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**HEALTH AND
SUSTAINABLE DEVELOPMENT**

BACKGROUND INTRODUCTORY PAPER

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Department of Health
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HEALTH AND SUSTAINABLE DEVELOPMENT¹

Introduction

1. This background introductory paper adopted at the Ministerial meeting on Health and Sustainable Development, outlines how health is a product of sustainable development, and how improvements in health, and indeed health services, contribute to sustainable development. After outlining health trends, it explores the links between health and poverty, economic growth and equity (particularly with regard to the process of globalisation), natural resources and the environment, and health services. While the links with health are addressed separately for purposes of elucidation, it cannot be overemphasised that they do not happen independently of one another. Rather, they are all interconnected, with sustainable development in one area positively influencing the others, and vice versa, setting up a virtuous cycle. The opposite also applies.

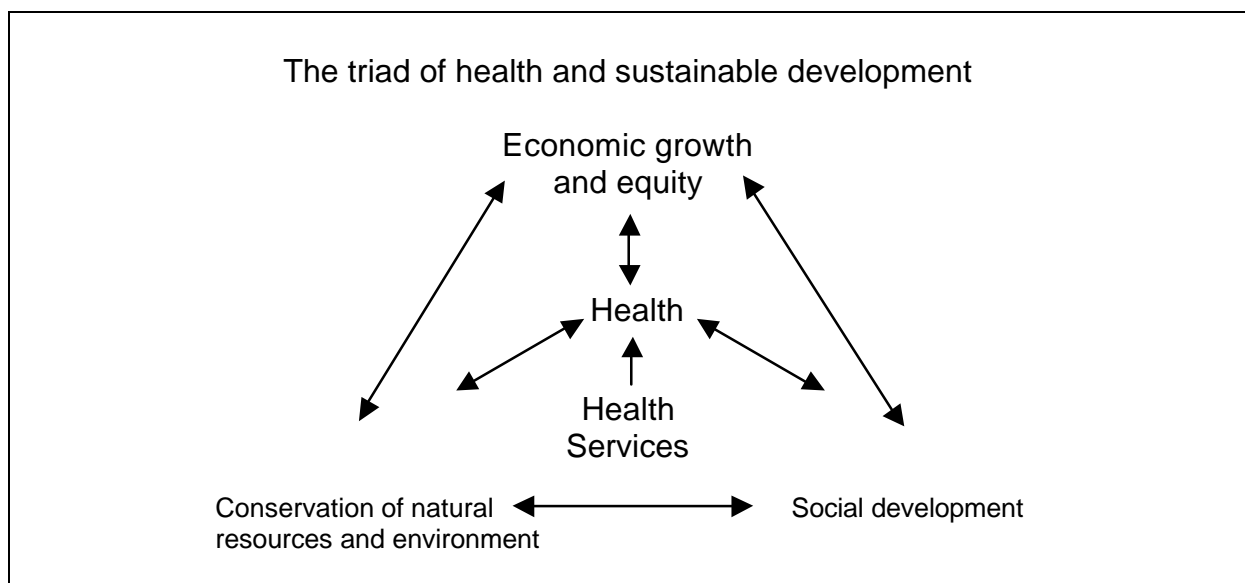
Health and sustainable development

2. Sustainable development aims at improving the quality of life of all the world's people without increasing the use of our natural resources beyond the earth's carrying capacity. This requires integrated action towards economic growth and equity, conservation of natural resources and the environment, and social development. Each of these elements is mutually supportive of the others, creating an interconnected sustainable development triad.
3. Health is recognised as a key goal of sustainable development in the first principle of the Rio Declaration on Environment and Development, which states that: "Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature." The

¹ For more detail see: Health in the Context of Sustainable Development: Background Document for the WHO Meeting "Making Health Central to Sustainable Development", Oslo, Norway, 29 November-1 December 2001 and
Macroeconomics and Health: Investing in Health for Economic Development. Report of the Commission on Macroeconomics and Health, World Health Organisation, 2001.

extent to which sustainable development benefits a community is closely tied to its level of health, as health is a product of economic, social, political and environmental factors, as well as of health services. If our development path is not conducive to sustained improvements in health, then it is not sustainable development.

4. Health, in turn, contributes to economic, social and environmental development through multiple pathways. Improved health feeds sustainable development and sustainable development feeds improved health in a virtuous cycle, supported by effective health services.



5. The opposite is experienced by many of the world's people: a vicious cycle of underdevelopment and ill health. The poor, marginalized, displaced and refugees carry the greatest burden of preventable and treatable disease and death. Inappropriate development and over-consumption also drive the disease burden.
6. Women, children, youth, the elderly, orphans and people with disabilities are amongst those vulnerable to disproportionate burdens of specific forms of ill-health. This holds true at all levels of development, but is most pronounced under circumstances of poverty.

7. Whole communities are often marginalized and excluded from the opportunities for sustainable development and health – be it in rural or urban areas, amongst minority groups, in the face of direct discrimination, or amongst refugees or those displaced by war or conflict. There are health consequences of social exclusion, poorer services and lack of opportunities for development and empowerment.
8. Peace, good governance, political stability and concern for its people are the foundation for the sustainable development of nations.
9. There are patterns of development that undermine health and sustainable improvements in health. These include factors related to lifestyles, consumption patterns and particular forms of economic development and inequity. Improved health is a pre-requisite for effective development. Poor health, amongst other things, undercuts improvement in gross domestic product.
10. Agenda 21, the global plan of action agreed to at the United Nations Conference on Environment and Development (UNCED) devotes an entire chapter to “Protecting and Promoting Human Health”. Chapter 6 recognises the interconnection between health and environmental, social and economic development, supports an inter-sectoral approach and identifies five programme areas: meeting primary health care needs, particularly in rural areas; control of communicable diseases; protection of vulnerable groups; meeting the urban health challenge; and reducing health risks from environmental pollution and hazards.

Health trends²

11. Over the past decade, there have been improvements in life expectancy and declines in infant and child mortality rates – all key indicators of health. However, these global trends, while highlighting what has been achieved, hide the fact that the gains of development are being reversed in a number of countries, particularly in sub-Saharan Africa. This is strongly associated with the impact of HIV/AIDS,

² For more detail, see: Health in the Context of Sustainable Development: Background Document for the WHO Meeting “Making Health Central to Sustainable Development”, Oslo, Norway, 29 November-1 December 2001.

but is also tied to underdevelopment, people becoming poorer, or being negatively affected by war and conflict.

12. In 1999, average life expectancy at birth was 49.2 years in the least developed countries, 61.4 for all developing countries and 75.2 for developed countries. These gaps highlight the increased disease burden in the absence of sustainable development. The differences in life expectancy are paralleled by similar differentials in the burden of morbidity and mortality related to pregnancy and childbirth: more than 90% of the over half a million annual maternal deaths occur in Africa and Asia. Chances of a woman dying in childbirth in sub-Saharan Africa range from 1 in 11 in Eastern Africa to 1 in 65 in Southern Africa, compared to 1 in 1100 in Eastern Europe and 1 in 5000 in Southern Europe. The mortality rate for children in the least developed countries is 159 per 1000 births, compared to 6 per 1000 in developed countries.

13. In communicable diseases, notable successes have been achieved against polio, guinea worm (dracunculiasis) and river blindness (onchocerciasis). However conditions such as AIDS, tuberculosis and malaria (which result in approximately 2 million, 1.5 million and 1 million deaths respectively each year), as well as the major communicable diseases of childhood such as acute respiratory infections, (predominantly pneumonia), diarrhoea and measles (which lead to approximately 4 million, 1.5 million and 800 000 deaths respectively each year). Together they are responsible for more than 90% of deaths from communicable disease. Malnutrition, including micronutrient deficiency is associated with more than half of these deaths. The death burden is greatest in sub-Saharan Africa. Developing countries remain vulnerable to epidemics, such as cholera.

14. According to UNAIDS, about 40 million people are now living with HIV/AIDS, 95 per cent of them in developing countries. In 2001 2.3 million people died of AIDS in sub-Saharan Africa out of a total of 3 million worldwide. Life expectancy in the most severely affected countries in sub-Saharan Africa has been reduced by almost a third, from about 60 years to 43, reversing gains made over the past half century. Poverty, underdevelopment and illiteracy increase the vulnerability to HIV infection and AIDS exacerbates poverty. Poverty leads to migration,

influences sexual behaviour and limits care and education. In turn, AIDS threatens efforts to revitalize economies and has devastating social impacts, not least of which is children orphaned. But, as with many other communicable diseases, there is much that can be done.

15. Consequent on unsustainable development, non-communicable diseases (NCDs) are a significant and growing burden in developing countries. Most non-communicable disease deaths and high levels of morbidity occur in the developing world. 77% of deaths from NCDs worldwide occur in developing countries. These include diseases of lifestyle (for example due to unhealthy diets, physical inactivity, tobacco and alcohol use), injuries, violence, mental ill-health, disability and occupation. In developing countries each year, there are around 5.5 million deaths from heart attacks, 5.1 million from strokes and 2.9 million from tobacco-related disease.

16. Concern about the high disease burden is increasing. A number of programmes to address these have been put in place over the past decade, and have significant potential to impact on disease burden.³

17. A number of targets have also been set for reduction of the disease burden, notably the Millennium Development Targets, and targets set in global and regional fora (see box 1). If current trends continue, it seems that, as was the case with many previous efforts, these targets will not be reached. A major scaling up of effort, not only in regard to disease programmes, but also with respect to improving basic health services (and impacting the sustainable development triad) is required if these targets are not to be seen as empty words.

³ These include various AIDS programmes, Roll Back Malaria, Stop TB, the Integrated Mother and Child Initiative and Safe Motherhood initiative, the Framework Convention on Tobacco Control, Vision 2020 - The Right to Sight and the Global Campaign against Epilepsy.

Box 1: The Millennium Development Goals and Other Targets

1. Reduce by 2005 HIV prevalence among young men and women aged 15 to 24 in the most affected countries, by 25% and by 25% globally by 2010⁴
2. By 2005, reduce the proportion of infants infected with HIV by 20%, and by 50% by 2010⁵
3. Reduce TB deaths and prevalence of the disease by 50% by 2010⁶
4. Reduce the burden of disease associated with malaria by 50% by 2010⁷
5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality⁸
6. Reduce by three-quarters, between 1990 and 2015, the maternal mortality ration⁹

Inequity in health status within and between countries strongly reflects inequalities in development, and also in health systems.

Poor health undermines development

18. Poverty leads to ill-health, but possibly ultimately more debilitating is the negative impact of poor health on development. Malaria alone is estimated to have slowed economic growth in Africa by up to 1.3% each year and HIV/AIDS by up to 2.6% in high prevalence countries. These percentages translate into billions of dollars. When the consequences of the high burden of other preventable diseases and lack of effective care are added, the result translates into hundreds of billions of dollars. Considering what an annual investment of hundreds of billions of dollars would have on life in poorer countries succinctly illustrates how investments in health and health care are productive, and not simply consumptive - as some are prone to think - with more than tangible returns.

19. Good health enhances development through multiple pathways. This includes survival of trained labour, higher productivity among healthier workers, higher rates of savings and investment, greater enterprise and agrarian productivity and increased direct foreign investment and tourism. Children's educational

⁴ For more detail see: Declaration of Commitment on HIV/AIDS, "Global crisis – Global action" adopted at the Twenty-sixth Special Session of the General Assembly, 25-27 June 2001.

⁵ Declaration of Commitment on HIV/AIDS, "Global crisis – Global action" adopted at the Twenty-sixth Special Session of the General Assembly, 25-27 June 2001.

⁶ For more detail see: Final Communiqué of the G8 Kyushu Okinawa Summit, 21-23 July 2000.

⁷ Final Communiqué of the G8 Kyushu Okinawa Summit, 21-23 July 2000.

⁸ For more detail see: "Millennium Development Goals", adopted at the United Nations Millennium Summit, 6-8 September 2000.

⁹ "Millennium Development Goals", adopted at the United Nations Millennium Summit, 6-8 September 2000.

attainment is higher, which ultimately enhances productivity, lowers rates of fertility and changes the dependency ratio. In short, health is a positive economic asset for countries.

20. Ill-health exacerbates poverty at the family level. The most visible impact is a catastrophic illness or injury which, in the absence of an effective public health service or pre-payment system, can lead to a debt trap that impoverishes families for years, driving ill-health in the entire family through mechanisms such as malnutrition. This in turn undermines the potential of families for development.

Poverty leads to ill-health

21. Poverty is the predominant underlying cause of the huge burden of disease in poorer countries and the disproportionate burden amongst the poor elsewhere.

22. Examples of how poverty and the absence of sustainable systems in every sector of socio-economic life ultimately (in a complementary way) undermine health are illustrated in the Table 1 below.

Table 1: Examples of how poverty undermines health

1. Economic underdevelopment, including through reduced production and raw goods prices, and protective trade and market practices, damage health through a number of paths, including unemployment and low incomes. Countries cannot ensure basic services for their people and individuals are unable to purchase the necessities of health. Long work hours are among the many stresses that undermine the health of workers in poor countries.
2. Shortfalls in agricultural production and lack of land reform have a direct effect on food security and hence on malnutrition. In spite of a world surplus of food, hundreds of millions of people go hungry each day. Malnutrition directly causes illness and vulnerability to infection.
3. Lack of education, and in particular women's education, limits the ability of the poor to identify and take appropriate action to improve their own health and indeed to secure their basic needs.
4. The oppressed position of women in poverty leads to poorer health in many ways, including a weak position in ensuring safer sex practices.
5. People living in informal settlements with poor infrastructure are exposed to the health problems of social instability and communicable disease, including respiratory infections, and to environmental hazards such as air pollution and fire.

6. The more than one billion people who are without access to improved water supply and the 2.4 billion without access to improved sanitation are exposed to water-related diseases.
7. Lack of general infrastructure, such as good roads and transport, not only impede access to health services, but add to fatalities and injuries from accidents.
8. The “digital divide” not only entrenches poverty by holding back development, but also impedes the chances of care in an emergency.
9. Governance and institutional weaknesses, although not uniform, influence health both indirectly and directly. Governments are faced with an array of pressures and health services are not necessarily afforded the priority required; nor is what is available necessarily equitably distributed or efficiently managed. The effectiveness of public and infrastructure services, the basis for development and for encouraging investment, may also be weak. This quality of governance impacts on economies and, through this, on health.
10. Besides directly causing death and political instability, war and conflict have had catastrophic effects on health, disease control and disability. Not only are health services prone to collapse, resources are diverted away from health-promoting actions and poverty becomes more pervasive as the health impact extends beyond the war zone. Displaced people become victims of the health impacts of even more acute poverty.

24. Poverty resulting in ill health is multidimensional and requires broad intersectoral interventions. The importance of these intersectoral factors on health is being recognised ever more acutely in international fora and by international organisations, and are now an important feature in poverty reduction strategies.

Health and the environment

25. Underdevelopment, unsustainable patterns of development and production and consumption processes, at both global and local level, are using resources and degrading the environment in a manner that is seriously damaging to health now and even more so in the future.

26. It has been estimated that poor environmental quality contributes to around 25% of all preventable ill-health in the world today.

27. The future impact on life support systems and consequent health effects often take second place to short term gains, albeit that one-third of the world's stocks of natural ecological resources have been lost since 1970. In contrast, balanced and functional ecological systems contribute to health through a number of pathways.

28. Local environmental problems impacting on health are widespread and varied, but among the most harmful to health are inadequate water (quantity and quality) and sanitation (sewage and waste disposal), and fuel combustion. The extent of the harm is influenced by factors such as sanitation behaviour, poverty (for example the cost of purchasing water impacting on money for food and other essentials), and housing - through factors such as overcrowding and rudimentary shelter. More than one billion people are without access to improved water supply and 2.4 billion without access to improved sanitation. Approximately two million deaths annually are attributed to air pollution, mainly from use of traditional biomass fuels. Local environmental burdens and the ability to manage them are influenced by social, political and economic forces at country and international level and by the quality of governance.
29. Rapidly urbanising areas in middle and also lower-income countries face a number of environmentally - driven health problems related to industrialisation, poverty, social dislocation (for example trauma from violence) and lack of utilities. The problems of unplanned human settlements - overcrowded housing, pollution, noise and waste lead to widespread ill-health. In addition, social instability and undermining of moral values are contributing to increased violence, the abuse of women and children, drug and alcohol abuse and mental ill health. The effects are generally worse in urban fringes and inner cities.
30. Although different hazards and health consequences are frequently associated with levels of poverty, affluence and types of settlement, the relationships vary widely. Also, the future health risks will have an impact beyond the source creating them.
31. Examples of how unsustainable patterns of development affect health through environmental degradation are shown in Table 2 below.

Table 2: Examples of how environmental degradation affects health

1. Excessive use of fossil fuels is leading to global climate change, increasing weather-related disasters and communicable diseases.
2. Emissions such as chlorofluorocarbons are depleting stratospheric ozone, leading to increases in skin cancer.
3. Impairment of food producing ecosystems (including productive soils) and fish stocks threaten nutrition, particularly as downturns in yields are greater in food-insecure regions.
4. Biodiversity loss reduces the chances of finding new medicines derived from indigenous plants.
5. Depletion of freshwater supplies poses increased water stress, while declines in quality will increase water-related diseases.
6. Chemical hazards may have direct toxic effects, such as in the case of asbestos, lead and arsenic. Many chemicals in commercial use have not been adequately tested for their toxicological properties.
7. Poor water, sanitation and hygiene are associated with diarrhoea (a big killer of children in the developing world) and other water-related diseases, for example skin and eye infections.
8. Household fuel combustion, particularly using firewood and crop residues indoors, contributes to acute and chronic respiratory infections, including pneumonia (another big killer of children in the developing world).
9. Exposure of workers in poorly controlled industries leads to an array of occupational diseases and to pollution of air and water.
10. Poor housing incorporates a range of environmental hazards associated with communicable and non-communicable conditions, including social causes of ill health.

Health and globalisation

32. The complex relationship between globalisation and health occurs via effects of international governance and agreements, globalisation's impact on economic, social, political and environmental conditions, exposure to health-damaging and health-benefiting commodities and conditions, and access to health care.
33. One argument that has been used in support of globalisation and trade liberalisation, deregulation and privatisation is that it will reduce poverty and improve services, and thereby improve health. The evidence for this is weak. Indeed, there is greater inequality between and within countries now than there was twenty years ago. This has raised the question of whether patterns of globalisation have widened health differentials, and has resulted in calls for more pro-poor sustainable development processes, so that development has a positive impact where the health burden is greatest. Concern has also been expressed about the impact of globalisation on the cost of basic services, such as water, and the effects of this on health.
34. In the longer term, one needs to ensure that the current pattern of globalisation, that depletes natural resources and increases emissions of industrial toxic substances at an alarming rate, does not bequeath an unsustainable situation to future generations with massive and varied health consequences.
35. Although the direct impact is difficult to measure, and some positive effects have been identified, globalisation has had some harmful effects on health, as illustrated in Table 3 below.

Table 3: Examples of how globalisation can harm health

1. Trade barriers have blocked growth of the economies of poor countries and helped to maintain them as commodity-led exporters, limiting manufacturing growth and domestic enterprise. This has left countries more vulnerable to the full range of diseases of poverty.
2. The implications of the use of international trade and intellectual property agreements which are blind to their consequences on the health of people in poor countries has been most explicitly illustrated in the case of drugs for treating HIV / AIDS and other conditions prevalent in the developing world.
3. Trade liberalisation, including reduction of excise taxes, has led to increased use of tobacco in low-income countries, with all the concomitant health damage that will occur.
4. Erosion of public services has been linked to various consequences of globalisation in some countries. The extent to which this undermines education, supply of utilities and health services will impact negatively on health.
5. The “digital divide”, besides its economic impact, blocks access to information beneficial to the health of individuals and communities.
6. The high cost of hazardous waste disposal in the developed world has opened the door to widespread unofficial movement of this waste into developing countries, which have poorer safety precautions.

Health and health services

36. Disease control programmes have the potential to impact massively on the disease burden. Influencing sexual behaviour to prevent HIV/AIDS, treatment compliance for tuberculosis, rapid treatment for malaria, reaching children to immunise them against measles, use of oral rehydration to prevent dehydration from diarrhoea and early identification and treatment of pneumonia are all within our grasp. Programmes and initiatives such as the International Partnership Against Aids in Africa, Stop TB, Roll Back Malaria, the Integrated Management of Childhood Illnesses, and Making Pregnancy Safer are all making a major contribution. However, overall success to date has been limited, because the overall effort has not been of sufficient scale to impact at the level desired. The concept of disease control is commonly erroneously applied only to communicable diseases. The potential for effective prevention and control programmes to impact on non-communicable diseases, such as chronic obstructive airways disease, diabetes, hypertension, myocardial infarction, epilepsy and blindness is similarly massive.

37. Success in the reducing the disease burden requires more than disease control programmes. Besides sustainable economic, environmental and social development, countries also require a solid health care system, capacity for strategic support and effective mobilization of personal action and technological development to improve health.
38. Effective health services are the backbone of health interventions, and have the potential to impact dramatically on health. To be effective, services need to be accessible and offer good quality care. This requires appropriate focus, equitable distribution, good organisation and sufficient resources (human, physical and supplies). Yet many countries are unable to secure or sustain their health services at the level required to make the desired impact to effectively support disease reduction. Governance and management weaknesses do continue to compromise the system but, however judiciously available money is spent, current funding levels are inadequate to allow for viable health systems.
39. According to some estimates, total health spending in the least developed countries averages US\$ 13 per capita per annum and US\$ 24 in other developing countries. This is well below what is required, even to sustain basic health services. This compromises the ability of countries to retain sufficient numbers of capable and committed health workers and to afford and ensure supply chains and even affordable generic drugs, particularly so in more remote and unstable areas. The continuing loss of health professionals from developing countries compromises services, and results in a waste of the investment made in their education.
40. Coverage of health services in sub-Saharan Africa and other countries with a GDP less than or equal to US\$ 1200 is 44% for DOTS for TB, 2% for malaria prevention, 27% for malaria care, 35% for acute respiratory infections (ARIs), 60% for measles immunisation, 45% for skilled birth attendants, 20% for smoking control, and below 10% for most components of HIV prevention and care. In consequence, many conditions that are treated in the developed world are death sentences for the worlds poor. The HIV/AIDS epidemic has made this contrast more striking than ever.

41. Some of the pathways through which insecure health services worsen health are illustrated in Box 2 below.

Box 2: Examples of how insecure health services worsen health

Whether a person is suffering from a genital discharge that, untreated, increases manifold the risk of contracting HIV, a chronic cough which could indicate tuberculosis, a high fever that could signal (resistant) malaria, or shortness of breath that may be pneumonia, access to health care is imperative to reduce death, suffering and to avoid the spread of infection, directly or indirectly. The reality for many of the world's poor is that there is no accessible service and, even where there is access, the health worker may not be capable of accurately diagnosing or treating their condition. Essential drugs and supplies required for treatment and care are commonly not available. They may also be unable to effect referrals to hospital in emergencies, such as for women in obstructed labour. Adherence to therapy for chronic diseases, such as tuberculosis, is particularly difficult in a weak health system, rendering treatment ineffective and leading to drug resistance. It is in this context that the lack of consistent care for non-communicable diseases, such as diabetes and asthma, add to the death toll, while uncontrolled epilepsy and untreated mental health problems add to morbidity. The effect of the epidemiological transition, often driven by lifestyle changes imposed on the poor, albeit hidden beneath the burden of communicable disease, should not be underestimated. Disease prevention and health promotion measures, such as immunization and contraception are also impeded by ineffective health systems. In addition, people are not enabled to take action to protect and improve their health, nor to intervene early through simple measures such as oral rehydration to prevent diarrhoea deaths, as the health service has not been able to achieve a sufficient level of health literacy in communities. Thus, although poverty is at the root of much ill-health, poor health services add dramatically to disease burden and death.

42. The lack of sufficient strategic support capacity for health system development is shown by the dearth and impoverishment of centres of excellence in the developing world. Health research capacity is also underdeveloped, and even accounting for contributions from developed countries, 90% of the world's research goes into less than 10% percent of its health problems.

43. The potential for technological development to advance disease control is not realised. A key reason for this is that the commercial opportunity is not good enough. So, although there are important new initiatives, there is slow progress for more effective drugs for the treatment of malaria, tuberculosis and sleeping sickness (trypanosomiasis) and for vaccines against the strains of pneumococci, rotavirus, shigella and meningococcus causing disease in the developing world.¹⁰

¹⁰ The pneumococcus causes pneumonia, the rotavirus and shigella cause diarrhoea and the meningococcus causes meningitis.

44. There is much that individuals and families can do to improve their own health, as illustrated in Box 3 below. This potential for reducing disease is not realised, as not enough is done to empower individuals and communities to take action to improve their own health – nor is it done in a manner that enhances dignity and consciousness. Exploitative advertising is a counter-force, which not only needs to be controlled, but whose power to use the media needs to be emulated in pursuit of health.

Box 3: Examples of actions that families can take to improve their health

A drop of chlorine in a litre of water and hand washing with soap can prevent cholera and many cases of diarrhoea, while the early use of home-made oral rehydration solutions can prevent death from dehydration. Use of insecticide-impregnated materials helps prevent malaria and use of condoms, AIDS. Lifestyle changes, such as healthier eating patterns and not smoking could impact on disease, while seeking health care early for children with fast breathing, a cough and a hot body would reduce deaths from pneumonia.

45. The inequity in burden of disease and of development opportunities is mirrored by health services often not being evenly spread between and within countries. As the poorest and most marginalized people and those displaced by war and other emergencies are especially vulnerable and bear a disproportionate burden of disease, if the aim is to massively reduce disease burden, then health care should be skewed towards them. Yet, the inverse is generally true.

Way forward

46. To date, overall efforts to achieve sustainable development and improved health have not been successful enough. A major commitment will be required to allow history to judge this generation as the one that turned the corner on improving the quality of life and health of all the world's people without increasing the use of our natural resources beyond the earth's capacity.

47. Significant changes will be required if we are to reduce poverty, alter patterns of globalisation and environmental degradation, and achieve provision of effective health services so that the resultant improved health can enhance sustainable development, and sustainable development can improve health in a virtuous

cycle. The negative macroeconomic impacts on sustainable development and on health will need to be addressed.

48. The measures required to achieve sustainable economic, social and environmental development are manifold and will require co-ordinated intersectoral action. Programmes for the reduction of disease burden and for improved health services will also require massive scaling-up if they are to play their part in enhancing well being on our planet.
