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Infectious Diseases in Africa: Overview and Outlook for Action

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It will be considered during the discussion on Infectious Diseases in Africa,
which will take place on Friday 27th October 2006, starting at 09:30*

Infectious Diseases in Africa: Overview and outlook for Action

Executive Summary

Background

1. In the realm of infectious diseases, the juxtaposition of two facts is all that is needed to convey the gap between the optimistic projections of the 1970s and present-day reality: in 1972, the great immunologist Frank MacFarlane Burnett predicted that infectious diseases would be wiped out entirely in the very near future; on 5 June 1981, the description of five serious cases of pneumonia in the weekly report of the Centers for Disease Control (CDC) in Atlanta, Georgia would proclaim to the world the advent of what would later become known as HIV/AIDS¹.

2. As a matter of fact, infectious diseases are still the primary cause of mortality in the world, claiming some 17 million victims² out of a total of 57 million deaths every year; in comparison, all of the wars of the twentieth century are estimated to have resulted in the deaths of an annual average of 1.1 million combatants and civilians³. And of this total, Africa is by far the continent that pays the greatest price. Looking only at the three great pandemics of AIDS, malaria and tuberculosis, Africa alone bears roughly two-thirds of the global mortality burden.

Commitments and targets

3. Cognizant of the heavy toll of these diseases on social, economic and human development across Africa, members of the African Union (AU) have most notably committed themselves to increasing health budgets to 15 % of public expenditure, making HIV/AIDS one of the top priorities of their national development, introducing strategies to fight tuberculosis and halving the burden of malaria by 2010.⁴

¹ *Regards 21*, February 1997, "Les maladies du progrès", <http://www.regards.fr/archives/1997/199702/199702cit15.html>.

² See World Health Organization (WHO), *50 Facts: Global health situation and trends 1955-2025*, 2006. http://www.who.int/whr/1998/media_centre/50facts/en/print.html

³ <http://www.worldwatch.org/node/68>.

⁴ See, *inter alia*, African Union, *Abuja Declaration and Action Plan on HIV/AIDS, Tuberculosis and Other Related Infectious Diseases*, African Summit on HIV/AIDS, Tuberculosis and Other Related Infectious Diseases, Abuja, April 2001; African Union, *Gaborone Declaration*, 2nd Ordinary Session of the Conference of African Ministers of Health, Gaborone, October 2005.

Key bottlenecks and next steps

4. In doing so, they can profit from an increasingly supportive international environment characterised by a greater awareness regarding infectious diseases⁵. But they will have to cope with a multitude of initiatives featuring a certain “verticality” which undermines the effectiveness of health care systems. The reality of this can be expressed through the proportion of health care expenditures administered by African governments – 14% – as opposed to the 86% that remains under the control of donors. Such measures, based on much stronger coordination and decentralisation, should target persons and territories, not only diseases.

5. Today, the effectiveness of the fight against infectious diseases in Africa demands measures that are conducive to a better tie-in between international initiatives and domestic undertakings and that are geared towards bolstering health care systems and policies – beginning with the human component thereof – and disseminating them throughout society.

⁵ The G8 countries acknowledged at the recent St. Petersburg summit that infectious diseases hit the less developed countries, and especially those in Africa, harder. They stressed the need for international support for African governments’ efforts to bolster their health care systems and reduce the frequency of epidemics. Lastly, they reaffirmed their partnership with African states and the African Union, as well as their willingness to work together with them to achieve the NEPAD objectives for the strengthening of health care systems and the fight against infectious diseases.

I. Overview of infectious diseases worldwide and in Africa

A. Rapidly developing diseases

6. The incidence of infectious diseases – the main cause of death among young people – has risen alarmingly over the past thirty years. The rise of antibiotic-resistant infections, unbridled urban sprawl, unprecedented migratory movements and enduring or even exacerbated poverty have provided a fertile environment in which new infections have flourished, whereas other strains, previously thought to have been eradicated, have re-emerged.

7. The number of deaths attributable to infectious diseases exceeds 17 million. Examples of new and old infectious diseases that have now reached the pandemic stage include HIV/AIDS, which kills 2.8 million people a year, and tuberculosis, which kills a further 2 million. However, other diseases that have never ceased to be endemic also claim a vast number of lives. Acute respiratory diseases, diarrhoeal diseases, malaria and measles respectively kill 3 million, 2.5 million, 1 million⁶ and 750 000 people each year worldwide. Consequently, six diseases – pneumonia, tuberculosis, diarrhoea, malaria, measles and HIV/AIDS – cause almost 80% of deaths from infectious diseases⁷.

B. Africa pays a heavy tribute to infectious diseases

8. Although sub-Saharan Africa is home to merely 10% of the world's population, it accounts for 4 million deaths from AIDS, malaria and tuberculosis alone, *i.e.* two-thirds (66%) of the morbidity burden from these diseases⁸.

9. Of a total of 38.6 million people carrying the AIDS virus in 2005⁹, some 24.5 million were to be found in sub-Saharan Africa. Of the 4.1 million new infections reported, between 2.3 million and 3.1 million were from the same region. While the epidemic has claimed some 2.8 million lives, no fewer than 2 million were accounted for by sub-Saharan Africa¹⁰.

10. At the same time, while 9 million people contracted tuberculosis in 2004 and over 2 million of them died from it, Africa accounts for around a quarter of all infections and deaths attributable to this disease¹¹. Indeed, the increase in tuberculosis on the continent is closely linked to that in HIV/AIDS infections.

⁶ Besides these one million “direct” victims, malaria, together with other diseases, could account for a further two million deaths. See WHO, *Health and the Millenium development Goals*, Geneva, 2005. http://www.who.int/mdg/publications/MDG_Report_08_2005.pdf

⁷ See WHO, *Report on Infectious Diseases, Removing Obstacles to Healthy Development*, Geneva, 1999 (<http://www.who.int/infectious-disease-report/index-rpt99.html>).

⁸ See African Union, *Special Summit on HIV/AIDS, Tuberculosis and Malaria, Concept Paper 180406 on HIV/AIDS, Tuberculosis and Malaria*, Abuja, May 2006. <http://www.abuja-auatsummit2006.net/auatsummitmain/summitdocs/Concept%20paper%20180406.pdf>.

⁹ See UNAIDS, *Report on the Global AIDS Epidemic*, Geneva, 2006. http://data.unaids.org/pub/GlobalReport/2006/2006_GR-ExecutiveSummary_en.pdf.

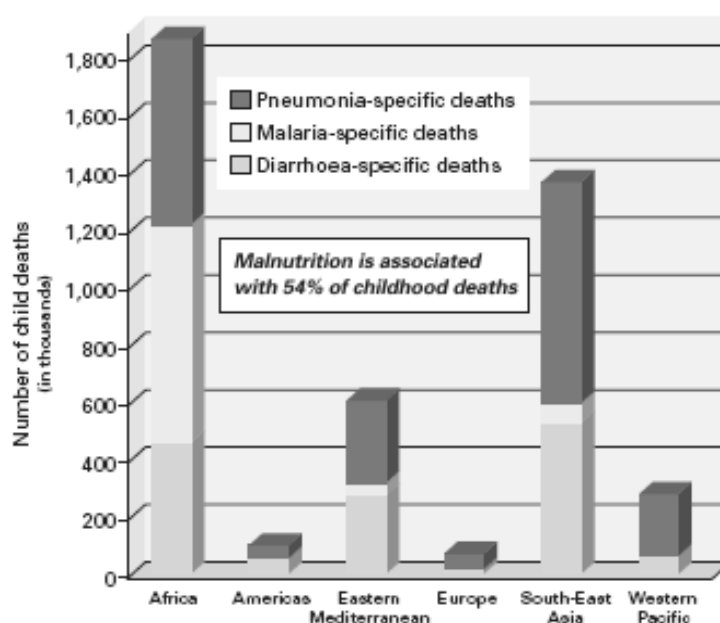
¹⁰ See African Union, *Special Summit on HIV/AIDS, Tuberculosis and Malaria, Ibid.*

¹¹ See WHO, *Global Tuberculosis Control Report*, 2006.

11. In the case of malaria, 90% of the 350-600 million clinical cases reported each year are in sub-Saharan Africa¹². Of the million people a year who die from the effects of this disease, 97% are African, and particularly children¹³.

12. Furthermore, Africa, together with Asia, is the region worst affected by pulmonary diseases (which kill more children than any other infectious disease), diarrhoeal diseases and measles¹⁴. Children alone account for some 600 000 deaths from pneumonia in Africa each year, and a further 400 000 deaths from diarrhoea.

Annual child deaths from pneumonia, malaria and diarrhoea, by WHO region



Sources: For total mortality, estimates from 'Proportionate mortality among under fives by region, 2000', Ahmad, O. B., A. D. Lopez and M. Inoue, 'The Decline in Child Mortality: A reappraisal', *Bulletin of the World Health Organization*, vol. 78, no. 10, 2000. For proportionate mortality, estimates from *The World Health Report 2003*, World Health Organization, Geneva, 2003. For malnutrition, Pelletier, D.L., E.A. Frongillo, and S.P. Habicht, 'Epidemiological evidence for a potentiating effect of malnutrition on child mortality', *American Journal of Public Health*, vol. 83, no. 8, August 1993, pp. 1130-1133.

Note: The figures for proportionate mortality related to children under five are currently under review by UNICEF and WHO.

http://www.who.int/tb/publications/global_report/2006/pdf/full_report_correctedversion.pdf

¹² http://www.unicef.org/media/media_26392.html?q=printme

¹³ See WHO, *Scaling up the Response to Infectious Diseases*, Geneva, 2002. <http://www.who.int/infectious-disease-report/2002/introduction.html>

¹⁴ In Africa, fewer than two out of three children are vaccinated against this disease. In ten countries the proportion is less than half. See WHO, 1999.

13. In addition to the above, the so-called “neglected” infectious diseases, and especially those that are waterborne, are also having a high human cost in Africa (see Table 1), which is due in part to lack of access to drinking water and sanitation.

Table 1.1: Prevalence of selected waterborne diseases in Africa and worldwide

Condition	Cases in Africa	Proportion of Global Burden in Africa
Hookworm	198 million	27%-34%
Ascariasis	173 million	14%-22%
Schistosomiasis	166 million	89%
Trichuriasis	162 million	20%-26%
Trachoma	33 million	40%
Lymphatic filariasis	46 million	38%
Onchocerciasis	18 million	99%

Source: Imperial College, London¹⁵

14. In addition to imposing a markedly disproportionate mortality burden on Africa, compared with that on other regions, infectious diseases threaten to unravel the continent’s social and economic fabric. As the main cause of mortality among children and young adults, they affect social classes that are of paramount importance to Africa’s social and economic development.

15. The HIV/AIDS epidemic in particular is having a severe impact on the health and teaching professions. By way of example, Zambia has estimated that 815 primary school teachers died from AIDS in 2001, equivalent to 45% of the teachers trained that year¹⁶. Given that the chances of achieving the goal of stopping and reversing the spread of HIV/AIDS by 2015 would seem fairly slim, how is it possible to succeed in achieving universal primary education, another millennium development goal (MDG), under such conditions?

16. According to the Global Fund to Fight AIDS, Tuberculosis and Malaria, malaria costs Africa almost 12 billion US dollars in gross domestic product every year¹⁷. It induces a gap in economic growth that according to the WHO can be as high as 1.3% per year, which over a 15-year period is tantamount to a roughly 20% cut in GNP.

¹⁵ <http://www.imperial.ac.uk/P8089.htm>.

¹⁶ See UNESCO, Education for All (EFA) Global Monitoring Report, *Education for All: the Quality Imperative*, Paris, 2005. http://www.unesco.org/education/gmr_download/en_summary.pdf.

¹⁷ http://www.walf.sn/societe/suite.php?rub=4&id_art=20572 [in French].

C. A global problem

17. Although infectious diseases affect developing countries far more severely than developed countries¹⁸, the latter are where most of the efforts to combat such diseases are concentrated. Accordingly, while 97% of deaths occur in developing countries, of the 1 223 New Chemical Entities (NCEs) produced and marketed from 1975 to 1997, only 13 (approximately 1%) were specifically designed to treat tropical diseases¹⁹.

18. And yet, infectious diseases are very clearly a global issue, and not one single country can consider itself immune to their effects. The cost of failing to take action, or of taking inappropriate action, can make itself felt through the emergence and spread of drug-resistant micro-organisms. Strongly driven by the misuse of antibiotics, resulting in the early halting of treatments or the prescribing of unsuitable drugs, these developments are forcing doctors to forego their first choice of treatment, thereby generating rapidly escalating costs. Again, to give simply one example, in the early 1990s the United States had to spend almost a billion US dollars to treat the 350 latest cases of multi-resistant tuberculosis – involving a strain originating in Russia and Asia – in the city of New York²⁰.

19. How can we not be concerned at the possibility of further drug resistance originating in Africa, given the failure of health systems and the incorrect use of certain treatments? While Africa is fast becoming the main source of tuberculosis worldwide, the lack of efforts to improve health care administration may well lead to exponential growth in treatment costs²¹.

20. Perhaps nowhere are the costs of failing to pursue co-operative strategies likely to be as high as in the area of infectious diseases²². There is clearly a need for close collaboration not only at the multilateral level but also at the regional level between countries sharing common borders, ecological systems and uniform settlement dynamics.

¹⁸ Infectious diseases are responsible for half of the deaths in developing countries, versus 1% in the developed countries. Indeed, over 90% of all infections occur in developing countries. See WHO, 1999.

¹⁹ OECD, 2003.

²⁰ OECD, *Ibid.*

²¹ Over a third of the world's population already carries the tuberculosis virus and WHO estimates that, if current trends persist, by the year 2020 there will be a further billion new carriers, 150 million sufferers and 35 million deaths from this disease.

See <http://www.pasteur.fr/actu/presse/documentation/tuberculose.html> [in French].

²² Mention might also be made of vaccinations against polio, which cost US\$ 1.5 billion a year, of which US\$ 250 million in the United States alone, despite the fact that the disease has been eradicated in that country and currently affects merely a few hundred people worldwide. Eradication would therefore clearly appear to be a global public good. See WHO, 1999.

II. Main commitments and efforts relating to the fight against infectious diseases

A. Commitments and efforts of African countries

Increase health budgets to 15% of public expenditure

21. To date, six countries have reached or are about to reach this goal, set out in the Abuja Declaration of 2001²³ and reaffirmed by the Health Ministers of the African Union²⁴ (AU) at the recent Abuja Summit on HIV/AIDS, Tuberculosis and Malaria (ATM)²⁵. A third of African Union governments have also allocated at least 10% of their resources to the health sector²⁶.

Making HIV/AIDS the top priority of national development²⁷

22. With regard to the UNAIDS “Three Ones” principles²⁸, 85% of AU countries have set up national authorities to co-ordinate the fight against HIV/AIDS and have introduced a strategic framework of action, a third have created national monitoring and evaluation systems, and 43% have set up co-ordinating authorities at a sub-national level²⁹.

Introducing a national strategy for tuberculosis

23. Two-thirds of the 53 African countries evaluated have national co-ordinating bodies aimed at stepping up the fight against tuberculosis. Twenty countries are currently setting up community-based health systems to fight tuberculosis³⁰.

Halving the burden of malaria by 2010

24. While pursuit of this goal of the Abuja Declaration has not led to the creation of national co-ordination bodies comparable to those set up to combat HIV/AIDS and tuberculosis, almost all AU countries have entered into “Roll Back Malaria (RBM)” partnerships. Regional economic organisations have also incorporated malaria programmes into their strategies and action plans³¹.

²³ <http://www.uneca.org/ADF2000/Abuja%20Declaration.htm#top>.

²⁴ African Union, *Universal Access to HIV/AIDS, Tuberculosis and Malaria Services by a United Africa by 2010*, Resolution of the Ministers of Health on Health Financing in Africa. Sp/Assembly/ATM/5 (I) Rev.3.

²⁵ Special Summit of African Union on HIV/AIDS, Tuberculosis and Malaria (ATM), 2-4 May, 2006, Abuja, Nigeria.

²⁶ See African Union, Special Summit on HIV/AIDS, Tuberculosis and Malaria, *Concept Paper 180406*, Abuja, May 2006.

²⁷ See Abuja Declaration, Art. 23.

²⁸ http://www.unaids.org/en/Coordination/Initiatives/three_ones.asp

²⁹ See Resolution of the Ministers of Health on Health Financing in Africa, Art. 9 (iv).

³⁰ See African Union, Special Summit on HIV/AIDS, Tuberculosis and Malaria, *Concept Paper 180406*, Abuja, May 2006.

³¹ African Union, *Ibid.*

Allocating more resources to meet the Abuja and Millennium goals

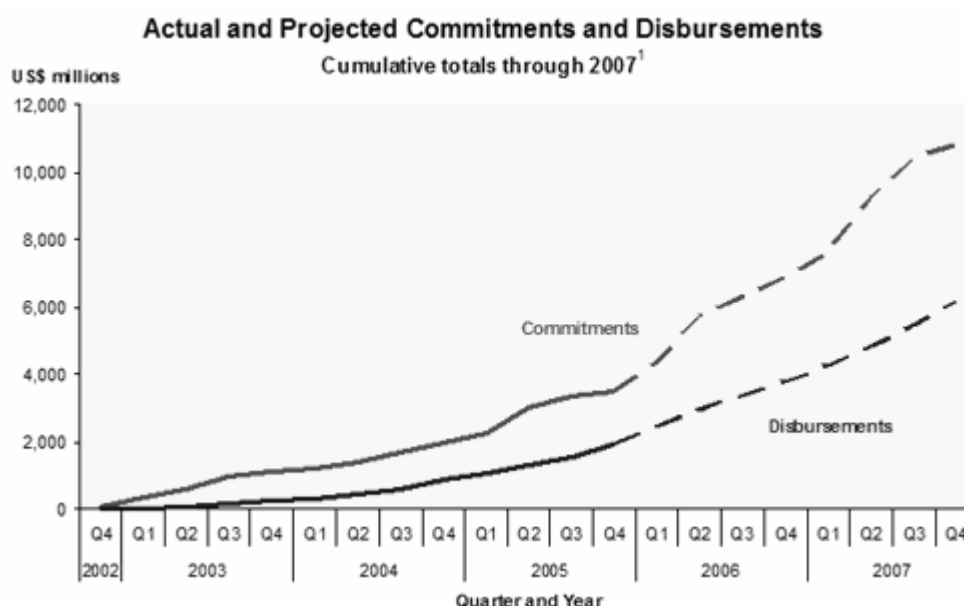
25. At the Special Summit in Abuja, AU Health Ministers committed themselves to allocating more domestic resources for the fight against infectious diseases and managing those resources effectively, to introducing health financing policies that would reduce the health-risk burden on families, and to ensuring that budgetary support mechanisms did not decrease the funding available for health³².

B. Commitments and efforts of the international community

Fight against HIV/AIDS

26. The 2006 High-Level Meeting on AIDS (31 May to 2 June) enabled States to renew their commitment to work towards achieving universal access to prevention, treatment, care and support³³. At least fifty-five countries are expected to have set targets and introduced plans to meet this goal by 2007.

27. Despite a persistent gap between promises and payments made, contributions to the Global Fund to Fight Aids, Tuberculosis and Malaria have been rising along with commitments.



Source: The Global Fund to Fight AIDS, Tuberculosis and Malaria

³² See Resolution of the Ministers of Health on Health Financing in Africa, Art. 9.

³³ See United Nations, Resolution adopted by the General Assembly, 60/262, Political Declaration on HIV/AIDS, 2 June 2006.

Global Plan to Stop Tuberculosis

28. At the World Economic Forum in January 2006, the Stop Tuberculosis partnership announced the launching of a global plan to fight tuberculosis which identifies actions aimed at halving the number of deaths from tuberculosis by 2015 (for which funding of US\$ 56 billion will be required)³⁴. The G8 countries committed themselves in St. Petersburg to supporting this plan³⁵.

Initiatives to eradicate polio

29. The Global Polio Eradication Initiative (GPEI) still needs to secure funding of US\$ 485 million for the period 2006-2008, of which 50 million for 2006³⁶. In Gleneagles, the G8 countries undertook to maintain or increase their contributions to USD 829 million for the “post-eradication” period³⁷.

Initiatives and commitments aimed at widening access to drugs and vaccines

30. The UN Financing for Development Conference decided to create a US\$ 4 billion international finance facility for vaccination which should save some 5 million lives from 2015 onwards (through vaccination campaigns against diphtheria, measles, chicken pox, tetanus and hepatitis B). The aim is to raise US\$ 500 million on the bond market before year-end 2006, and a further US\$ 500 million in 2007, to finance campaigns and purchases of vaccine by developing countries.

31. At the meeting of G7 Finance Ministers in December 2005, the Ministers proposed developing a pilot Advanced Market Commitment initiative that could be used to subsidise the purchase of technologies, and of vaccines in particular, to combat infectious diseases, provided that the technologies had been approved by the regulatory authorities and requested by developing countries. Diseases under consideration as possible targets for new vaccines include: HIV/AIDS, malaria, tuberculosis, cervical cancer, pneumococcal diseases and rotavirus diarrhoea³⁸. The initiative is to be launched formally at the end of 2006.

32. The UNITAID initiative, which will finance drug purchases for poor countries to combat AIDS, malaria and tuberculosis, was launched officially on 19 September 2006. Nineteen countries have committed themselves to creating an air ticket levy designed to finance the initiative – five countries (France, Chile, Côte d’Ivoire, Mauritius and Gabon) have already implemented it – , whereas other members of the pilot group (44 countries) are to make budgetary contributions to the fund³⁹.

Recent G8 commitments in St. Petersburg

33. The G8 countries would like to make tangible progress in the following major areas: strengthening international co-operation on monitoring and controlling infectious diseases; intensifying scientific research and exchange programmes, taking care to include researchers from developing countries; preparing for possible development of the human form of avian flu; pursuit of the goal of universal access to HIV/AIDS treatment by 2010; allocating resources to fight malaria; and support for efforts to ease the public-health consequences of natural disasters⁴⁰.

³⁴ <http://www.stoptb.org/globalplan/>.

³⁵ <http://en.g8russia.ru/docs/10-print.html>.

³⁶ <http://www.polioeradication.org/fundingbackground.asp>.

³⁷ Financial Resource Requirements for 2006-2008, World Health Organization (Geneva), 5 May 2006.

³⁸ See <http://www.ifpma.org/News/NewsReleaseDetail.aspx?nID=4762>

³⁹ <http://www.unaids.org/en/MediaCentre/PressMaterials/FeatureStory/20060920-unitaid.asp>.

⁴⁰ Final documentation on infectious diseases, G8 St. Petersburg Summit, 16 July 2006.

III. Successes and limitations of the commitments and efforts undertaken

A. While some countries have succeeded in containing or rolling back AIDS, tuberculosis and malaria...

Prevention and control of HIV/AIDS

34. With regard to HIV/AIDS, certain African countries demonstrated at a very early stage that effective prevention campaigns could check the spread of infection. Senegal in particular took action without delay, soon after the epidemic's outbreak, introducing sex education into primary and secondary school curricula, providing treatment for sexually transmitted diseases and encouraging the use of condoms. The result was spectacular, since the prevalence rate has remained below 2% throughout the country⁴¹.

35. Although at one point, after a certain stage of development had passed, it had seemed that the disease had become uncontrollable, a number of countries have shown recently that it is possible to roll back HIV/AIDS. Through extensive and targeted prevention programmes, Uganda cut its prevalence rate to 8% in 1999, and then 6.7% in 2005, after a peak of nearly 14% in the early 90s⁴². Today, declining prices for retroviral drugs⁴³ are providing grounds for hope that progress can be made in treating the sick. Out of 4.6 million Africans living with the virus and requiring antiretrovirals, 23% were undergoing treatment in June 2006. Three countries (Namibia, Rwanda and Botswana) have even achieved the goal of treating at least 50%⁴⁴.

Tuberculosis screening and treatment

36. With regard to tuberculosis, African countries were among the first to apply the "DOTS" method – Directly Observed Treatment Short course – whereby sufferers can be detected and treated effectively at lesser cost. In the first four years after the programme was launched, Guinea, which is one of the continent's poorest countries, doubled the screening rate and cured 80% of TB victims⁴⁵. In addition, TB detection rates rose by 23% to roughly 50% between 1995 and 2005⁴⁶.

⁴¹ WHO, 1999

⁴² UNAIDS, *HIV/AIDS in Africa* – April 2001 – DPI/2198.

⁴³ The decline was facilitated by two WTO decisions: (i) to interpret the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) in a manner supportive of the members' right to promote access to medicines for all (2001); and (ii) to liberalise imports of generic drugs by poor countries beset by health emergencies (2003).

⁴⁴ See XVI International AIDS Conference, Toronto, 16-18 August 2006. Updated by WHO. <http://www.aids2006.org/>.

⁴⁵ WHO, 1999.

⁴⁶ The Global Plan to Stop TB 2006 - 2015.

Prevention and treatment of malaria

37. In the fight against malaria, many countries have achieved spectacular increases in the distribution of insecticide-treated mosquito nets and the coverage rate for children under five years of age. As of year-end 2005, two-thirds of the countries had adopted policies that include the use of drugs that are effective against the disease. The “Roll Back Malaria” partnership has facilitated access to artemisinin-based drugs, which constitute a response to drug resistance.

B. ...major obstacles are still hampering the fight against infectious diseases in Africa

38. Despite undeniable successes, the fight against infectious diseases is still at a standstill in much of Africa. First, the progress that has been made in preventing and/or treating diseases that attract the bulk of international attention has been neither decisive nor uniform. Although some advances have been made against HIV/AIDS, the situation is so serious that it is important to step up the pace. At the same time, treatment success rates for tuberculosis have been stuck since 1998 at around 70%⁴⁷. In addition, some countries have been slow to import the millions of insecticide-treated mosquito nets that were purchased – in some cases years earlier – by the Global Fund to Fight AIDS, Tuberculosis and Malaria⁴⁸. Furthermore, in 2005, three of six countries in which polio was still endemic, and eight out of the ten countries in which polio had reappeared, were in Africa⁴⁹.

39. Lastly, it should be noted that there has not been much progress against diseases that fail to attract serious attention – and thus substantial funding – on an international level. Each year diarrhoeal and pulmonary diseases combined continue to kill more African children than malaria. Scarcely anything is being done about many so-called “neglected” tropical diseases such as onchocercosis, trypanosomiasis, yellow fever, filariasis and schistosomiasis, even though these illnesses affect hundreds of millions of people⁵⁰.

40. These difficulties stem from a number of causes, and especially from *insufficient co-ordination* of: (i) resources; (ii) mechanisms to combat infectious diseases; and (iii) sectoral policies. They also arise from: (iv) excessive centralisation at the national level; and (v) underfunding.

“Vertical” programmes and funding

41. The effectiveness of the fight against infectious diseases does not depend solely on the volume of resources made available. What is also needed is efficient national public health systems that are well integrated with other sectors of activity and staffed with a sufficient number of qualified people. Yet international programmes and financing for combating infectious diseases have to date been characterised by a certain verticality⁵¹ which has done nothing to help national health care systems bolster their capacities, and their planning capacities in particular. While these programmes

⁴⁷ The Global Plan to Stop TB 2006 – 2015, p. 71.
http://www.stoptb.org/globalplan/assets/documents/RP_Africa.pdf

⁴⁸ *The New York Times*, Saturday, 8 July 2006.

⁴⁹ G8 Research Group Final Compliance Report, Draft of June 12, 2006.

⁵⁰ WHO, *Addressing the Changing Health Challenges of the Developing World*, Geneva, 2005. See http://whqlibdoc.who.int/publications/2005/9241562986_part4.pdf.

⁵¹ For a presentation of the successes and limitations of vertical programmes, see: WHO, *World Health Report 2005 – Make Every Child and Mother Count*.
<http://www.who.int/whr/2005/chapter6/en/index.html>

have been able to lower the mortality rates of several diseases, their ability to lessen the overall health risk is open to question. With regard to children, for example, the effectiveness of measures limited to a single disease is diminished by the fact that in many cases there is a combination of afflictions. Integrated Management of Childhood Illnesses (IMCI)⁵², which consists in administering rehydration salts for diarrhoea, antibiotics for pneumonia and anti-malarial drugs along with vitamin and mineral supplements, can lead to a spectacular reduction in mortality. But shortages of medical supplies, difficulties in retaining qualified⁵³ but overworked staff, and excessive centralisation of health care systems⁵⁴ prevent many African countries from carrying this out effectively.

Insufficient co-ordination of the means for combating infectious diseases

42. First, the fact that there are limitations on interaction between agencies in the government, academic and private sectors that have capabilities for fighting infectious diseases⁵⁵ means that the use of resources earmarked for surveillance is sub-optimal. Second, co-ordination is also insufficient between professionals working to eradicate diseases that affect animals, plants and humans. And yet many infectious diseases – AIDS, BSE/Creutzfeld-Jacob disease, SARS, avian flu, plague, etc. – that affect man are of animal origin⁵⁶. Furthermore, technological advances in genomics, electronics and information technology create new opportunities that apply equally to the diagnosis and epidemiology of plant, animal and human disease⁵⁷. A joint approach could therefore maximise the potential of human resources thanks to a better sharing of surveillance data.

Lack of co-ordination with other sectors of activity, such as access to water and sanitation

43. Very frequently, the primary determinants of infectious diseases are to be found in fields other than health itself. For example, in Africa the emergence and spread of infectious diseases are influenced by population movements that result from settlement and conflicts⁵⁸, overcrowding and insalubrious living conditions in refugee camps or makeshift housing⁵⁹, global warming and its consequences for the extension of certain vectors such as mosquitoes, dependence of families on energy sources that give off harmful smoke or, above all, difficulties of access to water and sanitation.

44. But another consequence of vertical programmes is that not enough attention is paid to the environment that fosters the outbreak of infectious diseases. In particular, eradication mechanisms

⁵² http://www.unicef.org/health/index_imcd.html.

⁵³ WHO, *The World Health Report 2006 – Working Together for Health*.

⁵⁴ 90% of children die at home, which confirms the need for a communities-oriented approach. See WHO, 2005.

⁵⁵ Office for Science and Technology, *Infectious Futures: Report of a pan-African Workshop in Entebbe, Uganda, August 2005*.

⁵⁶ Moreover, it is projected that 75% of the infectious diseases that will emerge in the near future will originate with animals. See *Ibid*, p.39.

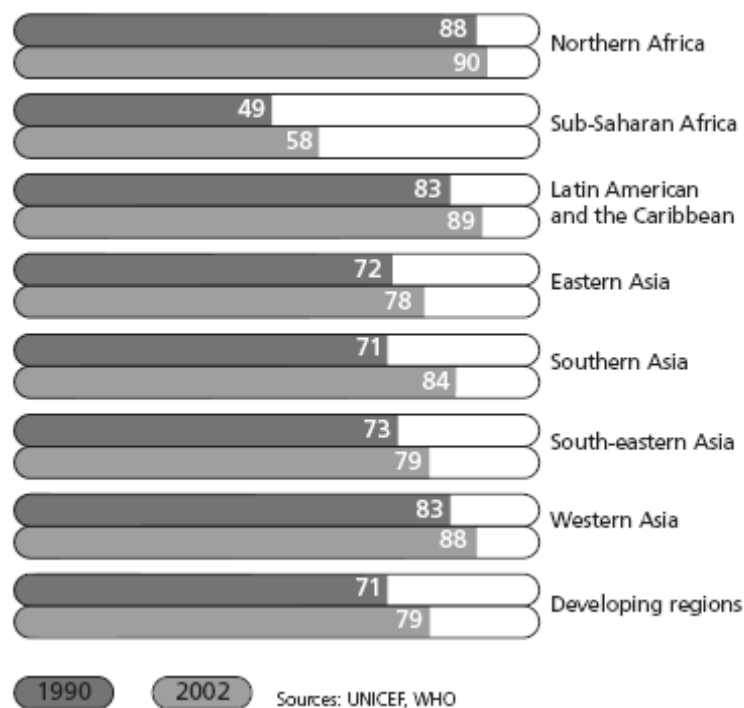
⁵⁷ *Ibid*, p. 42.

⁵⁸ Africa is the continent with the largest intra-regional international migrations. The dynamics of settlement entail huge population shifts from the interior to the coasts and from rural to urban areas. Conflicts are generally accelerators of such phenomena. And Africa also holds records with regard to armed conflicts and displaced persons.

⁵⁹ It is fast-growing cities, in many cases lacking community facilities – such as Kikwit, Zaire, where the Ebola haemorrhagic fever epidemic broke out in 1995 – that attract populations from the hinterland that wish to migrate to large cities. Some towns have only one toilet for 800 or more people. Some neighbourhoods are so overcrowded that they are conducive to the spread of waterborne, airborne, sexually-transmitted or contact-transmitted infections. See Laurie Garrett, “The Return of Infectious Diseases”, *Foreign Affairs*, January/February 1996.

give access to water and sanitation far less importance than it deserves⁶⁰. And yet 60% of all infant mortality is linked to infectious and parasitic diseases, most of them water-related⁶¹. Moreover, compared with other continents, Africa is still the region with the lowest rates of access to drinking water and sanitation⁶².

Access to improved water sources: regional trends (in percentage)



Action mechanisms that are too highly centralised at national level

45. Although national administrative and planning frameworks ought to be bolstered, that does not mean that everything should be accomplished at central level. Action by government agencies should be based locally and local authorities given greater powers in the realm of public health. Rural areas still have far lower rates of access to drinking water and sanitation than urban ones, even if those rates are increasing at a faster pace⁶³. The ability of rural residents to access health care services and facilities is also very limited. But decentralisation of health services entails more than just relocating facilities and shifting labour; it also entails community empowerment and accountability. Neither can decentralisation be limited to rural areas alone: it is also needed in fast-growing neighbourhoods of major cities, many of which suffer total deprivation and are perfect breeding grounds for infection.

46. At the same time, the sub-regional level should be reinforced as well. There are no African regional organisations with the responsibility for co-ordinating the detection, identification and

⁶⁰ In 1997-98, while assistance for health totalled US\$ 5 billion, DAC members' bilateral ODA for basic education, water distribution and sanitation amounted to 1.1 billion.

⁶¹ <http://www.infoforhealth.org/pr/m14/m14chap5.shtml#top>.

⁶² See WHO, *Health and the Millennium Development Goals*, Geneva, 2005.

⁶³ *Ibid.*

monitoring of infectious diseases affecting humans⁶⁴. International co-ordination of activities to monitor these afflictions is therefore left to the WHO. As a result, sub-continental peculiarities of diseases are not taken into account, even though these are substantial (for example, there are areas in which malaria is especially endemic).

Funding constraints

47. In the fight against AIDS, the United Nations General Assembly has recognised that, according to UNAIDS estimates, US\$ 18.1 billion will be needed in 2007 – and 22.1 billion in 2008 – to support a rapidly expanded response in low- and middle-income countries⁶⁵. This figure must be held up against a total of 8.3 billion from all sources, in 2005, for all AIDS-related activities. According to projections incorporating past trends, pledges and commitments, the amounts for 2006 and 2007 will be respectively US\$ 8.9 and 10 billion⁶⁶.

48. Regarding malaria, UNICEF and the WHO emphasise in their (joint) global report on the disease that an estimated US\$ 3.2 billion per year is needed to combat malaria effectively in the 82 countries with the highest disease burden. And yet, only US\$ 600 million was made available in 2005 for global malaria control⁶⁷.

49. The high cost of vaccines and medicine is also preventing many people suffering from measles, tuberculosis, malaria or pneumonia from having access to these vital tools of prevention and treatment, especially when the development of drug-resistant micro-organisms is causing the cost of these drugs to skyrocket.

50. More generally, at the beginning of the 2000s, only 7% of aggregate bilateral official development assistance (ODA) from countries belonging to the OECD Development Assistance Committee (DAC) and ODA loans from multilateral banks was earmarked for health. Moreover, health-related aid in Africa diminished throughout the 1990s⁶⁸. While there has been an upswing recently, this stems essentially from increased funding for HIV/AIDS. Interest in other infectious diseases has been more modest, and other priorities of health-care systems – and especially those for the poor – have actually seen a drop in contributions⁶⁹. Apart from HIV/AIDS, health system sub-sectors geared towards the poor saw the proportion of ODA earmarked for health, AIDS and population drop from 57.2 to 42% between 1993 and 2003⁷⁰. While substantial efforts have been made for some diseases, the increase involved falls far short of reflecting a uniform trend towards greater funding for health.

⁶⁴ Such organisations do exist for animal and plant diseases: *e.g.* the Interafrican Bureau for Animal Research (IBAR), the African Union's Inter-African Phytosanitary Council and the Livestock Sector Technical Committee of the Southern Africa Development Community (SADC). See Office for Science and Technology, 2005.

⁶⁵ See UNAIDS, *Report on the Global AIDS Epidemic*, Geneva, 2006.

⁶⁶ http://data.unaids.org/Publications/IRC-pub07/JC1255-ResourceNeeds_en.pdf?preview=true.

⁶⁷ http://www.unicef.org/media/media_26392.html.

⁶⁸ See OECD/DAC, *Development Co-operation Report 2000*.

⁶⁹ Apart from HIV/AIDS, aid for health and population declined from 5.3% of ODA in 1993 to 5% in 2003. See OECD Development Centre, *Priorities in Global Assistance for Health, AIDS and Population*, June 2005. <http://www.oecd.org/dataoecd/42/39/34987795.pdf>.

⁷⁰ OECD, *Ibid.*

IV. Priority actions to be taken by African countries and the international community

A. Priorities for the international community

Support reinforcement of national planning capabilities

51. The current governance capabilities of health care systems are very limited. Most are managed reactively in response to pressing problems. It is important to bolster national planning structures, which would entail greater co-ordination on the part both of African governments and of international donors. The various initiatives should be better integrated into national administrations and budgets – a factor that militates in favour of budgetary support and against the creation of operational units outside the public health service.

Strengthen budgetary support to the health care sector

52. Budgetary support for the health care sector raises the issue of harmonisation of donor funding procedures.

53. Another issue that needs to be raised involves evaluation mechanisms to ensure that funds are used efficiently. Just as it is important to provide for the traceability of ODA that is granted for budgetary support, it ought to be possible to measure the breakdown and effectiveness of funding within each sector.

Fill funding gaps and find ways to increase available resources

54. A number of innovative funding mechanisms (International Finance Facility, Advanced Market Commitment, UNITAID) are headed in the right direction. Greater use should also be made of foundations. Co-ordination of these various resources is needed to enhance their effectiveness.

Increase the effectiveness of health-related assistance

55. Increasing the volume of assistance for combating infectious diseases is not enough to ensure that the aid will be effective. Further reductions are needed in the administrative costs of assistance, and in drug prices, through the involvement of private-sector partners. It is also necessary to bolster the capacities of the countries assisted, and in particular their capacities to absorb financial flows and training for health care workers. Lastly, low-cost awareness-building campaigns involving the media and cultural and religious leaders at the local and community levels could also enhance the effectiveness of support measures.

B. Priorities for African countries

Increase health budgets

56. Internal funding sources should be increased, and at the same time the reinforcement of budgetary support and debt relief should feed through to health care budgets.

Bolster personnel management policies

57. The WHO has identified a threshold in the density of health workers below which essential coverage of essential interventions, including those necessary to meet health-related Millennium Development Goals (MDGs), is highly improbable. It is in sub-Saharan Africa that the shortage is most acute⁷¹. Most African health care systems are affected by the migration or demobilisation of managerial personnel, and by a critical shortage of support staff. The effectiveness of the fight against infectious diseases, and of all public-health policies, depends on the capacity of the African countries to remobilise and recruit personnel.

Co-ordinate sectoral policies

58. Create in each country a national interministerial institute on infectious diseases, *i.e.* a network, apt to co-ordinate the actions of public-health, public-works, transport, town planning and social welfare services so that disease treatment strategies can pay more attention to the surrounding environment.

Deconcentrate and decentralise

59. It is vital to deconcentrate and decentralise health care systems to the sub-national level in order to reach all groups that are vulnerable to infectious diseases. These efforts should be geared towards territories, and in particular isolated rural areas and outlying areas of large cities, and at the same time supported by the communities involved.

Target persons and territories, not diseases

60. - Rapidly growing neighbourhoods in Africa's secondary and large cities constitute a choice breeding ground for epidemics: (i) because of the concentration of many of the vulnerable groups – migrants, refugees, sex workers, street children, and so on – who are also the main vectors of infectious diseases; (ii) because they are densely populated; and (iii) because they are almost totally deprived of such basic services as access to drinking water and sanitation.

61. Refugee camps are also especially sensitive risk areas.

62. The largest risk groups for spreading infectious diseases should be the target of the greatest prevention efforts. Significant efforts are needed, not only to fight legal and regulatory discrimination, but also to work against community stigmatisation. Frank discussions, with no taboos, should be held with young people, and especially girls, since Africa continues to be the continent with the highest proportion of women carrying the AIDS virus. Health education, and sexual and reproductive health in particular, should be an integral part of secondary-school curricula, while any and all measures that could increase the female population in the educational system could bolster the fight against infectious diseases.

Strengthen the sub-regional level

63. The monitoring of infectious diseases in Africa should be co-ordinated between countries that share a common ecosystem. One way to do so would be through African Regional Economic Communities (RECs), (such as EAC, SADC or ECOWAS).

⁷¹ WHO, *Working Together for Health: The World Health Report 2006*, http://www.who.int/entity/whr/2006/whr06_en.pdf

64. The Economic Commission for Africa has proposed creating regional/sub-regional reference and co-ordination centres (RCCs), the goal of which would be to supervise infectious diseases, assist countries or regions afflicted by epidemics and promote the dissemination of appropriate technologies.

65. But effective surveillance systems should not be limited to the sub-regional level. They should be grounded in an approach conducive to mutual responsibility between the sub-regional level and that of the national level. Any negligence in the implementation of national means of control would be likely to impair the capabilities and credibility of the sub-region as a whole (and, for example, to compromise the long-term funding of regional technology centres or centres of excellence). A system of surveillance by peers could play a very important role in the area of infectious diseases.

Table 4.1 Possible monitoring framework for evaluating the efficiency of the fight against infectious diseases

Key Monitoring Issues	Bottlenecks	Next steps	Responsibilities	Potential indicators
Strengthening the capacities of health systems	Disease-specific programmes	Strengthen national planning frameworks	African States and the international community	Degree to which programmes are integrated into health administration structures
	Disjointed funding systems	Increase budgetary support for the health sector	International community	Level of budgetary support for the health sector
	Migration and demobilisation of health workers	Development of personnel management policies	African States	Salary scales Career programmes
Co-ordination of programmes combating diseases	Poor co-ordination of bodies combating infectious diseases	Participation of private, public and university bodies in integrated programmes Closer contacts between professional workers engaged in the fight against animal, plant and human diseases	African States and NEPAD	Introduction of frameworks and integrated programmes
	Poor co-ordination with other sectors (eg. water, sanitation, etc.)	Improved access to water and sanitation, development of educational programmes on infectious diseases, etc.	African States and the int'l community	Proportion of persons with access to water and sanitation Modification of curricula
Decentralisation and regionalisation of control programmes	Uneven coverage : - of urban and rural areas ; -of central and peripheral districts in urban areas	Improve the distribution of health infrastructure, facilities and personnel on national territory	African States	Rate of extended access to health facilities and personnel
	Lack of screening and detection bodies at the sub-regional level	Give powers of oversight to regional economic communities (RECs) Set up regional centres of reference and co-ordination	RECs, NEPAD, international community	Number and powers of the sub-regional bodies created
	Inadequate targeting of high-risk areas and groups	Develop measures targeting migrants, refugees, sex workers, street children, young girls, etc.	African States, RECs	Number of programmes aimed specifically at high-risk groups
Enhanced prevention, detection and treatment	Insufficient coverage of treatment and prevention technologies	Better meet needs in terms of vaccines, effective drugs and treatments, impregnated mosquito nets, etc.	African States and the international community	Rate of growth in the distribution of impregnated mosquito nets, drugs and effective treatment
	Widening gap between needs and the resources available	Increase health aid (besides HIV/AIDS)	African States and the int'l community	Funding gaps in various areas
Availability of resources	Lack of resources	Increase public expenditure on health	African States	Number of countries devoting 15% of budget to health