



Communicable Disease Newsletter



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Climate change and communicable diseases Addressing the challenge

In September 2007, a report of the Intergovernmental Panel on Climate Change (IPCC) followed by a high-level meeting organized by the UN Secretary-General clearly highlighted two facts: (1) warming of the earth's climate is primarily attributable to human activities and that (2) climate change is already disproportionately affecting developing countries. These are very real reasons for concern. The temperature of our atmosphere is projected to warm at the rate of about 0.2°C per decade. With the warming of the earth's atmosphere, the seasons are changing, glaciers receding and sea levels rising. The frequency and severity of floods and droughts are notably increasing, thereby challenging water, food and energy security; and placing an enormous strain on health security.

Issues pertaining to the impact of climate change, especially in developing countries, are being discussed in the UN Climate Change Conference in Bali, Indonesia from 3 to 14 December 2007.

It is clear that climate change is not only an environmental concern but also has profound health, economic and social consequences. It impacts disproportionately on the poorest and most vulnerable populations, undermining the gains achieved from poverty alleviation initiatives and threatening to derail the progress towards the MDGs, putting them beyond the reach of many countries including those in the South-East Asia Region.

Impact on communicable diseases

Within this scenario, the spread of disease is, for the health community, a challenge that cannot go unheeded. Unfortunately, however, the potential impact of climate change on health, in particular that of communicable

diseases in developing countries, has not been sufficiently addressed. Some of the health impacts of climate change include increases in the following:

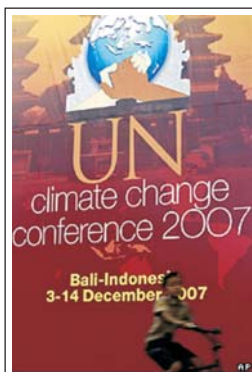
- Acute deaths due to sudden heat waves, floods and droughts
- Vector-borne diseases such as dengue, malaria and chikungunya
- Waterborne diseases especially diarrhoeal diseases
- Malnutrition and its associated effects on child growth and development
- Morbidity and mortality related to cardiorespiratory ailments.

For example, climate change is expected to increase the proportion of the population exposed to dengue from about 35% to 60% by the latter part of this century. Similarly, uncontrolled floods will contaminate the water we drink leading to diarrhoeal diseases, and migration of people due to floods and drought will make them vulnerable to various communicable diseases.

According to WHO's Director General, Dr Margaret Chan, climate change "may turn out to be the single most ominous struggle" facing the health sector in coming years. Therefore, the health sector must be empowered to be part of crucial decision-making processes in the context of climate change and be fully prepared to participate in mitigating the negative health consequences. Climate change and its consequences on health should be used as a powerful argument for substantive action on climate change.

Role of the health sector

While climate change is an issue that cuts across many sectors and demands a multisectoral approach, globally and



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at the country level, the health sector has a crucial leadership role. In order to reach for solutions that are beyond the health sector and create concern among such sectors, the health sector must articulate and share with other relevant sectors information on the potentially devastating health and developmental impact of climate change. In order to exercise health leadership responsibilities, we need to carry out health impact assessments at the regional, national and local levels on the extent and severity of communicable disease, as a consequence of climate change.

Another area where the health sector can play a key role is instituting an early warning system which will further improve the preparedness of health departments to investigate and control outbreaks of vector-borne and waterborne diseases and strengthen risk reduction approaches through public awareness campaigns. To do this successfully, all relevant health programmes must strengthen their core capacity to be able to respond immediately and effectively.

WHO is at the forefront of dealing with the issue of climate change and is taking a lead role in mitigating its impact on

health. WHO can help countries develop national plans building on the existing programmes, for example, to ensure that a surveillance and early warning system is in place, and capacity built up so that countries are better prepared to respond to the increased incidence of communicable diseases in the future. According to Dr Samlee Plianbangchang, Regional Director, WHO Regional Office for South-East Asia "climate change is now high on the health agenda of WHO and we stand ready and committed to assist Member countries in planning strategies and building their capacities to mitigate the health impact of climate change in the SEA Region". Ultimately, governments both in the developed as well as developing world must try to cut down on emissions creatively and invest in cleaner technologies, because therein lies the solution to preventing climate change and its catastrophic consequences on health.

Dr Sattar Yoosuf
Dr Jai P Narain
WHO/SEARO

Outbreak update

Outbreak of Cholera-like diarrhoea in Orissa, India

An outbreak of acute diarrhoeal disease was investigated in Orissa state, India. The disease affected a population of 104 872 in 306 villages of 10 administrative blocks in three districts (Rayagada, Koraput and Kalahandi) in Orissa state on the eastern coast of India. Of the 7565 cases detected, 1848 needed hospitalization. One hundred fifty-nine of these patients died, giving a case fatality ratio of 8.6%. The outbreak, which started in mid-July, continued for almost two months and peaked during the last week of August 2007. The epidemic curve is shown in Fig. 1.

The outbreak was considered to be the result of poor sanitation and water contamination in the affected areas. Water and stool samples that were processed in the laboratories

revealed the presence of *Vibrio cholerae* O1 Ogawa biotype El Tor. The presence of toxigenic genes in these isolates of *Vibrio* was also demonstrated by multiplex polymerase chain reaction (PCR).

As a short-term measure, safe water supply was ensured. Long-term measures have been recommended to ensure continuous supply of safe water and good sanitation in the affected areas.

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Avian influenza in South-East Asia Region

As of 26 November 2007, 335 confirmed human cases of avian influenza A(H5N1) have been reported globally, of which 206 have died. Till date, more than 220 million chickens, ducks and birds have been culled to contain the virus. Indonesia and Thailand are the only two countries in the South-East Asia Region where 138 human cases with 108 deaths have occurred. Thailand reported a total of 25 cases with 17 deaths during 2004-2006. No case has been reported in Thailand during 2007.

Indonesia has been regularly reporting human cases of avian influenza, indicating ongoing exposure of humans to the virus in this country. Since June 2005, Indonesia has investigated over 1000 suspected cases of avian influenza of which 113 cases could be confirmed by laboratory diagnosis (Fig. 2). Of these, 91 cases died, giving a case fatality rate of 80%. The age and sex distribution is given in Fig. 3.

Figure 1: Epidemic curve of the acute severe diarrheal disease outbreak in Orissa: July-September 2007

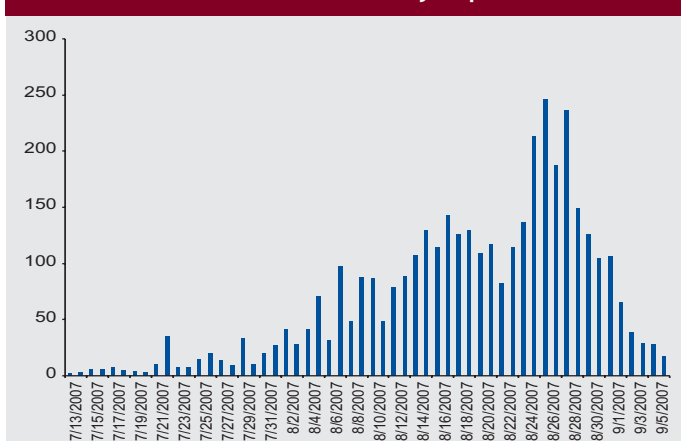
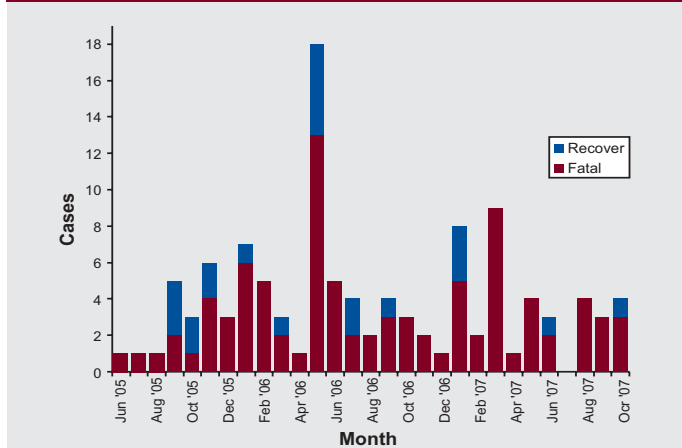
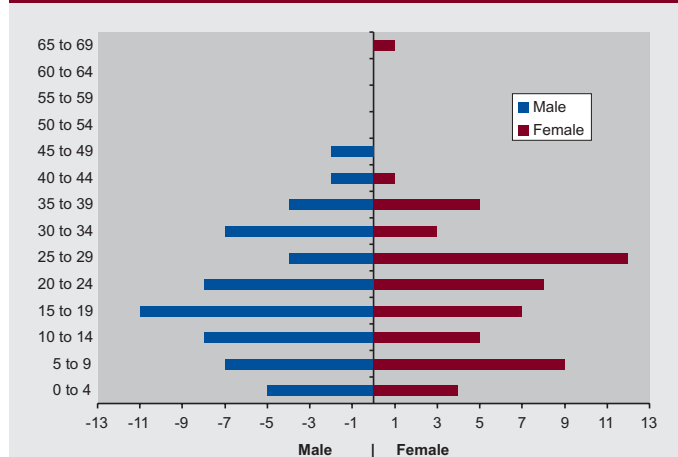


Figure 2: Human avian influenza A/H5N1 cases by onset, Indonesia (N=113)**Figure 3: Age and gender distribution of human H5N1 cases, Indonesia (N=113)**

All confirmed cases of avian influenza were in persons less than 46 years of age, except for one 67-year-old female (Fig. 3). Children under 14 years of age accounted for a large proportion of cases (29%). Among male patients between the ages of 15 and 24 years, 50% were employed in poultry-related occupations. The majority of cases had direct or indirect

exposure to a possible source. The source of exposure could not be determined in 19% of cases despite thorough investigations. The presence of the avian influenza virus in the locality of some cases suggests that environmental contamination may also be a factor contributing to human infection.

Avian influenza in poultry in Bangladesh, India and Myanmar

Bangladesh

Till 5 December 2007, 60 farms spread over 20 districts including Dhaka have reported confirmed outbreaks of avian influenza H5N1 among poultry. A total of 262,000 birds have been culled. No human case has been reported. About 4 million people are directly or indirectly associated with poultry farming in Bangladesh. Surveillance activities among poultry are ongoing.

India

An outbreak of H5N1 virus infection in poultry was notified in the last week of July 2007, in the East Imphal District of Manipur. It was successfully brought under control and post-outbreak surveillance showed no traces of H5N1 infection in the outbreak zone. In a final report submitted to the OIE on 7 November 2007, India informed that the final culling of poultry was done on 2 August 2007. No outbreak has occurred

since, and the country has requested the OIE to declare it free of human pathogenic avian influenza (HPAI) H5N1.

Myanmar

Outbreaks of avian influenza were reported from Mon State, Yangon and Bago Provinces in the poultry population from February to October 2007. A fresh outbreak was reported in backyard chickens in Naung Ngaing village in Kyaing Ton Township since 4 November 2007 where 1858 backyard chickens and 200 ducks died. According to the official report of the Livestock Breeding and Veterinary Department, the new outbreak is related to importation of infected ducks from China into Shan (eastern state). A rapid response team has been mobilized for human surveillance in the outbreak area. The H5N1 control policy in Myanmar comprises stamping out and vaccination is prohibited.

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Khanchit Limpakarnjanarat (CSR/SEARO)
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Programme update

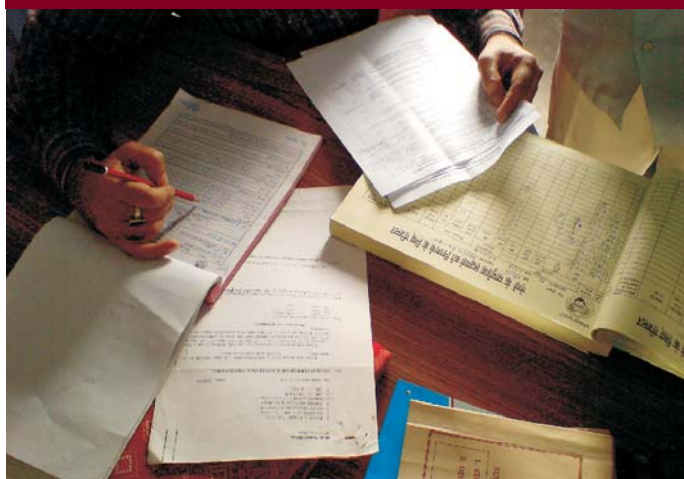
Competency-based training programme to enhance surveillance capacity at district level, India

A strong capacity to analyse surveillance data at district level is considered critical for improving capacity to use information to make public health decisions. To enhance this capacity, the National Institute of Communicable Diseases, Ministry of Health and Family Welfare, Government of India (NICD)

prepared a two-week training course in partnership with the World Bank and WHO. This competency-based programme was designed to be fully compatible with other initiatives in field epidemiology training in India, such as the two-year Field Epidemiology Training Programme (FETP).

In July 2007, a pilot version of the course was conducted with 17 district surveillance officers from different parts of India at NICD, New Delhi. It included a two-day field exercise

Figure 4: Field exercise during the two-week course for district surveillance officers



data, and (iv) evaluation of the district surveillance system. Performance is evaluated through pre-test assessment, field supervision, presentations and evaluation of project outputs, and post-test assessment.

Training modules for the course			
Module 1.	Principles of epidemiology	Module 6.	Laboratory in public health
Module 2.	Introduction to biostatistics	Module 7.	Prioritization of diseases
Module 3.	Disease surveillance	Module 8.	Communication and health promotion
Module 4.	Basic computer applications	Module 9.	International health regulations
Module 5.	Investigation of disease outbreaks	Module 10.	Field projects and orientation

and a field assignment during which participants went back to their districts and analysed surveillance data. This pilot had several quality assurance measures, including full electronic documentation, pre- and post-test assessments, evaluation of the course by the district officers and participation of observers from academic institutions in India. Based on the observations of the pilot course, a revised version of the training programme has been developed. The course will now be implemented on a larger scale in India in collaboration with partner institutions.

Field projects and tools were developed and preparations were finalized at each field station before the trainees were deployed. They were posted at four field stations of the NICD. Each field team of five to six members had three supervisors. On completion of the field assignment, trainees returned to the NICD where they prepared project reports and presented their work at plenary sessions.

NICD is also considering developing an online version of the course for distance learning. Individuals or institutions interested in participating can obtain the learning material of the course by contacting NICD at idspsmo@nic.in.

In addition to acquiring skills applicable to their duties, the participants at this course are expected to facilitate related epidemiology training courses in their respective countries.

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WHO/SEARO Three-month epidemiology training begins at NICD, Delhi

The first three-month epidemiology training course started on 11 September 2007 at the National Institute of Communicable Diseases, (NICD) Delhi, the WHO Collaborating Centre for Training and Epidemiology, with 21 participants from eight countries.

The three diseases fund (3DF) in Myanmar

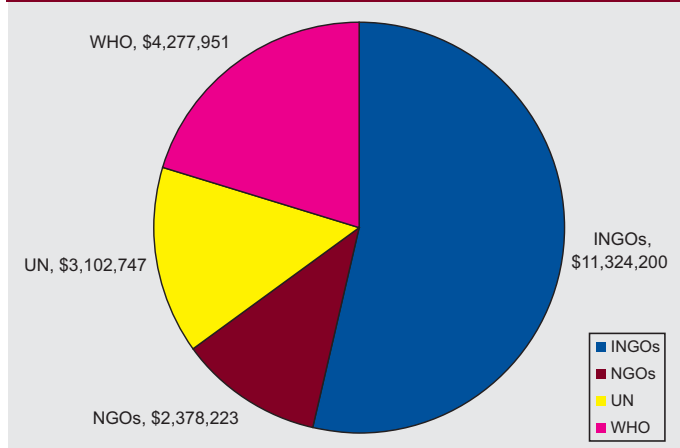
A three diseases fund (3DF) was established in 2006 in Myanmar by a consortium of six donors (AusAid, DFID, EC, Netherlands, Norway and Sweden) to provide support to the programmes of activities for HIV/AIDS, TB and malaria in Myanmar with a budget of US\$ 102 million for five years. The Fund was created to meet the resource gap caused by termination of the support from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFTAM) and the Fund for HIV/AIDS in Myanmar (FHAM).

The training course was developed by SEARO in consultation with experts in field epidemiology from Bangladesh, India, Indonesia and Thailand. The competency-based curriculum for the three-month field epidemiology training programme (FETP) comprises 10 training modules (Box 1). This course involves four weeks of lectures, problem-solving exercises and case studies. This is followed by six weeks of field posting where the participants acquire hands-on skills through "learning by doing". Following the field assignment, participants return to the training institution for a three-week period to finalize and present project reports on (i) community survey, (ii) outbreak investigation, (iii) analysis of health facility

The first funding available from the 3DF was for a direct grant to WHO Myanmar (US\$ 1.6 million) to fill a crucial gap and ensure uninterrupted programme implementation in the transit period between termination of the GFATM and start up of the 3DF Year 1. Activities included procurement of essential drugs, commodities, training, staff, supervision and technical support, especially for populations living in high-risk areas. The Bridge Fund activities also allowed WHO and the Ministry of Health (MOH) to strengthen the technical and managerial capacity at the township level required for Year 1 implementation of the 3DF under the initiative "Strategic leadership and management".

In December 2006, the United Nations Office for Project Services (UNOPS) released the Round 1 Call for Expressions of Interest (EOI) for interested implementing partners on a

Figure 5: 3DF funding for Year 1 by partners, for AIDS, tuberculosis and malaria



competitive basis and in line with the priorities of the national strategies of each of the three diseases. In April 2006, the 3DF Board approved 26 partners for a total of US\$ 21 million with disease-specific resource allocation - 60% AIDS, 20% TB, 20% malaria. For WHO, US\$ 4.27 million was approved for the three diseases (Fig. 5). The WHO Country Office in Myanmar, on request of the MOH, Myanmar agreed to provide the funding for the three national programmes (AIDS, TB, malaria) and for two national NGOs (Myanmar Medical Association and Myanmar Council of Churches). WHO has established a new 3DF Unit to administer and monitor the conditional, decentralized cash flow directly to 325 townships.

Dr Hans Kluge

Team Leader 3DF Unit, WHO, Myanmar

Newsbytes

Promising news on malaria vaccine for infants

Seattle, USA: PATH recently reported the results of a Phase II clinical trial with a new malaria vaccine conducted in Mozambique. The trial has demonstrated proof-of-concept that young infants exposed to intense *Plasmodium falciparum* transmission can be protected from infection and clinical disease. The study reports that vaccine efficacy against new infection was 65% over a three-month follow-up period after the infants received all three doses of the vaccine. The results also showed that the vaccine reduced episodes of clinical malaria by 35% over a six-month follow-up period starting after the first dose. A Phase III trial of the vaccine is likely to commence in 2008 and, if successful, the vaccine will be submitted to the regulatory authorities for commercial use by 2011. Further details are available at

http://www.path.org/news/pr071017_malaria_vaccine.php

Review of the National TB Control Programme

Dhaka, Bangladesh: A joint review of the National TB Control Programme of Bangladesh organized by the Govt. of Bangladesh and WHO, showed that remarkable progress has been made during the past three years in TB control in the country. The targets of 70% case detection and 85% treatment success have been surpassed, making Bangladesh the second high-burden country in the Region to have achieved these milestones. Sustainable community-based initiatives, excellent collaboration with NGO partners, involvement of medical colleges and private providers, and support from the academia have contributed to this progress.

While the successes of the Programme are laudable, a number of issues need to be urgently addressed in order to sustain the current momentum and allow for the implementation of additional interventions as planned under the new Stop TB strategy. Establishing a quality-assured laboratory network for

smear microscopy and culture and drug-susceptibility testing, ensuring X-ray facilities, addressing imbalances in drug distribution, improving programme management and supervision, and streamlining financial management are the key areas that require attention.

National AIDS Programme Managers call for accelerated actions on prevention and care

Bali, Indonesia: The 19th Meeting of National AIDS Programme Managers of SEA Region was held in Bali, Indonesia from 29 to 31 October 2007, to review the overall HIV situation in the Region; discuss the scaling up of HIV/STI prevention, care and treatment; and reach a consensus on key indicators for HIV prevention, care and treatment.

The participants deliberated on the current challenges and opportunities for scaling up HIV prevention, care and treatment interventions. The National AIDS programme managers, WHO and UNAIDS committed to take action on the key challenges including HIV/STI prevention; antiretroviral therapy (ART); human resources strengthening; and monitoring and evaluation (M&E).

Review of the Orissa malaria situation and research priorities

Bhubaneswar, India: Malaria continues to be a major public health problem in the SEA Region, including in India. An Indian Council of Medical Research (ICMR)-WHO meeting held in Bhubaneswar on 12-13 November 2007 reviewed the malaria situation, assessed the capacity of the state in terms of its manpower and resources, and identified operational research areas and measures that needed to be implemented to scale up effective interventions for malaria control. Orissa has 4% of India's population but accounts for 22% of malaria cases, 42% of the burden of *Plasmodium falciparum* cases and 27% of national malaria deaths.

Dr Margaret Chan, WHO DG urges countries to remain alert to the threat of Avian Influenza



New Delhi, India, 4th Dec, 2007: The Director-General of the World Health Organization, Dr Margaret Chan today reiterated her call and urged countries across the globe to not let their guard down and to remain alert to

the threat of Avian Influenza. Dr Chan made these remarks at the inaugural session of the New Delhi International Ministerial Conference on Avian and Pandemic Influenza. The three day event has attracted more than seven hundred participants including some 71 ministers from the Agriculture and Health sectors from 111 countries.

WHO workshop to strengthen laboratory services for TB control

Bangkok, Thailand: A WHO Regional workshop was organized for senior laboratory staff from national reference laboratories to improve their technical and managerial skills in quality-assured TB mycobacterial culture and drug susceptibility testing (DST) within national laboratory networks. The week-long workshop reviewed the TB situation in the Region with particular focus on MDR/extremely drug-resistant (XDR) TB and the capacity of national laboratories for undertaking quality-assured diagnosis and surveillance of MDR/XDR TB. The workshop also updated the knowledge of the participants on approaches for improving the organization, management and monitoring of laboratory services including infection control measures; and enhanced their skills in culture and DST techniques. The participants also identified next steps to establish quality culture and DST for the diagnosis and management of MDR-TB.

Workshop on Programme management of drug-resistant tuberculosis

Faridabad, India: A WHO Regional Workshop on Programme management of drug-resistant tuberculosis was organized by SEARO in August 2007. The workshop reviewed the status of management of drug-resistant TB in countries of the Region, imparted knowledge on the standardized approach for the management of MDR-TB, and enhanced skills to effectively plan, implement and monitor activities to address MDR-TB under national programmes. The meeting was attended by the staff of MDR-TB projects from India, Nepal and Bangladesh, and programme managers, who brought substantial experience on the implementation of MDR-TB treatment within the Region. Participants shared experiences from pilot directly-observed treatment, short-course (DOTS)-Plus projects in Nepal, New Delhi and Bangladesh, discussed plans for accelerating the response to the threat of MDR-TB.

India Yaws Programme praised by International Task Force on Disease Eradication



Atlanta, USA: The 11th meeting of the International Task Force for Disease Eradication (ITFDE) held at Carter Center, Atlanta on 11 October 2007, lauded the success achieved by India in eliminating yaws. Dr Don Hopkins, Vice President of the Carter Center and Chair of the ITFDE, referred to India's efforts as a "powerful" example of yaws eradication which should be widely disseminated and replicated with the final objective of global eradication of this disease. In the South-East Asia Region, similar efforts are under way in other countries where yaws is endemic - Indonesia and Timor-Leste.

APEC develops guidelines for economies to weather pandemics

Sydney, Australia. Ministers of the Asia-Pacific Economic Cooperation (APEC) endorsed the APEC Functioning Economies in Times of Pandemic (FETP) Guidelines, which are designed to reduce the economic impact of a pandemic in the Asia-Pacific region. The Minister for Foreign Affairs, Alexander Downer, and the Minister of Health and Ageing, Toby Abbott announced - "The health ministers of all 21 APEC economies agree that threats to the health of our populations can have a devastating effect on prosperity." The guidelines can be accessed at [http://www.healthconnect.gov.au/internet/wcms/publishing.nsf/Content/D6DA9875C7C1F37DCA25735B001BDA90/\\$File/P3-2001%20Health%20Pandemic%20A5%20Complete%20Screen.pdf](http://www.healthconnect.gov.au/internet/wcms/publishing.nsf/Content/D6DA9875C7C1F37DCA25735B001BDA90/$File/P3-2001%20Health%20Pandemic%20A5%20Complete%20Screen.pdf)

WHO's Regional Committee for South-East Asia calls for continued solidarity to tackle health challenges

Thimpu, Bhutan: The 60th session of WHO's Regional Committee (RC) for South-East Asia gave a call for continued solidarity and joint endeavours for health development by Member countries. The session took several momentous decisions and would be viewed "as the session where regional solidarity and togetherness were further strengthened", said Dr Samlee Plianbangchang, Regional Director for the WHO South-East Asia Region.

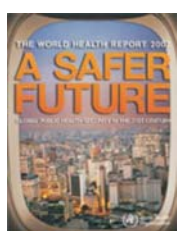
The Committee deliberated on several issues of regional priority including TB control, revised malaria control strategy, and avian and pandemic influenza preparedness. The Committee, while recognizing that substantial progress had been made in tuberculosis control in the Region, noted that the burden of TB remains high in the Region. The emergence of resistance to antituberculosis drugs and impact of HIV were added concerns. Acknowledging that many challenges needed to be overcome in order to reach the TB-related targets under the Millennium Development Goals, members at the RC endorsed a resolution in support of the new Stop TB strategy and its implementation in Member countries of the Region.

Global Fund approves grants for USD 211 million for five South-East Asia Region countries

Geneva, Switzerland: Eight of the 17 proposals submitted from SEA Region countries were successful in the Global Fund (GF) Round 7 applications. These proposals attract a total funding of USD 211 million for prevention and control of HIV/AIDS, malaria and TB in these countries.

Global Fund grant approved in Round 7 and their life-time budgets

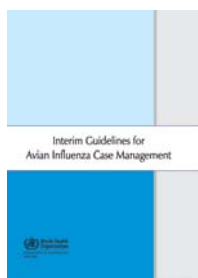
Country	Disease component & budget in US \$			Total (in USD)
	HIV	TB	Malaria	
Bhutan	-	-	2,932,772	2,932,772
India	88,173,118	-	-	88,173,118
Nepal	36,620,119	15,506,566	25,757,233	77,883,918
Thailand	-	-	24,689,670	24,689,670
Timor-Leste	-	7,011,931	10,328,742	17,340,673
Total	124,793,237	22,518,497	63,708,417	211,020,151



The World Health Report 2007 focuses on international spread of diseases

Geneva, Switzerland The World Health Report, 2007 shows how the world is at increasing risk of disease outbreaks, epidemics, industrial accidents, natural disasters and other health emergencies which can rapidly become threats to global public health security. The report explains how the revised International Health Regulations (2005), which came into force this year, helps countries to work together to identify risks and act to contain and control them. Full report available at http://www.who.int/whr/2007/whr07_en.pdf

New SEARO publications



Interim guidelines for avian influenza case management

The Regional Office for South-East Asia has produced interim guidelines for the case management of avian influenza. The purpose of this document is to provide guidance to medical officers in primary health care for proper case management of human cases of avian influenza, emphasizing on the need for early detection, triage, prompt administration of antivirals, and transport of the patient to the nearest health facility following standard infection control practices.

Guidelines on establishment of accreditation of health laboratories

In many countries of the SEA Region, laboratory accreditation, especially in the areas of medicine and health, is either not available or not implemented. This document provides guidelines on the facilities and personnel needed, and directions on how to initiate the establishment of an accreditation process in a system. Beginning with national standards, the goal should be to achieve an internationally acceptable accreditation system. The laboratory accreditation system is important for test results to be accepted nationally and internationally. http://www.searo.who.int/LinkFiles/Publications_SEA-HLM-394.pdf



HIV prevention, care and treatment in prisons in the South-East Asia Region

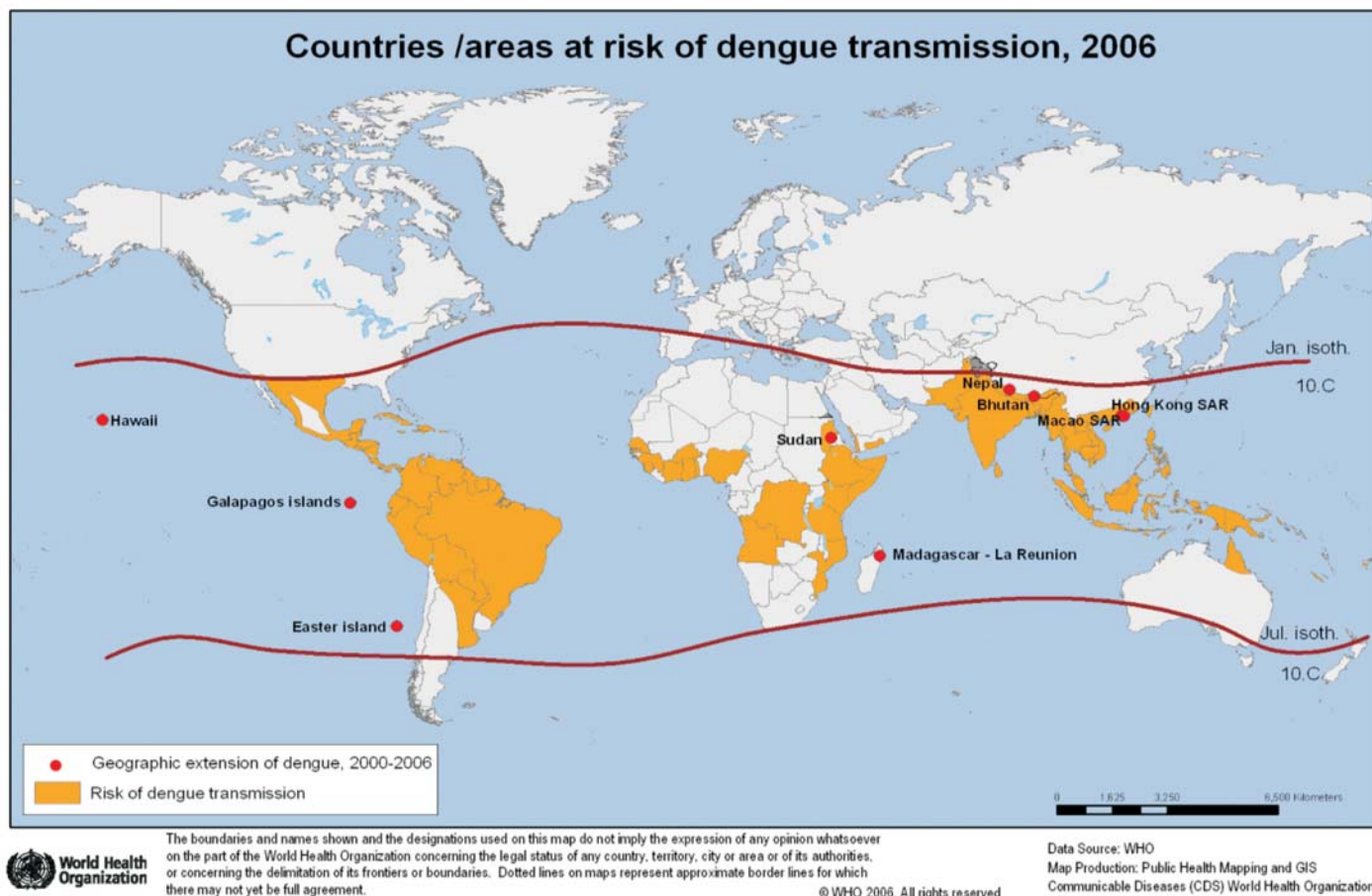
The role of HIV transmission in prison as a key factor for the spread of HIV in the community has largely been ignored. This document reviews the interventions that have been implemented in prisons for the prevention, care and treatment of HIV and other sexually transmitted infections, and provides examples of innovative and positive actions that can be taken to arrest the spread of HIV in prisons. http://www.searo.who.int/LinkFiles/Publications_TreatmentinPrisons.pdf

TDR Small Grants Programme: Call for applications

Under the Joint SEARO-TDR Small Grants Programme for Research in Tropical Diseases 2008, applications are invited from researchers and health professionals working in communicable disease programmes of ministries of health and other health sector partners, universities, research institutions and nongovernmental organizations for possible areas of research. Proposals are invited through government channels to the respective WHO Country Office to be forwarded to the Regional Office before 31 March 2008. The details can be seen at http://www.searo.who.int/LinkFiles/Call_for_Applications_Call_For_Application_2008.pdf

Dengue fever is spreading rapidly

Dengue fever is now endemic in more than 100 countries world wide. The South-East Asia and Western Pacific Regions are the most seriously affected. Some 2500 million people -- two fifths of the world's population -- are at risk. WHO currently estimates that around 50 million cases of dengue infection occur worldwide every year, 500 000 cases of dengue haemorrhagic fever (DHF) require hospitalization, of whom a very large proportion are children and at least 2.5% of cases die.



Not only is the number of cases increasing as the disease is spreading to new areas, but explosive outbreaks are also occurring. In 2006-2007 alone, dengue fever has been reported for the first time in at least nine countries including three in South-East Asia (see Map). The spread of dengue is attributed to the expanding geographical distribution of the four dengue viruses and their mosquito vectors. A rapid rise in urban populations is bringing ever greater numbers of people into contact with this vector, especially in areas that are favourable for mosquito breeding, e.g. where household water storage is common and solid waste disposal services are inadequate.

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