2013

- Support all countries to achieve universal access to higher and early case notification and treatment success rate and maintain the current rate of decline in TB prevalence and mortality.
- Scale up Drug Resistant TB as a component of national programmes.
- Expand TB-HIV interventions to reach to over 50% of the Region’s population.
- Secure adequate supplies of first- and second-line anti-TB drugs.
- Take effective measures to achieve less than 5% funding gap for TB control.

Malaria

Current situation and challenges

Significant progress in malaria control in the WHO South-East Asia Region has been observed in the past decade. Key interventions were scaled up and the trends in malaria morbidity and mortality declined (Figure 4). Bhutan, DPR Korea, Indonesia, Nepal, Thailand and Sri Lanka are now moving towards the pre-elimination phase of malaria. In Bangladesh and Thailand, malaria cases and deaths were reduced markedly and transmission is now limited to only a few districts. Maldives has been malaria-free since 1984.

In spite of major achievements, the burden of malaria in the South-East Asia Region is still high; it is second to sub-Saharan Africa. Malaria causes a loss of 1.34 million DALYs in this Region (2004 data). Around 1.32 billion people (76% of 1.75 billion, the total population in the Region) were at risk of contracting the disease in 2010. In the same year, 4.3 million malaria cases were reported, of which 2.41 million cases were confirmed either by microscopy or rapid diagnostic test. Three countries accounted for 94% of
confirmed cases: India (66%), Myanmar (18%) and Indonesia (10%). The majority of confirmed cases in the Region are due to *Plasmodium falciparum*, although the proportion varies greatly among countries. *P. falciparum* accounts for most of malaria cases reported in Bangladesh, Myanmar and Timor-Leste. *P. vivax* is the most predominant species detected in Nepal and Sri Lanka and it is the only type of malaria in Democratic People’s Republic of Korea. A total of 2426 malaria deaths were reported from eight countries, 93% of which were from India, Myanmar and Indonesia. Both cases and deaths are substantially under-reported, but these proportions are indicative of the geographical distribution of malaria in the Region. WHO estimated that the actual malaria cases could be approximately 28 million and actual deaths may be about 38 000 in 2010 (*World Malaria Report 2011*).


**Resistance to artemisinin-based combination therapy (ACT)**

All countries in the Region with *P. falciparum* adopted and scaled up the use of artemisinin-based combination therapy (ACT), in response to the increasing resistance of this species to chloroquine and sulfadoxine-pyremithamine. Currently artemisinin and its derivatives are the most efficacious drugs against falciparum parasite. Artemisinin resistance has emerged at the border between Thailand and Cambodia and between Thailand and Myanmar; it is suspected in the south-eastern part of Myanmar and in central Vietnam. This poses a serious threat to malaria control not only in these countries in the Greater-Mekong Subregion but also globally. Containment activities started in Thailand and Cambodia in 2009 and in Myanmar and in Viet Nam in 2011.

Aside from containment of artemisinin resistance, challenges include addressing the great diversity of malaria due to several different eco-epidemiological subtypes that require the use of strategies in stratified geographical areas; dynamicity of malaria due to rapid ecological changes resulting from socioeconomic, environmental and economic developments; lack of effective tools and service delivery mechanisms to address malaria among ethnic groups, migrant workers, and forest related workers/settlers; financial gaps; insufficient technical and managerial capacities in malaria control at national and sub-national levels, and quality of information on malaria including under-reporting of malaria cases and deaths. Moreover, control of vivax malaria remains a challenge due to lack of an effective drug to substitute for the 14-day regimen of primaquine for radical cure.
Malaria is not just a public health problem but it is also a disease closely related to social and ecological changes including climate change. Successful malaria control would need strong and sustained political will, participation of the community, public and private sectors, health and non-health sectors, supported by strong technical and management capacities for malaria control at all levels.

**Objectives and strategies**

**Objectives**

To achieve the following by the end of the current biennium (2012–2013):

- Strengthen technical and management capacities for malaria control and elimination, including containment of artemisinin resistance.
- Update national malaria control strategic plans based on evidence and in line with Regional Malaria Control and Elimination Strategy.
- Strengthen quality assurance and quality control of malaria microscopy.
- Improve epidemiological research, surveillance, monitoring and evaluation that would strengthen evidence base for malaria control and elimination.
- Advocate to sustain political and financial support for malaria control programmes.

**Strategies**

- Strengthen collaboration across three levels of the Organization and with ministries of health and other key partners, as well as inter-country.
• Well targeted training for malaria control and elimination based on needs assessment.

• Investing the limited financial resources in strategic areas (e.g. surveillance, M & E, research, QA/QC) that would contribute substantially to malaria control and elimination.

• Intensify advocacy for political and financial support.

Key activities

The key activities planned in 2012–2014 are as follows:

• training needs assessment for malaria control and elimination;

• training in malariology and other aspects based on needs identified;

• development of regional framework for containment of artemisinin resistance in Greater Mekong Sub-region;

• development of guidelines on control of malaria in pregnancy, micro-stratification of malaria risk areas for better targeting of intervention, and surveillance, monitoring and evaluation;

• inter-country (BBIMNS) meeting to revive networking for cross-border surveillance, drug resistance monitoring and capacity development;

• cross-border meeting between DPRK and the Republic of Korea;

• support research including therapeutic efficacy and epidemiological studies;

• program review in Myanmar and Sri Lanka;

• provide technical support based on needs of NMCP in each Member Country.
4.3 Elimination and eradication of tropical diseases

Dengue

Dengue, a vector-borne viral disease, is one of the most significant public health threats affecting humans. Nearly 2.5 billion people live under threat of dengue with 50 million new infections in over 100 countries. There are
24,000 deaths reported annually. The SEA Region harbours 52% of the population at risk in all Member States except DPR Korea. WHO’s South-East Asia and Western Pacific regions worked together to develop a bi-regional dengue strategic plan which was endorsed by the Regional Committee in 2008 and shared with Member States. The South-East Asia Region developed “Comprehensive guidelines on Control and Prevention of Dengue” in 2011, and it has been distributed in the Region.

SEA Region reported a gradual increase in number of cases of dengue (Figure 5) from 63,672 (2000) to 355,314 (2010). Similarly deaths also increased from 656 (2000) to 1980 (2010). Subsequently, as a result of improvement in programme management, including vector control measures, the number of cases and deaths reduced to 176,719 and 887, respectively, during 2011. Due to climate change, dengue was reported from mountainous countries such as Bhutan and Nepal for the first time in 2004. The Democratic People’s Republic of Korea is the only country in the Region that has not reported indigenous dengue cases.

*Provisional data from 10 Member countries.
Among the endemic countries, Indonesia, Myanmar, Thailand and Sri Lanka reported high numbers of cases. There was a sudden increase in the number of reported cases of dengue in Sri Lanka in 2009 and 2010 and Maldives in 2011. Bangladesh and India report only laboratory-confirmed cases while the reported case count in other countries include confirmed/probable/suspected cases.

WHO-SEARO has made significant progress in developing strategic plans, guidelines and enhancing country capacity in dengue control and prevention including integrated vector management (IVM). These include:

- National Environmental Agency (NEA), Singapore offer of training to strengthen laboratory and entomological surveillance in the Asia-Pacific Region:
  - The first workshop was held from 10 to 19 March 2009.
  - The second one from 31 August to 8 September 2010.
  - The third workshop is planned from 28 August to 6 September 2012.
• Dengue Programme Managers’ meeting in SEA Region, held in June 2010 to scale up the strategy in Member countries.

• Programme manager’s meeting to implement and scale up integrated vector management (IVM), organized in September 2010.

• Regional Training on IVM, held in October 2011.

• Comprehensive guideline for prevention and control of dengue and DHF, developed in 2011.

**Road map 2012–2013**

- Scaling up of dengue control according to the Asia Pacific Dengue Control Strategy.
- Implantation of comprehensive guideline for prevention and control of dengue and DHF, revised and expanded edition, 2011

**Leprosy**

*Present situation and challenges*

The South-East Asia Region achieved the goal of elimination of leprosy as a public health problem at the end of December 2005 with the regional prevalence rate of 0.87 per 10 000 population.

In the beginning of 2010, the regional prevalence rate was 0.66 per 10 000 population with a total of 120 456 cases on treatment in the Region. Trends of new case detection of leprosy globally and in South-East Asia Region from 2001 to 2009, is shown in Figure 6.

Of the global total registered prevalent cases 56.8% were in the SEA Region at the beginning of 2010, as shown in Figure 7. During 2009, 67.9% of the global total new cases were detected in the SEA Region, as shown in Figure 8.
At the end of 2010, all 11 Member States of the Region achieved the goal of elimination at the national level. However, globally, there are 16 countries that reported 1000 and more new cases during 2009 and six of these 16 countries are in this Region (Bangladesh: 5 239, India: 133 717, Indonesia: 17 260, Myanmar: 3147, Nepal: 4374 and Sri Lanka: 1875 cases). Two priority countries (India and Indonesia) with large populations and with large numbers of new leprosy cases reporting annually are also targeting for sub-national elimination; in India, 33 of the total 35 States/Union Territories, and in Indonesia, 21 of the 33 provinces achieved elimination by the end of December 2009.

In spite of a large number of new cases detected annually, Bangladesh, Myanmar, Nepal and Sri Lanka have achieved and sustained elimination at the national level and are making concerted efforts to further reduce the leprosy burden.

**Figure 6: Trends of new case detection of leprosy, globally and in South-East Asia Region 2001–2009**

With WHO technical support for capacity building, country-based workshops were conducted by the national leprosy programmes in Bangladesh, India, Indonesia, Myanmar, Nepal and Timor-Leste. Technical support was also provided to priority countries – Bangladesh, Indonesia,
Nepal and Timor-Leste. The Regional Office organized a “workshop in Dhaka on Leprosy Programme Management for Low-endemic Countries” (Bhutan, Maldives, and Thailand) and Timor-Leste in collaboration with the Global Leprosy Programme (GLP) and partners. The workshop was targeted at sustaining basic knowledge and skills on leprosy diagnosis and case management including rehabilitation among the national programme managers of the low-endemic Member States in the Region. In due course, they are expected to conduct similar in-country workshops and serve as facilitators.

The Regional Office also supported the country offices in conducting national advocacy meetings for implementation of the “Enhanced Global Strategy and Operational Guidelines for Further Reducing the Disease Burden due to Leprosy (2011-2015). The strategy targets on the reduction of Grade II disability among new cases at the national level during the period.

**The remaining challenges**

- Sustaining political commitment and ensuring adequate resources in order to sustain elimination at national level, and progress towards further reducing the burden of leprosy.
- Strengthening integration of leprosy services into the general health system through capacity building and skill development, to ensure and sustain quality leprosy services, including diagnosis and treatment.
• Ensuring a wider coverage of leprosy services, especially in currently under-served population groups such as in remote rural areas, urban slums, migrant labourers and such others.

• Increasing and sustaining community awareness through sustained advocacy and IEC activities to promote voluntary case detection and decrease stigma and discrimination.

• Minimizing/preventing operational factors.

• Prevention and care of disabilities, prevention of displacement of leprosy-affected, ensuring community-based rehabilitation of cured/disabled leprosy persons.

• Streamlining the MDT supply and stock management in each country, especially at all levels in large countries.

Activities

The road map for 2011-2015 is as outlined below:

<table>
<thead>
<tr>
<th>Roadmap for 2011–2015</th>
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<tbody>
<tr>
<td>• Promote advocacy for the implementation of the Enhanced Global Strategy (2011-2015) among Member States.</td>
</tr>
<tr>
<td>• Provide technical support focusing on capacity building to the priority countries with a large number of new cases to implement key activities outlined in the Enhanced Global Strategy 2011-2015.</td>
</tr>
<tr>
<td>• Monitor the leprosy situation at national and sub-national levels including MDT drug supply and surveillance of drug resistance in leprosy.</td>
</tr>
<tr>
<td>• Conduct operational research in collaboration with other partners to improve leprosy services in the Member States.</td>
</tr>
<tr>
<td>• Reduce by the end of 2015, the rate of new cases occurring with grade-2 disabilities (visible disabilities) per million population at the national level by 20% compared to the baseline of 2010.</td>
</tr>
</tbody>
</table>
Lymphatic filariasis

Present situation and challenges

Globally an estimated 120 million people were infected with lymphatic filariasis (LF) in 72 countries in 2010 and about 60 million of them live in the SEA Region. An estimated 1.39 billion people live in areas where filariasis is endemic and mass drug administration (MDA) with diethyl carbamazine citrate (DEC) and Albendazole is required. About 876 million, 63% of the global population requiring MDA for LF live in nine endemic countries in the Region. Of them, 34% are children. The Region also accounts for approximately 57% of the total global burden of 5.1 million disability-adjusted life years lost due to LF. The Member States of the Region are committed to eliminating the disease as a public health problem by 2020. All three parasites of LF—namely *Wuchereria bancrofti, Brugia malayi,* and *B. timori* are present in the Region. *W. bancrofti* causes 95% of infections. *Culex quinquefasciatus* is the main vector transmitting LF infection. *Aedes* and *Anopheles* species act as vectors in few foci. Several species of *Manson* and *Anopheles* are responsible for the transmission of brugian filariasis.

As of 2010, the global programme for elimination of LF (GPELF) had targeted 622 million people and treated 466 million with the two-drug combination in 53 countries. In the South-East Asia Region, 476 million people were targeted and 365 million were treated in 2010, contributing to around 80% of global treatment. Treatment coverage data for 2011 is being updated. Since the South-East Asia Region is contributing significantly to the success of the global programme, it is important to scale up treatment coverage in the Region through mass drug administration (MDA). Bangladesh, India, Indonesia, Myanmar and Nepal are making steady progress in scaling up MDA to cover the entire endemic population. Timor-Leste would need additional resources to reinitiate MDA which was discontinued.
in 2007. The country, with assistance from WHO and University of Sydney, is gradually preparing to restart LF MDA, integrating with deworming of intestinal worm infection.

**Impact of MDA**

The impact of MDA in LF elimination programme is quite visible. As a result of effective implementation of MDA, the micro-filarial rate declined to less than 1% after completing five or more MDA rounds in 493 implementation units (defined geographic area). This accounts for 45% of the total 1100 implementation units (IU) endemic for LF (Figure 9).

Out of 1100 implementation units, 290 stopped MDA in Bangladesh (5 in 2011), the Maldives (1 in 2009), Myanmar (3 in 2009), Nepal (5 in 2011), Sri Lanka (8 in 2007) and Thailand (268 in 2006). This adds to 26% of the total 1100 implementation units requiring MDA.

**Figure 9: Impact of LF mass drug administration in SEA Region 2011**

![Figure 9: Impact of LF mass drug administration in SEA Region 2011]

IU: Implementation unit
The Maldives and Sri Lanka initiated verification of elimination of LF in 2011 with WHO assistance. An expert team visited both countries to initiate the process as per the WHO LF Transmission Assessment Survey (TAS) Manual (2011). These two countries have implemented post-MDA surveillance including vector surveillance. Sri Lanka implemented xenomonitoring. Since the micro-filarial rate declined to less than 1% in Thailand, it is planned to initiate the first step in verification of LF elimination late in 2012. Bangladesh and Nepal stopped MDA in 10 districts after completing a TAS exercise in 2011 and implemented post-MDA surveillance. Two hundred and three implementation units in India have reached micro-filarial rate to <1% and completed five or more MDA rounds by 2011. A TAS exercise is being planned to stop MDA eventually. Stopping MDA will result in saving of albendazole tablets and allow the programme to expand MDA to remaining districts. However, funding to procure immuno-chromatographic (ICT) kits and mobilizing operational cost including capacity building is a challenge to the Member countries. SEARO is planning a Regional capacity building workshop on TAS in 2012 to enhance the knowledge and skills of programme managers to initiate stopping MDA in the districts.

Elimination of lymphatic filariasis has the added benefit of controlling soil-transmitted helminthic infections including those caused by roundworm, hookworm and whipworm. This helps in reducing morbidity among the target population, especially school-age children, the most vulnerable group, and in improving their nutritional status and physical/cognitive growth.

WHO continued to supply albendazole to all the endemic countries. During 2011, WHO supplied 394 million tablets of albendazole. In addition, WHO also supplied 50 million tablets of DEC to Myanmar. WHO continued technical assistance to endemic countries. The 8th meeting of national LF programme managers and Regional Programme Review Group was held in Sri Lanka in 2011.
Challenges

Sustaining political commitment and providing adequate resources are important. In addition the following issues need to be addressed.

(1) Need for alternate tools, especially for *B. malayi*.
(2) Timely procurement of drugs to ensure high coverage.
(3) Impact analysis of MDA on *B. malayi* and *B. timori*.
(4) Procurement of ICT kits which are expensive.
(5) Capacity building in planning and implementing TAS.

Strategies

A regional strategy for 2010–15 has been developed focusing on the following:

(1) Specific strategies to reduce and ultimately interrupt LF transmission.
(2) Implementation of MDA and ensuring high treatment coverage and compliance.
(3) Specific strategies to prevent and alleviate disability.
(4) Community home care measures for lymphedema.
(5) Management of acute episodes.
(6) Surgical facilities for hydrocelectomy.
(7) Patient and family education.
Soil transmitted helminthiasis (STH) or intestinal parasitic infection is one of the major public health problems in the SEA Region. As per the revised estimate of WHO (2011), 372 million children (pre-school and school age) require preventive chemotherapy (PCT) with albendazole / mebendazole in the SEA Region. Of them, 107 million are preschool age (Pre-SCH) and 265 million are school age (SCH) children. 372 million of the 883 million children requiring preventive chemotherapy (PCT), in the world – 42% – are in SEA Region. (2011). All the three helminthes viz. ascariasis, trichuris trichura and hook worms are prevalent. Estimated prevalence rate of helminthiasis varies from 40% to 65% in many Member States. Of the 372 million children requiring PCT, 65% are in India alone. Indonesia and Bangladesh bear 16% and 13% of the burden of the SEA Region respectively. These three high burden countries will need rapid scaling up of PCT coverage to at least 75% of the children to reach the global target by 2020. Approximately 260 million of the 372 million children requiring PCT are living in LF-endemic districts and the remaining 112 million are outside the LF-MDA districts. LF-MDA annual dose provides one dose of albendazole to the targeted population in LF-endemic districts.
Progress in deworming coverage in SEA Region

Of the total number of children requiring PCT, approximately 137 million children received albendazole/mebendazole during 2010. About 106 million (78%) received albendazole during LF-MDA campaigns in 2010. The remaining received either albendazole/mebendazole through school health/nutrition/immunization programmes. Considering higher prevalence rates, Bangladesh and Nepal practiced a second round of deworming. Water and sanitation is being considered as an integral component of deworming activities through intersectoral partnership. Myanmar is planning to assess the impact of deworming in 2012 since the national STH control programme has been administering anti-helminthic drugs since 2003 onwards.

WHO-SEARO organized an informal consultation on scaling up STH treatment to attain the global goal of reaching at least 75% of children in the region by 2020. WHO is supplying free albendazole to Member countries to scale up deworming. In addition, partners also are coming forwards to donate mebendazole.
Challenges

(1) Sustained political commitment and resource mobilization for STH control jointly by the Ministry of Health and Ministry of Education.

(2) Increasing intersectoral partnership to improve sanitation and clean water supply.

(3) Public education to change habits towards improved sanitation and washing hands.

(4) Integrating STH control into other NTDs.

Strategies

(1) Estimation of prevalence of STH in Member States.

(2) In LF-MDA districts, children are covered during MDA campaigns with an annual single dose of albendazole.

(3) In non-LF-MDA districts, children are covered in the school health programme or nutrition/vitamin A campaign either with albendazole or mebendazole.

(4) Public education to create awareness about sanitation and washing hands.

Road map 2012–2013

- To assess current prevalence rate of helminthiasis in LF endemic districts after stopping MDA to decide about continuing deworming.
- To streamline albendazole and mebendazole donations to Member States.
- To advocate and educate health and non-health sectors and communities on improved sanitation, clean water supply and washing hands.
- To plan assessment of impact of deworming in Myanmar.
- Integrate STH treatment into other NTDs where preventive chemotherapy is practised.
Elimination of blinding trachoma

In South-East Asia, India, Myanmar and Nepal continue to be endemic for trachoma. These three countries have implemented the WHO recommended strategy package “Surgery, Antibiotics, Facial cleaning and Environmental cleanliness (SAFE)” to achieve elimination of trachoma in line with “Vision 2020”.

Strategies

- Surveys in known endemic districts to assess the prevalence.
- Implementing the SAFE strategy.

Myanmar

The National Trachoma Control and Prevention of Blindness programme implemented the SAFE strategy in 16 trachoma endemic districts covering 21 million population. The SAFE strategy reduced the prevalence rate of active trachoma from 43% (1964) to <5% by 2009. Trachoma Folliculitis (TF) rate among children ranged from 0.06% to 2.34% (2009). Trachoma trichiasis (TT) ranged from 0.004% to 0.34%. The programme is committed to achieve elimination of trachoma by 2020 (reducing TF rate to <5% among children 1–9 years and TT to <0.1% among the total population. The programme is aiming to plan assessment in 2012 if funds are available. Four more districts are being surveyed to decide about endemicity.

A total of 4820 trichiasis surgeries were performed in 2009. In the same year, 11 210 received tetracycline eye ointment. During 2010, a total of 3546 of the 5000 TT surgeries were conducted. The coverage was 71%. Tetracycline eye ointment was distributed to 18 715 TF cases in 2010. Health education was completed in 18 districts for facial cleaning and environmental cleaning in 2010. As per the reports, more than 80% of the people in endemic districts had access to clean water and functional latrines.
The programme received US$ 20,000 from WHO and USAID for planning trachoma elimination activities in 2011. The activities were implemented in six townships in six regions. Altogether, a total of 244 basic health workers received training in trachoma elimination activities including surveillance. A total of 880 trichiasis surgeries were performed.

The programme is committed to the global elimination of blinding trachoma by achieving sustained reduction of TF (trachomatous inflammation-follicular) prevalence to < 5% among children aged 1–9 years in any subdistrict and to reduce the prevalence of TT (trachomatous trichiasis) to < 0.1% among the total population by 2020 in line with “Vision 2020”.

**Nepal**

The National Trachoma programme (NTP) is implementing the SAFE strategy through a national NGO (Nepal Netra Jyoti Sangh) for MoHP. The national target to eliminate trachoma is by 2014 (reaching prevalence of < 5% active trachoma in children 1–9 years and < 1/1000 trachomatous trichiasis in all age people). Prevalence survey was carried out in 67 districts (eight more in 2012) which indicated that 19 districts were endemic. About 7.4 million people were at risk. Sixteen districts completed implementation of the SAFE strategy by 2011. Three more districts are currently implementing this strategy. Nine districts completed the impact survey and eliminated trachoma. In 2011, seven districts treated 1.8 million people with azithromycin. From 2002 to 2011, a total of 17,282 trichiasis surgeries were performed.

The International Trachoma Initiative (ITI), MoHP, RTI, USAID are supporting trachoma elimination. WHO provided US$ 10,000 in 2011 for surgery of TT cases. An external assessment is requested by the programme in nine districts which completed the impact survey.

**India**

It has been reported that a total of 246,995 children were surveyed in 10 districts in six endemic states in 2006. Of these children, 6.8% had TF/TI.
Prevalence of TF in children 1–9 years in Car Nicobar, where 17 967 people were examined in 2010, was found to be 50.8%. TT was 1%. An azithromycin antibiotic was administered to 13798 people in Andaman and Nicobar. Surveys carried out in six states in India during 2006–2007 showed a prevalence rate of TF ranging from 0.6% to 15%.

**Challenges**

- Although the Member countries are committed to eliminate the disease by 2020, lack of political support and funding for implementing surveys and SAFE strategy is the main concern.
- Inadequate public awareness about the disease and need for treatment and facial cleaning and environmental cleanliness.
- Inadequate trained health personnel for planning and implementing SAFE strategy.
- Inadequate inter-sectoral partnership and coordination to eliminate the disease.

**Road map 2012–2013**

- To scale up trachoma elimination through SAFE strategy and provide technical assistance to endemic Member States. India, Myanmar and Nepal.
- To advocate integration of trachoma elimination into other NTDs requiring preventive chemotherapy.
- To plan assessment of impact of SAFE strategy in Myanmar and Nepal.

**Schistosomiasis**

Schistosomiasis in Indonesia occurs in Lindu Valley at Sigi District and in Napu and Bada Valley at Poso District; Central Sulawesi. The prevalence rate varied from 0.36% (2001) to 2.2% (2008). The rate increased from 1.4% in 2007 to 2.2% in 2008. In 2011, the prevalence rate in humans was 0.89%
in Lindu and 0.3% in Napu. It is a significant decrease compared to 2010 prevalence which was 4.66% and 4.76% for Lindu and Napu, respectively. This significant decrease is achieved through MDA using praziquantel.

The prevalence in animals (rats and snails) remains high: 12.5% in Lindu and 6.67% in Napu for rats and 3.56% in Lindu and 1.88% in Napu for snails; in 2011. Thus, environmental management and community awareness and participation are key factors for eliminating the snail habitats and for eliminating schistosomiasis infection in animals and eventually humans.

The MoH has been successful in advocating to the Local Government of Central Sulawesi to be committed to Schistosomiasis Elimination. In March 2012, a Cross Sectoral Team was established through a Governoor Decree to work together on Schistosomiasis Elimination.

The Ministry of Health has requested WHO to continuously support the cross-sectoral approach as well as to ensure the technical quality of measures taken in the field.

**Challenges**

- Mobilizing political commitment and adequate resources for Indonesia.
- Capacity building of the general health staff to promote practice of preventive chemotherapy with praziquantel and stool examination.
- Creating community awareness on schistosomiasis transmission and prevention including environmental changes through appropriate advocacy/IEC campaigns.
- Building partnerships to support schistosomiasis elimination even though it is a small problem in Indonesia and in the SEA Region.
**Strategy**

Preventive chemotherapy (praziquantel) given to cases and “at-risk” population along with snail and environmental control and improving sanitation habits.

<table>
<thead>
<tr>
<th>Road map: 2012–2013</th>
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<tbody>
<tr>
<td>• Scale up schistosomiasis elimination in Indonesia.</td>
</tr>
<tr>
<td>• Advocate and educate community leaders and the public in affected pockets to practice sanitation.</td>
</tr>
<tr>
<td>• Integrate schistosomiasis control into integrated NTDs control.</td>
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</table>

**Yaws**

Yaws, caused by non-venereal treponema, remains one of the most neglected tropical diseases affecting primarily the poorest and most vulnerable population. This disease can be easily eliminated using a single dose of injection benzthine penicillin. A yaws control programme started in the Region in 1952, with assistance from WHO and UNICEF. The programme helped to reduce in the incidence of yaws by 93% by 2002. Later, anti-yaws activities were gradually abandoned in most countries, with the result that the disease re-emerged in the late 1970s. Subsequently in 1996, intensified efforts resulted in another dramatic decline of yaws.

India declared elimination of yaws in 2006 and continued serosurveillance. India is planning to declare itself “Free from Yaws” in 2012.

Indonesia is continuing its efforts to advocate decentralized district governments to mobilize resources and eliminate the disease. Though the exact situation is not known, 18 provinces of the 33 provinces in Indonesia are believed to be affected with this disease. Five of the 18 provinces are considered to carry a high burden of yaws mainly in 33 districts. While
Figure 11: Yaws elimination in India: a success story

![Graph showing the decrease in yaws cases in India from 1996 to 2011.](image)

Figure 12: Trend in reporting of new yaws cases in Indonesia

![Graph showing the trend in reporting of new yaws cases in Indonesia from 2001 to 2011.](image)
43 districts in 13 provinces which were endemic in the past are considered to be of very low endemicity as they report yaws cases occasionally indicating the presence of foci of infection in the community. The national programme (leprosy and yaws) of the Ministry of Health is reporting a steady increase in the number of new cases since 2001.

In Timor-Leste, yaws elimination has not yet received the required attention so far as the country is in the process of building its health infrastructure and manpower. Reliable data on yaws are not available but considering that yaws is endemic in the adjoining provinces of Indonesia which border Timor-Leste, a preliminary estimate of 1000 annual cases has been made. Yaws is endemic in at least 6 of the 13 districts.

WHO-SEARO organized an informal consultation on scaling up yaws elimination activities in Indonesia and Timor-Leste in October 2011 in Dili, Timor-Leste and revised the regional strategy of 2006-2010.

While currently practiced single dose of injection benzthine penicillin to cases and contacts is found to be effective, oral azithromycin in a single dose (2g) in yaws was found to be as effective in curing yaws when compared with benzthine penicillin. To scale up and give a further to eradicate yaws from the world by 2020, mass treatment with azithromycin twice year has been accepted as a strategy in a consultation meeting in Geneva in 2012. The South-East Asia Region adopted the new strategy and revised regional strategic plan to eliminate yaws: 2012–2020 to accelerate yaws elimination in the Region.

A patient with yaws, before and after treatment.
Challenges

- Mobilizing political commitment and adequate resources.
- Capacity building of the general health staff to recognize and treat yaws.
- Improving case detection and ensuring prompt treatment of index cases and their contacts.
- Extending yaws services to remote and difficult-to-reach areas.
- Creating community awareness on yaws, through appropriate advocacy/IEC campaigns, so that those affected can come forward for diagnosis and treatment.
- Building partnerships.

Strategy

- Active and passive case detection.
- Total community treatment with oral azithromycin in a single dose (2g) twice a year for three year to achieve zero new case followed by sero-survey of children below five years to verify transmission of the infection. Wherever azithromycin is not indicated, benzthine penicillin will continue.
- Strengthening the capacity of the health system to recognize and treat yaws.
- Strong advocacy and IEC campaign in the affected areas.
- Strong public/private partnership and involvement of non-health sectors.
- Regular supervision, monitoring and evaluation.
**Road map 2012–2013**

- To provide technical assistance to India for declaring “Country free from Yaws” by the end of 2012.
- To advocate Indonesia and Timor-Leste on the revised Regional Strategic Plan for Eliminating Yaws by 2020 with new strategy of using azithromycin as preventive chemotherapy.
- To provide technical assistance to endemic Member States.
- To advocate with MOH and inter-sectors for commitment, resource mobilization and water supply.
- To educate the affected population to practice personal hygiene and use of soap.

**Kala-azar**

*Present situation and challenges*

Kala-azar affects the poorest of the poor and is endemic in 109 districts, primarily in three countries in the Region: in Bangladesh (45), India (52) and Nepal (12). Approximately 200 million people in the Region are “at risk” from the disease. Bhutan has been reporting sporadic cases of kala-azar since 2006. If the disease is left untreated, it is fatal. Because of its unique epidemiology (humans are the only reservoir, and the disease is confined to limited areas in the three countries), availability of oral drug (miltefosine), diagnostic kit (rK39) and IRS for effective vector control and a strong political commitment, it is possible to eliminate the disease from the three countries in the Region. Since a single dose of ambizone has been found to be very effective it has been recommended by WHO to the programme. A new MoU will be signed in 2012 by the Health Ministers of Bangladesh, Bhutan, India and Nepal to reach a target of less than 1 case per 10 000 population in the affected areas by 2015.
By the end of 2011, India reported 33,043 cases with 80 deaths due to kala-azar. The figures from Bangladesh and Nepal in 2011 were 3,376 cases and 886 cases and 2 and 12 deaths, respectively. All the three countries reported 37,305. Of them, 94(0.3%) died. The overall death rate remained unchanged since 2007. Bhutan reported six new cases in 2010.

**Challenges facing elimination of kala-azar**

- The wide gap between the number of reported and estimated cases affects elimination efforts.
At present, diagnosis and treatment have been limited to large hospitals. Patients often seek treatment from private doctors or even quacks, who provide expensive, incomplete or inappropriate treatment that favours continued transmission of the disease.

Post-kala-azar dermal leishmaniasis (PKDL) patients with only skin signs resulting from delayed or incomplete treatment are reservoirs of infection responsible for continued transmission. These patients are difficult to diagnose and treat.

The threat of HIV/AIDS and kala-azar co-infection is increasing. If the HIV/AIDS epidemic spreads to the general population where kala-azar is endemic, it may have disastrous consequences.

**Objectives**

To contribute to improving the health status of vulnerable groups and at-risk population living in kala-azar-endemic areas of Bangladesh, Bhutan, India and Nepal by the elimination of kala-azar by 2015 so that it is no longer a public health problem. WHO-SEARO finalized the “Regional Strategic Framework for elimination of kala-azar from the South-East Asia Region 2011-2015” to give a further push to reach the revised Regional target for elimination.

**Targets**

- To reduce the annual incidence of kala-azar to less than one per 10 000 population at district or sub-district level (upazila in Bangladesh, sub-district in India and district in Nepal and Bhutan) by 2015.
- Reduce case fatality rates.
- Prevent the emergence of kala-azar/HIV, and TB co-infections.
Strategies

- Early diagnosis and complete case management.
- Integrated vector management and vector surveillance.
- Effective disease surveillance through passive and active case detection.
- Social mobilization and building partnerships.
- Implementation and operational research.
- Capacity building.

Post-kala-azar dermal leishmaniasis (PKDL)

PKDL is a complication of visceral leishmaniasis (VL) or kala-azar and is characterized by a macular, maculopapular and nodular rash in a patient who has recovered from VL and is otherwise well. Starting from around the mouth, it spreads to other parts of the body. In India, it follows treated VL in 2%–5% of cases and there is a gap of 3–8 years. Diagnosis is mainly clinical. Parasites may be demonstrated by microscopy in smears or skin biopsy. PCR may detect the parasite in more than 80% of cases. The burden of PKDL is yet to be assessed in the Region. The early diagnosis and management of PKDL is a challenge to the programme. Appropriate guidelines are needed.

WHO-SEARO organized an intercountry consultation on elimination of Kala-azar in the SEA Region in November 2011 to discuss on scaling up of elimination of kala-azar in the Region. In this meeting, the introduction single dose AmBisome as a first choice regimen was discussed.
**Road map 2012–2013**

- Scale up kala-azar elimination in Bangladesh, Bhutan, India and Nepal.
- Provide technical assistance to Member States.
- To develop guidelines for PKDL diagnosis and management.

**Integrated vector management**

Integrated vector management is an important component in the Global and Regional strategies for the control/elimination of malaria, kala-azar, dengue, Chickungunya and lymphatic filariasis. SEARO developed a step-by-step approach to the implementation of IVM at the district level in 2008. A Regional Meeting on Implementation of IVM was organized at Chiang Mai, Thailand from 27 to 30 September 2010 to discuss various issues related to the implementation of IVM in Member States and also to arrive at practical methods in expanding the strategy. A training module for IVM has been developed and the first training on IVM was organized at the Vector Control Research Centre (VCRC), Pondicherry (WHO CC) from 19 to 31 October 2011.

Large quantities of public health pesticides are used in the vector borne disease control programmes. Regional guidelines for sound pesticide management (2010) are in place.

Use of ITN/LLINs are being scaled up in Member States for interruption of transmission. Indoor residual spray is undertaken to control the adult population while larval control is carried out by use of chemical pesticides and biological control agents.
Integrated control of neglected tropical diseases

One of the control strategies for some of the neglected tropical diseases (NTDs) such as LF, soil transmitted helminthiasis (STH), trachoma and schistosomiasis is to practice mass drug administration (preventive chemotherapy). Many of these diseases amenable to PCT are geographically overlapping in some of the Member States. To rapidly increase treatment coverage with limited funding and technical manpower, integrated approaches are being recommended. While practicing integrated treatment strategies, integrated disability alleviation strategies and integrated vector management are also being recommended to make the programme more cost-effective.

Food-borne trematodes (Fasciola hepatica) which are prevalent mainly in Thailand are also considered for PCT. Other NTDs namely yaws, kala-azar and leprosy could be linked with the main integrated plan with individual case management and disability alleviation wherever applicable.

WHO-SEARO finalized the Regional Strategic plan for integrated NTD control 2012-2016 after a Regional consultation in New Delhi in August 2011. Indonesia, Myanmar, Nepal and Timor-Leste drafted country plans to integrate NTDs. Indonesia and Nepal are in the phase of implementation of the plans.

Tropical disease research

WHO-SEARO provides small grants to build research capacity in Member States. Between 2005 and 2010, 211 small research grants were provided.
The funding support received from TDR was discontinued in 2010. The Department of Communicable Diseases has funded seven proposals in 2008 and 11 proposals in 2010 from the CDS pool fund. The details are given below:

Table 2: Statement of WHO-TDR small grants supported projects from 2004–2011

<table>
<thead>
<tr>
<th>Year</th>
<th>TDR contribution (US $)</th>
<th>No. of proposals received</th>
<th>No. of proposals sent for RRC</th>
<th>No. of proposals funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>50 000</td>
<td>9</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2005</td>
<td>50 000</td>
<td>30</td>
<td>17</td>
<td>10*</td>
</tr>
<tr>
<td>2006</td>
<td>50 000</td>
<td>23</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>2007</td>
<td>50 000</td>
<td>38</td>
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</tr>
<tr>
<td>2008</td>
<td>50 000</td>
<td>58</td>
<td>26</td>
<td>13**</td>
</tr>
<tr>
<td>2009</td>
<td>75 000</td>
<td>36</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>2010</td>
<td>75 000***</td>
<td>26</td>
<td>17</td>
<td>11***</td>
</tr>
</tbody>
</table>

* 1 proposal was funded by MAL unit  
** 7 proposals supported under CDS pool fund  
*** funding from SEARO

The CDS Department has also developed generic research protocols (2009) to study climate change impact on vector borne and diarrheal diseases (retrospective, prospective and preparedness studies). These protocols are being used by Member countries.

**Laboratory support for communicable diseases**

Public health laboratories provide critical support to disease surveillance, epidemiological tracing of infection, outbreak investigation and research. Diagnosis is the fundamental and first essential step in the prevention and
control of communicable diseases. The recent outbreaks of SARS, Nipah virus disease, chikungunya, avian influenza as well as pandemic influenza H1N1 have exposed the inherent weaknesses in the diagnostic support system in several countries.

In many communicable diseases, notably HIV/AIDS, initiation of specific treatment and monitoring of therapy warrant vital laboratory inputs. Antimicrobial resistance surveillance, especially for HIV, malaria and TB, and studies on drug resistance in all microorganisms are entirely laboratory based.

**Present situation and challenges**

Laboratory support for disease surveillance and outbreak investigations for common endemic diseases (cholera, viral hepatitis, malaria, dengue fever, Japanese encephalitis, etc.) is available in all the Member States. National laboratory networks that support these functions and are coordinated by a designated national public health laboratory are operational in SEAR. India and Thailand have several national laboratories/centres that provide disease-specific referral support to intermediate and peripheral laboratories.

Eight of the 11 Member States are participating in the Global Influenza Laboratories Network (FLUNET) through their respective national influenza centres. Capacity to diagnose seasonal influenza using PCR technology is now available in remaining three Member States. Seventy-one laboratories (from the health and veterinary sectors) from seven countries are participating in the Global Salmonella Surveillance Network. Sixteen enterovirus laboratories are members of the Global Poliomyelitis Laboratories Network while 15 measles laboratories comprise the measles network.

National laboratories in India, Indonesia, Myanmar, Nepal, Sri Lanka and Thailand organize external quality assessment schemes (EQAS) to undertake periodic assessment of the quality of laboratories in their networks.
An Asia Pacific Strategy for Strengthening of Health Laboratories has been developed recently. This strategy aims to address major challenges that public health laboratories experience in the Region which include:

- Inadequate resources because of the low priority accorded to public health laboratories. This is a major constraint that has hampered modernization of the laboratories and equipping them with molecular biological tools for the early and reliable diagnosis of communicable diseases.

- The capacity, expertise and infrastructure required to diagnose emerging diseases using virological and molecular biological tools are inadequate. Laboratories from the private sector, academic institutions, the veterinary sector, and other research and development (R&D) institutes outside the health sector have not been included in the achievement of public health objectives. Thus, expertise already available within the country is not harnessed for supporting public health activities.

- Diagnostic reagents are not available for new or unusual infectious diseases such as SARS, avian and pandemic influenza and Nipah virus.

- The infrastructure and environment that ensure biosafety in the processing of clinical material for diagnosis of viral infections are rudimentary. Biosafety level (BSL)3 laboratory facilities are functional only in India, Indonesia and Thailand.

- Participation in international networks to meet the challenges of new pathogens is insufficient. Contributions to FLUNET from almost all national influenza centres have been limited.

- The referral support system for rapid diagnosis and characterization of pathogens causing emerging infectious diseases is weak.
Objectives, strategies and activities

The goal of the Blood Safety and Laboratory Technology (BLT) Unit is to support Member States in developing the capacity to identify, detect and respond to emerging and re-merging infectious diseases, with a focus on epidemic-prone communicable diseases.

The objectives are:

- Advocating with Member States to accord priority for strengthening laboratory support systems in accordance with the Asia Pacific Strategy for Strengthening Health Laboratories.
- Modernization of infrastructure of selected national public health laboratories with emphasis on BSL3 facilities and biosafety practices; Strengthening of selected laboratories in the Region to provide comprehensive referral services to emerging diseases in collaboration with technical support from international reference laboratories.
- Working closely with all Member States and providing technical support to them for scaling up quality laboratory services and establishing biosafety infrastructure.
- Identifying centres of excellence within SEAR, augmenting their technical capacity to rapidly diagnose emerging diseases and forge a network around them for providing disease specific referral services to the entire Region.
- Creating a core group of trained professionals with competence in advanced modern diagnostic technologies including PCR.
- Forging networking between laboratories within the health sector and with other sectors, especially animal health, at different levels of the health delivery services.
• Networking between international laboratories and national public health laboratories for referral services, sharing of information, and material and human resources.

• Capacity building at all levels of laboratories through training and horizontal exchange of experience among Member States and other WHO regions to support IHR and disease surveillance.

• Reducing transmission of infectious markers through blood

Specifically, WHO will:

• Advocate utilization of the Asia Pacific Strategy for Strengthening of Health Laboratories for prioritization of and allocation of resources to public health laboratories.

• Identify and strengthen centres of excellence within the Region for quality referral services through regional networks.

• Provide technical and logistical support for the establishment of laboratories for emerging diseases with an emphasis on virological diagnosis and use of molecular biological tools.

• Develop guidelines and tools for the establishment and strengthening of laboratories for the diagnosis of emerging infectious diseases and implementation of IHR. Support comprehensive assessments of national laboratory systems and the development of strategic plans.

• Ensure capacity development through fellowships and other short training courses in collaboration with WHO CCs.

• Assist in developing proposals for funding to strengthen public health laboratories.

• Maintain an inventory of experts and laboratories of excellence.

• Assure transfusion of safe blood to reduce the burden of transfusion transmissible agents mainly HIV, hepatitis B and C.
Department of Communicable Diseases: Profile and Vision

Road map for 2011–2013

- Asia Pacific Strategy for Strengthening Health Laboratories shall be advocated in the Region and national focal points for health laboratories shall be designated in all countries.
- Regional lab networks for plague, leptospirosis, Nipah, acute diarrhoeal diseases, arboviruses and antimicrobial resistance monitoring shall be established.
- Implementation of regional strategy for prevention and containment of antimicrobial resistance in all Member States shall be supported.
- National blood policy shall be formulated in nine Member States to reduce the burden of transfusion transmissible infections.
A community health worker with villagers at risk of malaria in Myanmar.

Photo: L. Ortega/WHO Myanmar
Challenges and opportunities ahead

5.1 Galvanizing political commitment, and building and sustaining partnerships for disease control/elimination

The South-East Asia Region has the tradition of enlisting political commitment for addressing major public health problems. WHO has taken the lead by convening annual meetings of Ministers of Health. Technical heads of various sectors participate in the annual meetings of the Regional Committee. Those representing political, administrative and technical leadership are thus fully involved. Member States participate in global events when global health challenges are discussed.
and they make appropriate commitments. This relationship has helped to solicit political commitment and sustain the momentum against the spread of diseases.

There is an increasing trend of public–private partnerships to solve public health problems. Large, open-ended donation of drugs by pharmaceutical companies; global and regional coalitions to control selected infectious diseases; and the use of health systems to participate actively in goal-oriented programmes are very encouraging. Efforts made by TDR in partnership with countries are yielding results. These have facilitated appropriate research to find solutions to regional problems. Diseases of the poor are being addressed with quality medicines and products. Control of infectious diseases is also being aided by rapid developments in information and mapping technologies. Partnerships with industry in improving human health and development are encouraging. Development of long-lasting bednets is an example of this partnership. While there is a great deal of activity at the global level, additional focus is required to build and sustain partnerships at the regional and country levels.

5.2 Mobilizing and ensuring financial sustainability

To realize the above vision, goals and objectives, sustainable financing is necessary. It is important to develop capacity within WHO as well as in Member States for effective scaling up of surveillance, treatment and control measures. This requires regular sharing of information and experiences, operational research, provision of technical support, tools and guidelines, ongoing supervision, monitoring and evaluation – all of which can only be accomplished with adequate funding. Finances will be obtained with the preparation of briefs for donor partners, writing of proposals for funding, organization of partners’ meetings and maintaining ongoing communication with stakeholders. Besides procuring additional funding, it is imperative
that the planning process be further streamlined to optimize the use of WHO’s regular and extrabudgetary funds. The increasing use of result-based budgeting will also help convince partners to commit resources to the Department’s endeavours.

5.3 Ensuring public information and social mobilization in each programme area

The importance of partnership with the media to communicate health risks to the public is being increasingly recognized. The challenges posed by the threat of emerging diseases have brought to the forefront the need to strengthen this partnership for better risk communication.

Widespread and extreme poverty, illiteracy and ignorance about risk factors among communities hamper efficient community-based control programmes. Reluctance to seek timely care, non-adherence to treatment, unsafe sexual practices and problems in ensuring safety of food, water and sanitation can undermine otherwise sound control strategies. At least 2 million deaths caused by communicable diseases could be prevented by ensuring simple measures such as clean water and sanitation, vector control and improved dietary intake.

Control of infectious diseases can be negatively affected by human behaviour. Strategies that rely on behavioural change can be more complicated to execute than those that rely on vaccination or medicines. However, disease eradication and elimination programmes can achieve considerable success even without the interventions of vaccines or medicines if behavioural change can be assured. This is borne out by the success in eradicating guinea worm disease and elimination of leprosy.

There is now compelling evidence that social mobilization is a powerful means of bringing about behavioural change, even among poor and illiterate people. By bringing about behavioural change, strategies to control infectious
diseases can be very successful if they are innovative and practical. Directly observed treatment in TB helps treatment adherence. Long-lasting treated bednets overcome the widespread failure of communities to re-treat the nets. The strategy of multi-drug therapy in leprosy ensures compliance, and this success is complemented by direct supervision.

For some of the other diseases, cultural attitudes and behaviours are so deeply entrenched that special social mobilization campaigns such as commercial advertising and marketing have to be organized. Media campaigns have been organized in the past to overcome social stigma. Through organization of special events such as the World TB Day and World AIDS Day, schoolchildren can be mobilized to bring health messages home and thus help create public awareness. Mass mobilization of the public, through the use of communication for behavioural impact (COMBI), is a promising strategy in the context of elimination of LF, elimination of leprosy, control of dengue/DHF, and widespread adoption of insecticide-treated bednets.

5.4 Building bridges for health system response

The increasing demands on public health systems in the Region aggravate the double burden of communicable and noncommunicable diseases. The capacity of the public health system, the backbone of all infectious disease control programmes, has not expanded in the countries in relation to the emerging needs. Although they are expected to recognize and respond to the challenges posed by infectious diseases, public health systems in many countries of the Region remain inadequate in rural or remote areas, especially among poor populations, where social, physical and biological conditions are conducive to the occurrence and spread of various infectious diseases. Strong partnerships within and across the public and private sectors and including cooperation, most notably among veterinary
sciences, academia, environmental organizations and NGOs are required. Enhanced communication of public health information to ensure the active participation of communities at the local level and partnerships with existing/emerging organizations at national, regional and global is essential to move the health systems agenda forwards.

5.5 Evidence-based programme planning

Research is a crucial part of the response to communicable diseases. A sustained, forward-thinking applied research programme enables scientists to uncover the weak links in the armoury of emerging microbes, create innovative ways to identify and fight microbial foes, and evaluate the preventive power of new interventions and approaches. To combat communicable diseases, public health requires renewal and expansion of research on the epidemiology and biology of microbes, vectors and intermediate hosts, and an awareness that new epidemics can and will emerge in unexpected places. Implementation of effective battle plans and operational as well as behavioural research are assuming increasing importance in the global and national commitment for scaling up interventions for the control, elimination and eradication of infectious diseases.

Frequent migrations, natural disasters, deterioration of health systems and complex emergencies have all increased the threat of epidemics. The emergence of new infectious diseases and re-emergence of others, accompanied by the speed and volume of international trade and travel, have alerted countries to the ease with which infectious diseases can cross national boundaries. Preparedness for a possible attack of bioterrorism is now the highest profile security issue pertaining to infectious diseases in both the developed and the developing world. The dramatic interruption of trade, travel and tourism that can follow the news of an outbreak places a further burden on the fragile economies of many countries. In this context, intensified vigilance and surveillance assumes great importance. Well-functioning and responsive surveillance systems help enhance the capacity
of health systems to detect and investigate these threats. This must be a 
part of preparedness planning since surveillance can help raise an alarm in 
time for a rapid response. Surveillance of drug resistance can be very useful 
in revising the policy on drugs and help bring about a change in the use 
of drugs for the treatment of infectious diseases. Behavioural surveillance 
erves an important purpose in reducing the vulnerability of segments of 
the population.

Emerging infectious diseases need to be confronted collectively by 
the international community. SARS and avian influenza could be contained 
through global efforts. Mechanisms for forging intercountry and interregional 
linkages need to be strengthened. WHO, with its mandate of providing 
technical support to the health sector of countries, will continue to facilitate 
disease control by supporting regional outbreak investigation and disease 
surveillance programmes, and by strengthening the knowledge base of 
countries in their fight against emerging infectious diseases.

5.6 Tracking progress through monitoring and 
evaluation

With the increase in resources and commitment to scale up efforts for 
the control, elimination and eradication of diseases, the momentum for 
expanding the response will increase. Ongoing routine supervision has to 
be institutionalized. Supervisory checklists need to be put in place and used 
so that timely feedback and follow-up actions can be organized.

It is becoming increasingly clear that the ability to report accurate, 
complete and timely information strengthens disease control programmes 
and increases accountability. A common, comprehensive and consistent 
monitoring and evaluation system has many advantages, and should
respond to the needs of programme managers, researchers and donors. A consistent and standardized system will help increase coordination and communication between the different groups responsible for the programme. Shared planning, execution, and collection, analysis and dissemination of data will help reduce overlap, as they will increase cooperation among different groups. The overall framework for monitoring and evaluation should be comprehensive and include input, process, output, outcome and impact indicators. The framework should provide for measurement of these indicators at all levels of the health system through the involvement of a health management information system (HMIS) and integrated disease surveillance. The principles to be adopted in surveillance, monitoring and evaluation should include the following:

- build on existing, well-defined indicators,
- harmonize with international frameworks such as the MDGs,
- minimize the number of key indicators to be measured,
- cover a wide range of programme areas and sectors related to different diseases, and
- Address country programme needs.

Some of the specific outcomes and impact indicators may require special surveys. These surveys may be carried out independently or as part of national surveys such as district health surveys or multiple indicator cluster surveys. When a decision is taken to carry out special surveys, it is prudent to accommodate several diseases to avoid duplication of effort.
Community health workers supporting malaria prevention and control in India.

Photo: Anubhav Das/WHO-SEARO
Conclusions

The CDS Department is committed to controlling the scourge of infectious diseases that affect the population in the South-East Asia Region. The Department will work on pertinent issues and challenges as outlined by the various units in the road map and next steps, and in line with role to support countries in achieving disease control targets through technically sound inputs. The Department will also work closely with WHO’s country focal points and national authorities to provide technical assistance for programme planning and development, resource mobilization, monitoring and evaluation, and advocacy for political commitment.
Department of Communicable Diseases: Profile and Vision

Annex 1

Organization of the Department of Communicable Diseases

- Director, Communicable Diseases
  - Disease Surveillance & Epidemiology
  - Blood Safety & Clinical Technology
  - Communicable Diseases Control & Global Fund
  - HIV/AIDS
  - Malaria
  - Mekong Malaria Project (Bangkok)
  - Tuberculosis Control
  - Vector Borne & Neglected Tropical Disease
  - Leprosy Elimination
  - DSE/EHA Stockpile Stores (Bangkok)
Department of Communicable Diseases: Profile and Vision

Annex 2

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With the understanding that health action must primarily occur at the country level, WHO initiatives in communicable diseases control, elimination and eradication are in support of, and guided by, national priorities and needs. These include technical support for formulation of national policy and strategy as well as in programme planning, implementation, and monitoring and evaluation.

WHO initiatives at the regional level focus on normative functions such as development of guidelines, best practice approaches, and training materials; providing a forum for information exchange and sharing of country experiences; advocacy; and mobilizing rapid response to disease outbreaks and health emergencies when needed.

As the threat of communicable diseases increases, this profile highlights the work of the Department of Communicable Diseases in the WHO Regional Office for South-East Asia.