Based on the preceding situation analyses, the key health challenges facing the Region and the actions countries need to take to address them are summarized in this chapter.

Environmental health challenges and actions

Global warming is a threat to health. Even if we are able to curb greenhouse gas emissions, warming of the Earth is expected to continue as gases already in the atmosphere will not be reduced. We need to deal with the consequences of global warming and adapt to new conditions, with adequate responses to environmental health challenges.

• Assessment of health vulnerability to climate change needs to be done in developing countries. Better evidence is needed on the links between climate change and human health to strengthen preparedness and response for climate-sensitive diseases, such as heat-related illness, waterborne and foodborne diarrhoeal diseases, and vector-borne diseases. Effective surveillance systems are needed to detect changes in environmental risks and associated health consequences and disease outbreaks. Combined with short- and medium-term weather forecasts, this would provide early health warnings to the public and policy-makers.

• Individuals, industries and businesses can contribute significantly to reducing greenhouse gas emissions by conserving and using less polluting forms of energy. Governments should support relevant strategies with media promotion and economic incentives.
Air quality, in particular indoor smoke and urban air pollution, is a threat to health. Indoor smoke from burning solid fuels for cooking and heating contributes to 1 million deaths per year, and urban air pollution contributes to over 500 000 deaths annually in the Region. Most of these deaths occur in developing countries.

- Smoke from cooking with solid fuels affects women and children most. Good ventilation and improved cooking stoves can dramatically reduce their exposure to smoke. Policies that promote moving from solid fuels to gas and electricity will save lives and reduce the burden of collecting solid fuels. Policy-makers need to be better informed about the problem of indoor smoke.

- Industrial growth, rapid urbanization and motorization in the Region aggravate urban air pollution. The removal of lead from gasoline considerably reduced ambient air concentration of lead and the blood lead level in children, but particulate matter and gaseous pollutants, such as nitrogen oxides, are still a problem in most cities in developing countries. Policies to reduce pollutant emissions from motor vehicles and industries should be established, and implementation should be strengthened where such policies exist.

- The Region has also suffered from cross-border air pollution problems, such as forest-fire-induced haze in South-East Asia and dust and sand storms in north-east Asia. Cooperation among countries involved is essential to solve such problems.

Lack of safe drinking water and sanitation threaten the health of hundreds of millions in the Region. Despite progress made over the years, over 600 million people in the Region are without access to improved sources of drinking water and nearly 2 billion people have no access to improved sanitation. According to global estimates, approximately 1.8 million people die annually from diarrhoeal diseases, including cholera, and 90% of these are children under the age of five, mostly in developing countries. In the Region, about 680 000 under-five children die every year from diarrhoeal diseases.

- Apart from providing safe drinking water and improved sanitation facilities, promoting good hygiene practices can reduce contamination of ingested water and food. Encouraging simple hand-washing is an extremely cost-effective measure that could save many lives.

- Hazardous chemicals in drinking water are a concern in several countries in the Region, particularly the natural arsenic and fluoride in groundwater. These chemicals are not easily removed by conventional water treatment. Often the only option is to provide an alternative source of water to those affected.

An increasing volume of various chemicals are used in workplaces and households, some posing serious risks to health if not properly controlled. Accelerating economic activity in the Region creates ever-increasing amounts of industrial and municipal solid wastes, a particular problem in the cities of developing countries, where reliable collection services and adequate disposal operations are not provided, often for financial reasons. Unsafe management of hazardous health-care waste poses risks to workers, patients, waste handlers and the general public.

- Legislation and multisectoral mechanisms to control the production, use, import and export, storage, transport and disposal of chemicals are in place in more industrialized and rapidly industrializing countries. Less developed countries still need to create these regulations and mechanisms.
• Most countries have legislation on waste management, including medical waste, but it is generally inadequate in scope and enforced only in more industrialized countries. More resources are needed for effective implementation of existing regulations and guidelines in developing countries.

Industrial and agricultural workplace injuries and disease must be reduced and occupational health services expanded.

• Challenges to improving occupational health programmes and control of physical hazards and toxic chemicals at workplaces (e.g. asbestos, silica and carcinogens) include strengthening monitoring and surveillance of occupational diseases and injuries, and developing critical human resources needed to implement strategic interventions.

• The coverage of occupational health services in developing countries is very limited, particularly for small-scale and informal sector enterprises. Only a small percentage of the workforce is covered by these services. Occupational health services based on the existing network of health services are being promoted in some countries.

Food contamination and food insecurity are dual threats to health, social welfare, and economic development of communities and populations, particularly those that are most vulnerable. The global impact of food safety and security in the Region cannot be underestimated, given that the Asia Pacific includes the two most populous countries in the world, the major exporters of agri-food products, countries heavily reliant on imported food, and a high proportion of the population living in close proximity to food animals, which puts them at greater risk of foodborne zoonoses. Many communities face chronic food shortages at a time of declining food aid and as natural resources are being placed under significant pressure. The true burden of foodborne illnesses is not clearly understood because of the diversity of illnesses involved and because many are simply reported in general terms such as gastrointestinal illness, diarrhoea, diseases of the digestive system, cancer or zoonoses. To achieve access to a nutritionally adequate diet and safe food for all, countries need to:

• Assess the impact of food insecurity on nutrition, and thereby health, and assess and meet the immediate nutritional and food security needs of vulnerable populations.

• Establish and implement intersectoral plans of action that identify how best to build longer-term resilience and contribute to food and nutrition security.

• Undertake comprehensive studies on the burden of foodborne disease and establish integrated monitoring programmes, with linkages to human and food-animal disease surveillance systems, to obtain rapid and reliable information on the prevalence and emergence of foodborne diseases and hazards in the food supply.

• Establish competent food safety authorities as independent and trusted public health bodies with the capacity to effectively enforce a comprehensive production-to-consumption food control programme, based on transparent and risk-based regulation consistent with the International reference for food safety (Codex Alimentarius).

• Establish procedures in conjunction with industry to rapidly identify, investigate and control food safety incidents.

• Communicate with and effectively train and educate consumers, the food industry and other stakeholders to empower safer food production and handling.
Communicable diseases challenges and actions

Communicable diseases continue to threaten the Region and the rest of the world. Outbreaks of severe acute respiratory syndrome (SARS) and avian influenza show that newly emerging infectious diseases can pose serious public health threats, with enormous potential impact on social and economic development. The capacity for disease surveillance and response needs to be improved in line with the implementation of the International Health Regulations (2005). Many countries still lack a basic system and capacity for outbreak communication.

- Governments should continue to develop and strengthen their national and regional systems and capacity to detect, assess, respond to and prepare for disease outbreaks and public health events. Countries should have effective event-based surveillance systems and rapid response systems with trained response teams, including field epidemiologists and laboratory experts.

- National risk communication plans and national and regional capacities for effective risk communication should be developed and maintained, especially for emerging infectious disease outbreaks.

- Public health laboratories need to be improved in many countries in terms of quality and capacity, and networking of laboratories should continue to be developed.

- Given that most emerging infectious diseases, such as avian influenza, originate from animals, countries need to establish and maintain effective collaboration between animal and human health sectors. More coordinated actions are required to reduce the risk of human infection from animals, to share disease information for early warning and to rapidly respond to zoonotic disease outbreaks.

- The capacity to prevent and control infection in health-care settings, including hospitals, should be strengthened by implementing effective infection control activities, including standard precautions.

The Region has a high number of HIV/AIDS cases and new infections are still occurring. The quality and scale of programmes for comprehensive prevention, care and treatment for HIV/AIDS need to be increased in several countries.

- This includes implementing comprehensive packages of interventions through the health sector and its partners in combating HIV/AIDS. Interventions should be targeted at population groups with the highest risk of exposure to HIV transmission.

- Care and treatment services should be expanded to accommodate new therapeutic approaches because effectiveness of current regimens may decline over time. Surveillance of drug resistance is a key component.

Malaria control presents a wide range of challenges and opportunities in the Region to bring the disease under control and limit its impact. Drug resistance and counterfeit drugs are now posing a major public health threat with potentially devastating consequence beyond the Region.

- Artemisinin tolerance in the border region between Cambodia and Thailand is being addressed and has been recognized as a key priority with global implications. Intensified actions involving key stakeholders are currently in progress to implement effective containment strategies to eliminate tolerant parasites. This involves preventing the use of artemisinin-based monotherapy and inappropriate treatment practices at all levels in the public and private sector, while applying an effective management system, proper surveillance, monitoring and evaluation.
• Actions are in progress to address the issue of counterfeit artemisinin in collaboration with the International Criminal Police Organization (ICPO-Interpol), relevant WHO Member States and other stakeholders, especially in the Mekong countries. This requires intensified and continuous collaboration among key stakeholders to sustain these efforts.

• Integrated vector management should be widely implemented with emphasis on a massive scaling up of the use of impregnated bednets, especially in those countries with the highest malaria burden.

• The feasibility of malaria elimination should be fully assessed for selected countries including Malaysia, the Republic of Korea and Vanuatu. Focal elimination in others, such as the Philippines, should also be considered.

• The issue of malaria during pregnancy needs to be made an integrated component of a regional malaria prevention and control strategy.

Current dengue fever and dengue haemorrhagic fever epidemics have resulted in much loss of life. Political and financial commitments are needed to ensure that a sustained, integrated dengue control and prevention strategy is implemented in the Region.

• Dengue surveillance needs to be strengthened by integrating with existing epidemic-prone diseases surveillance systems, including pandemic influenza.

• Surveillance systems should be linked to reliable information systems; efforts need to be made to improve existing information systems and to encourage their development where there are none.

• Countries need to develop a comprehensive national dengue integrated plan that includes surveillance, case management, social mobilization and communications, integrated vector management, outbreak response and operational research.

• Dengue transmission relies on a complex combination of multiple risk factors and calls for an intersectoral approach. Stakeholders’ actions need to cut across sectors for an effective dengue prevention and outbreak response.

• Efforts need to be made by all stakeholders to define and establish clear responsibilities of each of the key stakeholders to optimize outbreak preparedness and response within the framework of the International Health Regulations (2005).

The disease prevention opportunities offered by current and new vaccines are still not fully exploited. Immunization programmes need to be strengthened and expanded, including taking the final steps toward eradication of polio and elimination of measles and maternal and neonatal tetanus.

• Measles mortality reduction and elimination and hepatitis B control should be priority immunization programme goals.

• The introduction of new and underutilized vaccines (e.g. against Haemophilus influenzae type b (Hib), pneumococcus and Japanese encephalitis) should be accelerated in all countries, where justified, based on disease burden.

• Public health laboratory services need to be further strengthened, using the existing platform of well-functioning laboratory networks, such as those for polio and measles.

• Immunization coverage in low-performing districts should be improved, and the Expanded Programme on Immunization surveillance and monitoring systems strengthened.
Further coordination is required to exploit synergies with other health intervention approaches, including antenatal care, the Integrated Management of Childhood Illness and school health programmes, to deliver appropriate disease prevention packages.

Tuberculosis (TB) remains a major public health problem in the Region because of its high morbidity and mortality rates. Tuberculosis control needs to be further strengthened, with emphasis on addressing multidrug-resistant TB and TB-HIV coinfection.

- Strong support is needed to implement the programmatic management of multidrug-resistant TB across the Region.
- An effective infection control package needs to be introduced and scaled up.
- Tuberculosis laboratory capacity needs to be strengthened, including the introduction and scaling up of TB culture and drug-sensitivity testing, as well as new diagnostic tools.
- The high mortality associated with TB-HIV coinfection needs to be addressed by strengthening collaborative activities between HIV and TB programmes, including HIV testing among TB patients and TB screening among people living with HIV.
- Human and financial resources for TB control need to be sustained beyond 2010, including the provision of effective technical assistance.

**Noncommunicable diseases challenges and actions**

Noncommunicable diseases (NCDs) are rising in tandem with increased prosperity in the Region. More effective prevention and control programmes are needed, and in particular, health sector responses to the rapidly growing problem of obesity. There are risk factors common to several major NCDs, and country strategies could address these as a whole.

- Health systems must adapt to the needs posed by the burden of NCDs and develop integrated systems of care, from prevention through rehabilitation, that empower patients, provide continuity of care between different parts of the health sector and employ cost-effective approaches.
- The control of NCDs also requires strategies aimed at changing environmental and behavioural factors. The coordinated action of government, society and the private health sector are needed to enact appropriate public health laws and other measures to reduce the supply and demand for substances harmful to health, while promoting healthy behaviours.
- Low-cost and cost-effective interventions to control the NCD epidemic are currently available. The challenge is to ensure that they are used widely and consistently, especially for the poor and most vulnerable groups.

The prevalence of diabetes in the Region is expected to double over the next 15 years. Many countries in the Region do not undertake regular assessments of population health status. The disease is often managed badly due to poor access to health services and lack of knowledge or support, which usually results in serious complications.

- Environments that encourage population lifestyle changes, including diet and physical activity, need to be created through national planning to influence markets and promote self-responsibility for health. National plans and policies should be integrated and harmonized with other plans, such as for tobacco control, nutrition, physical activity, alcohol, hypertension and other diseases.
It is essential that individuals with diabetes and those at risk be identified. This can only be done through regular national or provincial monitoring and surveillance. Effective health services should be put in place to enable treatment of those with diabetes because very little is currently provided for specialized treatment and follow-up care.

The global tobacco epidemic is the second major cause of all deaths from NCDs, and is the fourth most common risk factor for diseases worldwide. In the Asia Pacific Region, every year about 2.3 million people die prematurely from tobacco-use-related disease. In addition, millions of nonsmoking adults and children in the Region are exposed to secondary tobacco smoke.

The WHO Framework Convention on Tobacco Control (FCTC) drives the global public health agenda to curb the tobacco epidemic. It aims to protect present and future generations by reducing tobacco use prevalence and exposure to tobacco smoke pollution through legislation, policy and enforcement. Several countries have national tobacco control legislation that conforms to the FCTC, and others are developing legislation.

There is a need to harmonize administrative, infrastructural and legislative measures with the provisions of the FCTC. Enforcement of policies, ordinances and regulations requires public awareness, social support and political will.

Accidental injuries, suicide and violence cause an alarming amount of death and disability in the Region. Road traffic is a major cause of injuries and deaths. Burns are a serious injury problem in South Asia, and drowning is a leading cause of death in children in many countries. Interpersonal violence—such as child abuse and neglect, violence against intimate partners, elder abuse and homicide—is a major public health problem, and gender-based violence has reached epidemic proportions in some countries. Three general types of interventions can be effective against these problems: surveillance, legislative and regulatory solutions, promotive activities and improving access to emergency treatment.

Some developing countries have legislation on road safety, but there are large gaps in enforcement. For surface water transport, legislation and enforcement of provisions for life-saving devices and avoidance of overloading can prevent mass casualties. Interventions against violence include control of lethal weapons, alcohol and drugs; documentation of cases; and advocacy for violence prevention. Better control measures can reduce the availability of poisons linked to suicide. Telephone help lines for the depressed are also effective.

Preventive strategies and interventions are available, but need to be widely implemented to be effective. Injury and death due to burns could be reduced by promotion of stable stands for lamps and stoves; installation of smoke detectors, fire alarms and extinguishers in houses and buildings; clear access to emergency exits; controlling the manufacture, sale and use of fireworks; increased use of flame retardant materials; and the availability of first aid and treatment. These practices are not common in developing countries and would also require regulatory action. Drowning deaths during water recreation can be prevented by adult supervision of children, swimming instruction and the training of lifeguards. In case of floods and storms, preventive measures include early warning and evacuation to safer places and prompt rescue activities.

Health promotion presents opportunities for people to make healthier lifestyle choices, increase influence over their environment and build healthier communities and societies. It also aims to strengthen the capabilities of individuals, empower communities and groups, and advocate for policies and actions to change social, environmental and economic conditions.
• Multiple interventions at many levels are needed for effective health promotion. Capacity mapping is a tool for identifying strategic entry points for strengthening health promotion. Countries can focus on national and local policies and legislation, sustainable infrastructure (health promotion units, foundations, councils and intersectoral committees), generating funding from various sources, capacity-building for leaders, and networks and movements for healthy settings.

• Health promotion programmes are most effective to counteract behavioural risks, e.g. unhealthy diets, sedentary lifestyles, tobacco use, harmful use of alcohol and unsafe sex. The recent Bangkok Charter on Health Promotion is a major effort to confront the changing context for promoting health, emphasizing actions that address broad determinants of health, such as persistent poverty, the increasing inequalities within and between countries, new patterns of consumption, communication, commercialization, global climate change and urbanization.

Challenges and actions in reproductive health, child and adolescent health, and care for older persons

The scope of reproductive health has broadened to include the concepts of sexuality and rights, along with family planning, safe motherhood, women’s health care, prevention and treatment of infertility, prevention of abortion and management of its consequences. Maternal mortality is unacceptably high in some countries in the Region. The major risk factor for maternal and neonatal deaths is lack of access to three critical services—skilled care at birth, family planning and emergency obstetric care. Young people (ages 10–24) constitute a significant portion of the population, and early marriage and child-bearing is a way of life in many countries. Maternal mortality among girls under 18 is two to five times higher than in women between 18 and 25. There are nearly 8 million unsafe abortions each year in the Region.

Many countries have national plans of action, including the provision to all women and newborns of skilled care during pregnancy and at birth and after childbirth; emergency obstetric care; the strengthening of midwifery schools; increasing the training of community-level skilled birth attendants; improving maternal health care for rural populations; accessible and affordable reproductive health services; and mainstreaming gender equality in all health programmes.

• Political commitment and advocacy for maternal and newborn health are required for effective implementation of reproductive health plans. Many countries need to strengthen health systems and health workforce training in general. STEPwise strategies should be followed up to improve organizational and clinical management and registration of midwives, and to increase hospital beds.

• Birth spacing and contraception improve reproductive health outcomes. Despite a significant general increase in the use of contraceptives, the unmet need for birth spacing is still high. Family planning programmes need to be supported and strengthened to improve both coverage and quality.

Considerable progress has been made, but large disparities in child health and survival still exist between and within countries. Accelerated reduction of under-five mortality may require a focus on countries with high mortality, particularly to address causes of neonatal deaths and scale up integrated child survival interventions. Two thirds of childhood deaths could be prevented with existing
evidence-based interventions, but their current coverage is too low to reach many of those in greatest need. Pneumonia and diarrhoea are the top two single causes of death in children under age five in the Region, and undernutrition is an important underlying factor.

- Adoption of policies and strategies that can narrow inequities are necessary. These would focus on improving health service delivery with adequate human, financial and logistic resources, and by ensuring financial protection of the poor. Child health and survival should be mainstreamed in national poverty reduction and other intersectoral economic strategies.

- Of all child deaths in the Region, 45% occur in the first month of life. Essential life-saving interventions that address the most common causes of child deaths need to be scaled up to ensure a continuum of quality care that extends through pregnancy, childbirth and childhood, and covers all health service delivery channels from the home through tertiary referral.

- More efforts are needed to ensure that infants receive the benefits of exclusive breastfeeding. Promotion of appropriate complementary feeding practices needs more attention. The Integrated Management of Childhood Illness strategy should be scaled up to provide holistic management of the common causes of childhood deaths by improving provider skills, health-care delivery systems, and family and community practices.

- Improvement of hospital care is also possible by the endorsement and implementation of standards for the management of common illnesses in referral settings for very sick children who need higher-level care. Strengthening of public health approaches to provide high-quality, cost-effective health services for children is needed at all health service levels.

- Overall investment in child health in many countries is insufficient to take cost-effective child survival interventions to scale up. Child health should be at the core of the health systems development agenda. Strong national commitments are needed to accelerate action and track progress in overcoming barriers to providing, accessing and utilizing essential child health care.

Demographic change in the Region is characterized by longer life expectancies, ageing populations and smaller families, and raises new health and welfare issues in both developed and developing countries. There are already 335 million people over age 60 in the Region, and their numbers and proportion are rising steadily, including very old persons and the infirm, who require much health and social care.

- Health systems and new programmes should be prepared to cope with the increasing numbers and specific needs of older persons. They need better access to services for acute and chronic illness, support for healthy lifestyles, employment and income support, less marginalization in urban environments, and gender-specific programmes and services for the increasing proportion of older females.

- Multisectoral approaches are required to address the needs and concerns of older persons, including the collaboration of local communities, nongovernmental organizations and the private sector, to mobilize resources and deliver services. Policy initiatives and new services are required to improve community-based care to counter the loss of family caregiving. A successful approach would be for countries and local authorities to share responsibility.
Nutrition-related disease is an important health issue because inadequate or inappropriate diet is a major risk factor for the majority of premature deaths in the Region, especially of children. Rates of undernutrition are slowly declining but are still unacceptably high among the poor. There is now a double burden of disease in many countries as a result of increasing overnutrition. Proven, cost-effective interventions for nutritional deficiencies in infants and children are available.

- The main challenge for governments is to persuade decision-makers across all sectors that nutrition has a significant impact on the national economy as well as on public health. National nutritional surveillance should be used to target interventions and assess their effectiveness, and is a research instrument for the determinants and consequences of undernutrition and overnutrition.

- Chronic undernutrition is unevenly distributed, and wide variations within some countries distort national prevalence figures. The challenge is to target high rates of undernutrition in priority countries and in marginalized regions within countries. Even relatively mild forms of undernutrition have serious consequences for public health.

- Nutrition interventions are essential to achieve other goals, such as child survival and maternal mortality reduction, and should be integrated into related policies and plans of action. A distinguishing feature of successful programmes has been the involvement of communities in the identification of problems and the design of interventions. High-profile individuals have played a role in some successful programmes.

- Cost-effective nutritional interventions can help improve the health and welfare of the poorest communities. Special efforts should be made to improve the situation of women as primary child and family carers. The greatest impact can be expected when targeting all children in populations at risk rather than individuals below a certain cut-off point. The focus should be on complementary infant feeding and early childhood diet, including early and continued breastfeeding.

- Countries should develop plans and strategies that include population dietary guidelines. A health promotion strategy to maintain healthy body weight is to encourage people, particularly those in sedentary occupations, to do an average of one hour per day of moderate-intensity activity.

The disease burden and carrier rates for thalassaemia and other genetic diseases are not well documented in many countries. Even in countries where there is good epidemiological knowledge, responses are not optimal because thalassaemia competes for priority with other NCDs.

- The genetic nature of the disease poses many difficulties in prevention, spanning politics, culture and religion. A successful prevention model that includes premarital testing, prenatal diagnosis and termination of pregnancy may not be culturally acceptable in many societies.

- For children already diagnosed, the mainstay of treatment is blood transfusion. This requires an adequate blood transfusion service, but even where available, patients require difficult and expensive iron chelation.

**Health systems development challenges and actions**

The poor and other vulnerable groups in the Region continue to have poor access to quality health services. Those who need health services the most—groups with high burdens of morbidity and mortality—tend to use them the least because they face high barriers to access. Many kinds of disparities
exist in terms of health risks, health-seeking behaviour, access to services, responsiveness of the system and of providers, and health outcomes. The barriers include multiple dimensions of social exclusion. Health disparities of various types appear to be widening rather than narrowing, suggesting that health systems are not addressing these problems effectively. Reversing inequity, whether among individuals or populations, often requires intersectoral action and larger and better-targeted investments in services.

- Access to health services should be universal and not limited by factors such as age, sex, socioeconomic status, location, ethnicity, employment status and sexual orientation. A focus on equity and access is part of primary health care.

- The Region has the highest levels of dependence on out-of-pocket expenditure to finance health services. This has reduced access to health services and led to poverty caused by health-care costs. Governments need to take responsibility for adequate financing that is equitably and efficiently allocated and leads to universal coverage and access to essential services. Reforming health financing to enable wider access requires continued increasing investment and public spending on health, reducing out-of-pocket spending and increasing pre-payment and risk-pooling, which may include tax-based financing, compulsory social insurance and other types of health insurance or pre-payment. Innovative mechanisms to promote risk-pooling and pre-payment for the informal sector should also be implemented.

- Donor assistance has caused fragmentation and distortion of the health sector in some countries that are highly aid dependent. Alignment of donors with national processes is particularly important in the least developed countries in order to decrease transaction costs and fragmentation while increasing efficiency in the health sector. Country-led planning and management processes are crucial. New initiatives in health must consider the sector holistically, gauge the impact of activities on the entire sector, and avoid short-term, top-down project-based approaches.

The Region suffers from imbalances in health worker skills, quality and density. Shortages are especially serious in South Asian countries, and worker emigration poses a difficult problem for the Pacific island countries. The fewest health workers are usually found where health needs are greatest. Inadequate salaries, incentives and supervision affect performance, motivation and retention of health workers. Health workforce planning and management need to be improved to ensure appropriate workforce size and skill mix, improved quality, performance, retention and geographical distribution.

- Production of high-quality health workers with the required skills must increase to meet population health needs.

- Strengthened health workforce information combined with well-designed research and analytical capacity is needed to guide human resources policy and strategy.

- The quality of basic and in-service training should be ensured by using defined standards, accreditation and monitoring of workforce training.

- Broad political commitment should be sought to improve health human resources. Partnerships with civil society, the private sector and other stakeholders can help sustain an adequate health workforce, with close collaboration with the education sector and training institutions.

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1 Strategy on health care financing for countries of the Western Pacific and South-East Asia Regions (2006-2010). New Delhi, World Health Organization Regional Office for South-East Asia, and Manila, World Health Organization Regional Office for the Western Pacific, 2005.
Many countries in the Region have not achieved the goals of their national medicines policies. Many people face financial barriers to obtaining needed medicines, and at the same time, the sale of drugs to provide income for health workers contributes to irrational drug use in many settings. Counterfeit and substandard drugs are a major risk to public health throughout much of the Region due to weak quality assurance systems. Access to essential medicines is limited due to inefficiency of drug supply and distribution systems. In many countries, national essential medicines lists are not properly used as the basis for medicines procurement and reimbursement.

- Governments should increase their commitment and resources to systematically implement comprehensive national medicines policies and to monitor their implementation.
- Strengthening regulation, quality assurance, supply, distribution and rational use of medicines is integral to implementation of national medicines policies.
- Governments should develop systems to regulate and monitor the availability and affordability of essential medicines.
- Comprehensive programmes to combat counterfeit and substandard drugs must be developed and vigorously implemented.
- Governments should promote therapeutically effective, safe and cost-effective use of medicines through standard treatment guidelines, supervision, monitoring and good governance.

Scientifically sound, responsive and efficient health services will be able to deliver high-quality care, but quality is sometimes underemphasized in the quest for quantity and universal access. It is an essential function of government to ensure the quality and safety of all health services, including the private sector. This is a serious problem even in developed countries, where many hospitalized patients have an adverse event or die due to health-care errors. In developing countries, low quality is often attributed to a lack of resources. However, high-quality services do not necessarily entail large resource outlays.

- Accreditation and licensing are strategies that should be used more effectively to improve the quality of health care.
- Patient advocacy, improved education of professionals and the public, and effective systems for decreasing the risk of error will improve quality.
- Standards and protocols should be used to improve quality and control costs.
- Systematic implementation of quality management systems and external quality assessment are essential for health laboratory services.
- National networks to enhance information sharing among health laboratories and also blood transfusion facilities are operational in many countries, but their effectiveness could be improved.

The development and implementation of effective actions to reduce health inequalities is usually hampered by a lack of evidence. Health information on specific groups, knowledge and skills will be required to develop and communicate appropriate evidence to address the needs of these groups.
• The capacity for producing health data disaggregated by socioeconomic indicators should be developed in national health information systems.

• Information systems should have skilled personnel and sufficient resources to be able to respond quickly to changing information requirements, including health system performance assessment. This will require linkages in the areas of data collection, analysis, information sharing and utilization among different units in the health sector, as well as with other sectors producing or utilizing health information.

• Effective mechanisms to facilitate the linkage between health information, research and policy should be developed.

• The evidence base in the area of health policy and systems should be strengthened to support policy-making.

Even though the Region suffers a disproportionate share of natural disasters, many countries still do not have a dedicated organizational unit for emergency preparedness and response. Ad hoc actions cannot be an effective substitute for adequate preparation.

• National and subnational capacities for risk reduction and disaster preparedness, response, and recovery should be analysed and strengthened where needed.

• Political support is needed for the development of national policies for disaster planning and response systems. National and subnational programmes should support community-based disaster risk reduction activities.

• There is a need for better knowledge about the impact of disasters on health systems to allow them to plan for rapid recovery from disasters. Exercises and drills should be used to test response plans and guidelines.

• Capacity-building can be strengthened by incorporating concepts on health emergency preparedness and response in the curriculum of health sciences training programmes.

The range and seriousness of these key challenges means that population health requires a greater commitment from most governments in the Region to put health higher on government agendas, as well as to build infrastructure with the capacity to deal with foreseeable problems. Social determinants of health cut across nearly all these challenges, and hence multisectoral action and the participation of civil society and communities are needed to address them effectively.