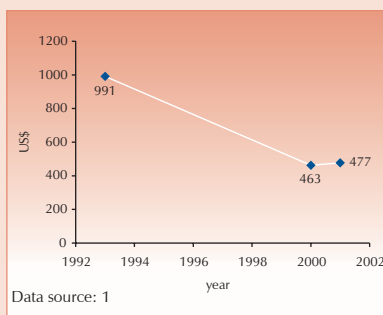


DPR Korea

(Democratic People's Republic of Korea)

Basic information	Latest available value	Year	Source
Total population (million)	23.61	2004	{CC}
Area (sq.km.)	120,538		{1}
Density of population (per sq.km.)	192	2003	{CC}
Regional divisions	9 provinces, 1 municipality and 210 counties		
Development	Latest available value	Year	Source
Gross Domestic Product per capita (US\$)	477	2001	{1}
Adult literacy rate >15 years (%)	100	2003	{1}
Highest in the Region – DPR Korea	100	2003	
School enrolment (%)	100	2003	{1}
Highest in the Region – DPR Korea	100	2003	

Gross Domestic Product per capita



Salient basics

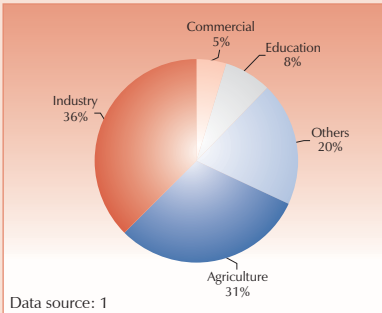
- Mountains account for nearly 80% of the country with the cultivated area comprising 17%.
- The country has faced many natural calamities.
- Adult literacy and school enrolment is the highest in the Region.

Q1

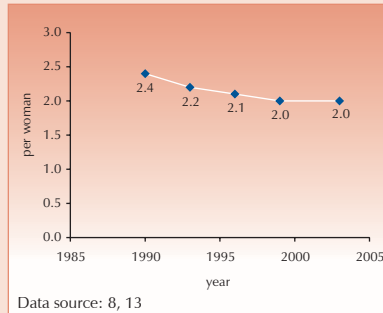
What are the basic demographic features?

Indicators	Latest available value	Year	Source
Population			
Total population (million)	23.61	2004	{CC}
Percentage of world's total	0.36	2003	{C}
Average annual growth rate (%)	0.71	2000-2003	{1}
Urban population (%)	60	2000-2003	{1}
Age-sex structure			
Sex ratio (F/1000M)	952	2003	{1}
Children <15 years (%)	26	2003	{1}
Elderly >60 years (%)	12	2002	{1}
Highest in the world – Italy, Japan	26	2005	{6}
Highest in the Region – DPR Korea	12	2002	
Dependency ratio (%)	47	2005	{6}
Fertility			
Birth rate (per 1000 population)	15.6	2003	{1}
Lowest in the world – Germany, Ukraine	8.0	2004	{7}
Lowest in the Region – Thailand	12.7	2002	
Total fertility rate (TFR) (per woman)	2.0	2003	{1}
Lowest in the world – Ukraine	1.1	2004	{8}
Lowest in the Region – Thailand	1.6	2000	
Contraceptive prevalence (%)	69	2002	{1}
Gross mortality			
Crude death rate (per 1000 population)	9.1	2003	{1}
Lowest in the world – UAE	1.0	2004	{7}
Lowest in the Region – Maldives	3.0	2005	

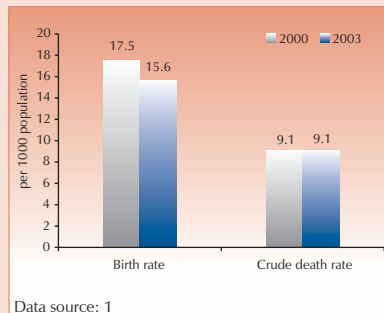
Occupational distribution



Total fertility rate



Birth rate and death rate



Salient demographic features

- The sex ratio is 952 females per 1000 males.
- There is more population in urban areas than in rural areas.
- The birth rate is fairly low and population growth rate too is not high compared with some other countries of the Region.

2

What is the progress regarding some health-related MDGs?

Indicators	1990	2000	2005
Poverty and hunger			
Under-weight children of age <7 years (%)	N/A	N/A	20 (2002)
Child mortality			
Infant mortality rate (per 1000 live births)	19 (1995-96)	N/A	21 (2003)
Under-five mortality rate (per 1000 live births)	39 (1995-96)	N/A	46 (2003)
One year olds immunized against measles (%)	N/A	N/A	95.3 (2002)
Maternal health			
Maternal mortality ratio (per 100,000 live births)	105 (1996)	N/A	97 (2002)
Deliveries attended by health staff (%)	87 (1995-96)	97 (1999)	98 (2002)
Malaria/tuberculosis			
Malaria prevalence (per 100,000 population at risk)	N/A	N/A	258 (2003)
Tuberculosis prevalence (per 100,000 population)	424	220 (2001)	219 (2003)
Tuberculosis cases detected and cured under DOTS (%)	N/A	91	88 (2003)
Water and sanitation			
Population with access to improved water source (%)	N/A	N/A	96 (2002)
Population with adequate excreta disposal facility (%)	N/A	N/A	99 (2002)

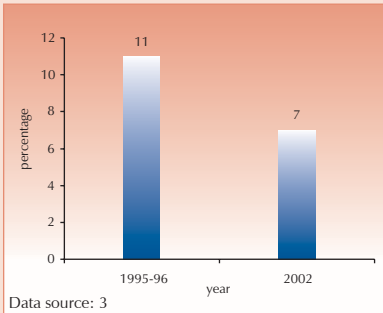
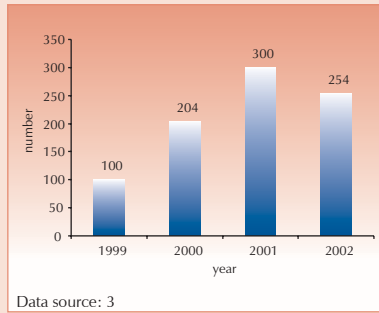
MDG progress

- Compared to some other countries in the Region, health-related MDG indicators are better, particularly in area like child mortality, maternal health and water and sanitation.
- Some data do not indicate improvements in trend.

3

What are the major health problems?

Indicators	Latest available value	Year	Source
In children under-five years			
Low birth weight at delivery (%)	7	2002	{1}
Lowest in the Region – Indonesia	6	2002	
Stunted children (%)	37	1996-2004	{7}
Lowest in the world – Croatia	1	1998-2004	{7}
Lowest in the Region – Sri Lanka	14	2000	
Under-weight children of age <7 years (%)	20	2003	{1}
Lowest in the world – Chile, Croatia, Ukraine	1	1998-2004	{7}
Lowest in the Region – Thailand	9	2003	
Childhood diseases			
Diarrhoeas – reported cases incidence (per 1000 children <2 years)	151	2002	{1}
Acute respiratory infections – prevalence (per 1000 children <5 years)	12	1998-2004	{7}
Other diseases			
Anaemia in women with child <2 years (%)	34	2002	{1}
Tuberculosis prevalence (per 100,000 population)	219	2003	{CC}
Malaria prevalence (per 100,000 population)	258	2003	{1}
Cardio-vascular diseases prevalence (per 100,000 population)	172	2002	{1}
Diabetes prevalence (per 100,000 population)	7	2002	{1}
Cancer prevalence (per 100,000 population)	14	2002	{1}
Injury (per 100,000 population)	21	2002	{1}
Comprehensive indices			
Expectation of healthy years lost (years)			
Male	6.4	2002	{9}
Female	7.4	2002	{9}
As % of expected life at birth (ELB) lost			
Male	10.0	2002	{9}
Female	11.0	2002	{9}

Percentage of low birth weight**Distribution of malaria cases**

Major health problems

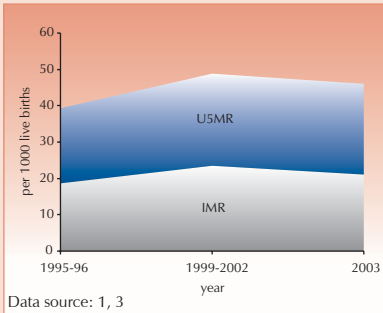
- Nearly one out of five children is under-weight.
- Anaemia in women is common.
- Smoking prevalence in male adults was 60% in 2002. The average age of initiation is 23 years and the average number of cigarettes smoked per day is 15.

4

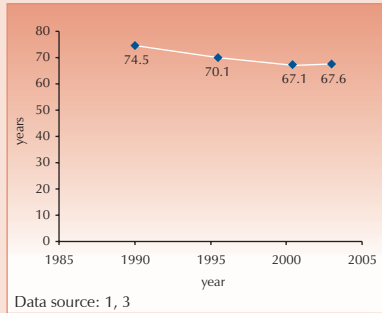
What is the mortality profile?

Indicators	Latest available value	Year	Source
Mortality rates			
Infant mortality rate (IMR) (per 1000 live births)	21	2003	{1}
Lowest in the Region – Sri Lanka	11	2003	
Under-five mortality rate (U5MR) (per 1000 live births)	46	2003	{1}
Lowest in the world – Iceland, Singapore	3	2004	{7}
Lowest in the Region – Maldives, Sri Lanka	16	2005	
Maternal mortality ratio (per 100,000 live births)	97	2002	{1}
Lowest in the Region – Thailand	14	2003	
Age at death			
Average life expectancy (years)	68	2003	{1}
Highest in the world – Japan	82	2004	{10}
Highest in the Region – Maldives, Sri Lanka	73	1996-2003	
Deaths under-five years (% of total deaths)	8	2003	{C}
Lowest in the Region – Thailand	4	2002	
Causes of death			
Three major causes of deaths (% of <5 years deaths)			
Preterm births	19	2000	{16}
Diarrhoeal diseases	19	2000	{16}
Pneumonia	15	2000	{16}
Three major causes of deaths – (% of total deaths)			
Ischaemic heart disease	13	2002	{16}
Lower respiratory infections	11	2002	{16}
Cerebrovascular disease	7	2002	{16}
Diabetes	3	2002	{16}
Tuberculosis death rate (per 100,000 population)	10	2002	{3}

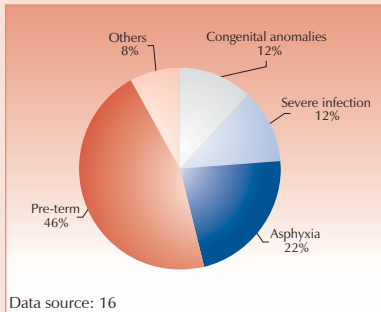
Comparison of mortality rates



Expectation of life at birth



Causes of neonatal deaths in 2000



Mortality profile

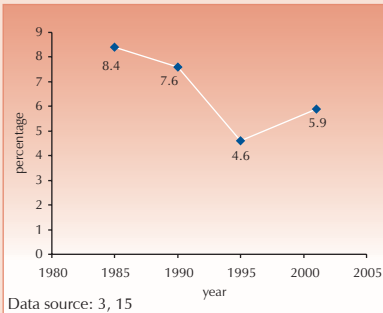
- Child mortality is low compared with many other countries in the Region. Main causes are preterm births, diarrhoeal diseases and pneumonia.
- Old data reveal that chronic diseases are taking a heavy toll. In 1960s, the proportional mortality due to heart diseases was 7.1% of total deaths but increased to 18% in 1991. In 2002, ischaemic heart disease was responsible for 13% deaths and hypertensive heart disease another for 6%. Diabetes melitus was responsible for 3% deaths.

5

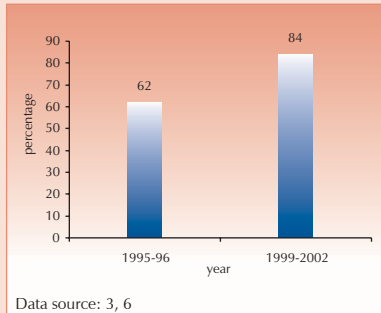
What resources are available for the health sector?

Indicators	Latest available value	Year	Source
Expenditure on health			
Percentage of GDP	6.3	2004	{CC}
Highest in the world – USA	15.2	2003	{10}
Highest in the Region – Timor-Leste	9.6	2003	
Per capita (US\$)	34	2004	{CC}
Per capita (Intl.\$)	74	2003	{10}
Highest in the world – USA (Intl.\$)	5711	2003	{10}
Highest in the Region – Maldives (Intl.\$)	364	2003	
Food			
Average dietary energy consumption (kcal/day/person)	2160	2001-03	{12}
Services			
Antenatal care coverage (%)	98	2002	{1}
Women that have been immunized with TT during pregnancy (%)	84	1999-2002	{3}
Deliveries by qualified attendant (%)	98	2002	{1}
Children immunized (%)			
BCG	94	2005	{18}
DPT-3	79	2005	{18}
Polio-3	97	2005	{18}
Measles	96	2005	{18}
Beds (per 10,000 population)	132	2002	{1}
Highest in the world – Monaco	196	1995	{8}
Highest in the Region – DPR Korea	132	2002	
Human resources			
Doctors of modern system (per 10,000 population)	32.0	2003	{1}
Highest in the world – Cuba	59	2002	{10}
Highest in the Region – DPR Korea	32.0	2003	
Nurses (per 10,000 population)	37.0	2003	{1}
Highest in the Region – DPR Korea	37.0	2003	{10}
Midwives (per 10,000 population)	2.7	2004	{10}
Dentists (per 10,000 population)	3.7	2004	{10}
Pharmacists (per 10,000 population)	6.0	2004	{10}
Public and Environmental Health Workers (per 10,000 population)	1.2	2004	{10}
Lab Technicians (per 10,000 population)	0.4	2004	{10}
Other Health workers (per 10,000 population)	30.0	2004	{10}

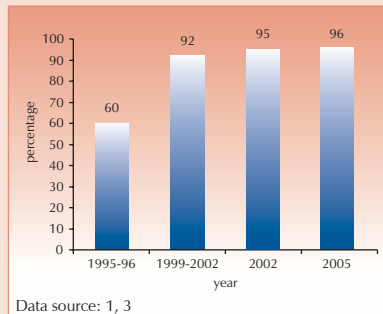
Health expenditure out of national budget



Percentage of TT coverage



Percentage of measles vaccination coverage



Health resources

- Health expenditure as a percentage of the national budget is low at 7.4 Intl.\$ per capita.
- Dietary energy consumption is 2160kcl/day/person.
- Antenatal coverage is 98% and measles vaccination coverage is 96%.
- The number of doctors and nurses available in DPR Korea per 10,000 population is the highest in the Region.

6

What is the system of health governance?

Organization

Health is the domain of the Ministry of Public Health which has two departments:

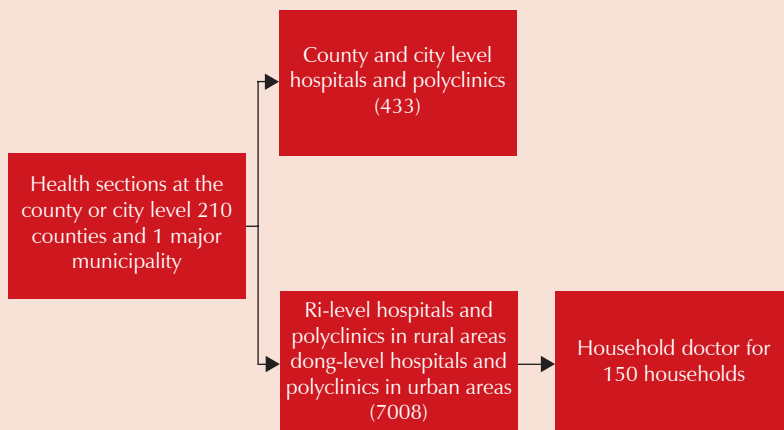
- Department of Health Planning
- Department of Communicable Diseases

Overall guidance is provided by the National Health Committee of the Cabinet.

The operational functions of the health infrastructure established at the central, provincial, county and sub-county (ri in rural and dong in urban areas) fall into two groups: those under the authority of the Ministry and those belonging to the local administrative bodies such as city and district People's Committees.

The Central government manages the Medical Information Centre for HIS through the Medical Science Academy. The main emphasis of this Centre is on: information on medical scientific technology; to build a database of various health information; and to develop the mechanism for exchange of information. Immunization is managed at the central level by the State Inspector. The Central Hygiene and Anti-epidemic Agency is responsible for control of communicable diseases. The Central government also manages various Central Hospitals including some specialized hospitals.

The health department at the province level comprises provincial people's hospitals, provincial specialized hospitals, and hygiene and anti-epidemic and drug stations. It also provides guidance to city and county level facilities falling within its jurisdiction.



The health sections at the county or city level are the actual agencies for providing health care through ri-level people's hospitals and polyclinics in the rural areas, and dong-level facilities in the urban areas. Hygiene, anti-epidemic and drug facilities are directly administered by the health section at the county or city-level as the case may be. The hospitals and clinics at ri and dong level are the facilities for first level of contact for primary health care while county and city level facilities provide specialized care such as paediatrics, surgery and gynaecology.

DPR Korea has a vast network of more than 800 general and specialized hospitals at the central, provincial and county levels, and 1000 hospitals and polyclinics at ri and dong levels with an estimated staff of around 300,000 in 2002. Note that these numbers include facilities at the provincial and central level, which are not included in the above diagram.

In addition, there are hundreds of industrial hospitals for factory workers and enterprises.

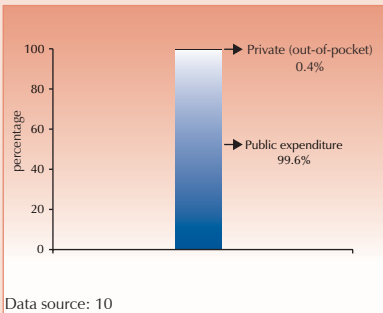
At the most peripheral level are the household doctors who are responsible for nearly 150 families in rural areas as well as in urban areas. They are also responsible for consultation on family planning and regular health care during pregnancy, as well as for immunizations.

7

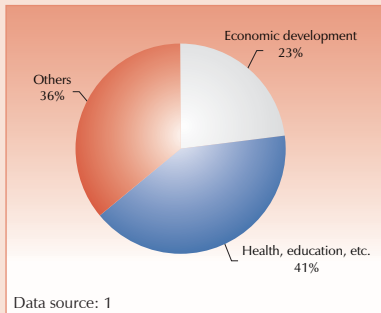
Who pays for health care?

Indicators	Latest available value	Year	Source
Government expenditure on health			
Out of total health expenditure (%)	99.6	2004	{CC}
Per capita (US\$)	34	2004	{CC}
Per capita (Intl.\$)	68	2003	{10}
Highest in the world – Monaco (Intl.\$)	3403	2003	{10}
Highest in the Region – Maldives (Intl.\$)	324	2003	
Private expenditure on health			
Out of total health expenditure (% of total expenditure on health)	0.4	2004	{CC}
Per capita (US\$)	<1	2004	{C}
Per capita (Intl.\$)	<1	2004	{C}
Lowest in the Region – DPR Korea	0.4	2004	

Health expenditure



National budget 2003-04



Health expenditure

- Almost the entire expenditure on health is by the government exchequer. Private expenditure is less than 1% and is out-of-pocket expenditure.
- Health services provide universal coverage.

8

What are the recent reforms and achievements of the health system?

Health sector reforms

- In 1999, the Ministry of Public Health developed a medium-term national health development programme for the 2000-2005. The main goal of this programme was to rehabilitate the health care facilities and reorient health workers to achieve the level of health status existing before 1990.
- Institutions are being set up for research on hygiene and communicable diseases.
- In recognition of the importance of injection safety, the government has modernized and expanded the production of syringes for single use.

Achievements

- The nutrition status of the people has improved over the last few years.
- After peaking in the 1990s, the incidence of malaria has substantially declined.
- The authorities took the SARS outbreak very seriously and imposed strict quarantine regulations and other control measures that helped to control the outbreak.
- Major improvements have taken place over the last few years for immunization and polio eradication because of the high priority given to these programmes by the government.
- Under a government decision 'To stop smoking in the whole nation', awareness campaigns were launched on a large scale. As result, health awareness about the risk of smoking has increased.

- A computer network has been set up for national drug management and is being expanded to lower units for rational management and use of medicines.
- The only endemic disease of significance is goitre due to iodine deficiency in the mountainous regions of south Pyongan and Zagang Provinces. To counter this, the government has set up a system of supplying seaweeds, which are available in plenty and can reduce iodine deficiency. In addition, there is a well-organized surveillance system, and treatment facilities have been established in affected areas. .
- The 4th DOTS expansion program in 2003 covered 94.1% of the national population. This now covers the whole nation. The sputum conversion and treatment cure rates are high at 90% and 87% respectively, in line with the global targets.
- In 2003, 71% of the population was able to access essential drugs. If a 5 km radius is considered, access reaches 99%. About 40 essential drugs recommended by WHO are widely used at the primary care level.
- The paediatric hospitals or wards and maternity hospitals or wards at all levels have been reconstructed and enlarged, and mobile service teams are organized for the difficult-to-reach areas and disaster regions.

Legislation

- In June 2002, the Law of Disability Protection was adopted in the Supreme People's Assembly.
- The production, storage and use of medicines is controlled by the Law of Medicines Management.

9

What are the constraints and challenges of the health system?

Financial constraints

- The economy was reduced to half its size in the 1990s. There was little investment in the health sector and there was an acute shortage of medical and hospital supplies.
- Health expenditure was 5.9% of the national budget in the year 2001 compared with 7.6% in 1990 and 8.4% in 1985. The running cost of extensive health care infrastructure is high and can not be met with the current level of expenditure.
- Investment in material and human support is required to strengthen national capacity for good manufacturing practices and quality control in order to produce essential drugs, vaccines and medical supplies.

Expertise and other physical constraints

- Essential expertise such as for handling complications of pregnancy and childbirth, treatment of severe infection in children, injuries and acute surgery, are sometimes compromised. Hospital infection control procedures require strengthening.

Social constraints

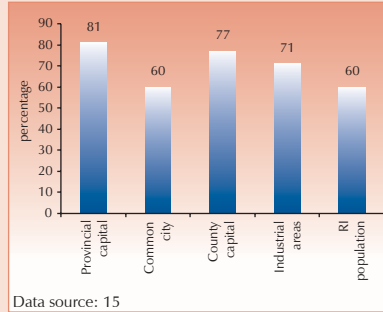
Indicators	Latest available value	Year	Source
Inequalities – Gender			
Average life expectancy F:M	1.12	2003	{1}
Seats held in parliament – F (%)	20.1	2003	{1}
Ratio of girls to boys in primary schools (%)	100	2003	{1}
Inequalities – Spatial			
Breastfeeding rate of children (%)			
Urban	95	2002	{1}
Rural	95	2002	{1}

Life expectancy of females is 71.4 years whereas of males it is 63.5 years.

Health sector constraints

- There is a need to review the health care system within the context of the economic situation to make it more efficient.
- The local production of essential medicines has declined and there is insufficient budget or foreign currency for import of drugs. A chronic shortage of medicines and supplies at all levels is an ongoing constraint affecting the quality of care.
- Access to the first level of health services at ri-level is high but referral services have become increasingly difficult due to transport bottlenecks and limited services.

Percentage of population access to essential drugs in 2003



Challenges

Nutrition

- There is a dramatic improvement in the nutritional situation since 1998, but severe malnourishment is still high. Greater attention to maternal nutrition status is needed.

Health services

- Health sector reforms can be undertaken only after a comprehensive situation analysis. Establishing this baseline in itself is a challenge.
- Effective supervision, accurate reporting, and improved management and distribution of medicines and laboratory consumables require strengthening.
- HIV/AIDS is not a problem in DPR Korea but the risk factors such as injection practices and quality of blood transfusion services have to be taken into account.
- Diarrhoeal diseases increased due to the run-down water and sanitation system while acute respiratory infection was compounded by malnutrition. Together, there are responsible for the majority of childhood illnesses and deaths.

Training of staff

- Training of health personnel needs to be strengthened including training in health management, rational use of drugs and medical supplies.

10

What does the country hope to achieve in the near future in health?

- The priority in the public policy for health is the protection and promotion of health of people. Examples are the public advocacy and support for public health, conducting public health work as a mass movement and not allowing economic development at the cost of health of the people.
- The government hopes to achieve a free but perfect medical care system for all by increasing expenditure on public health, improving skills to manage the health institutions effectively, tapping the health resources to the fullest extent, and by raising the national interest in health work.
- To narrow the regional differentials in primary health care, the government plans to be more rational in providing health facilities according to the density and physical features of different areas.
- A greater effort may be put into scientific developments such as bioengineering and telemedicine, which may improve the health administration, diagnosis and treatment.
- The government proposes to step up activities against common diseases and injuries, as well as to strengthen the provision of resources and research on primary health care.
- The government will direct its main efforts to environmental protection, to improving population nutrition and to reduce the health risk factors through social movement.
- The government hopes to further strengthen the international cooperation as well as exchanges within the country.

11

How is WHO collaborating with the country?

Policy development and planning

- WHO is the lead international health agency in the country and works in close collaboration with other UN agencies, international organizations and NGOs. It is gradually expanding its presence in the country. It contributed necessary material and financial support to improve the health system that deteriorated in the 1990s due to natural calamities.

Health systems management

- In collaboration with other international agencies, WHO developed and updated the list of essential medicines. The objective was to promote their optimal provision and adequate use.
- A large number of health personnel have awarded WHO fellowships. These are mainly funded from WHO's regular budget.
- A broad range of in-country training activities for health personnel are being supported every year, with particular attention to topics of public health significance such as control of communicable diseases, improving maternal and child health, and control of noncommunicable diseases.
- Standardized kits of equipment and consumables for support of community ri-clinics and county hospitals have been developed.
- WHO emergency health kits were provided with support from the government of Japan for helping the injured in the big train blast in 2004. The seriousness and needs of those injured were assessed, technical advice provided. WHO worked with local

authorities to prevent outbreak of infectious diseases and to establish a proper surveillance system in the aftermath of the disaster.

- The WHO Collaborating Centres for Gerontology and for Primary Health Care, were established to set up the Research Centre for Traditional Medicines.

Promotion of healthy lifestyles and settings

- The National Blood Centre in Pyongyang and the Provincial Blood Centre in Hamhung were strengthened with the introduction of disposable blood bags to ensure access to safe blood.
- WHO is also supporting activities such as development of nursing and midwifery medical education and tobacco control. These activities are supported on a small scale but are considered strategically important.

Prevention and control of priority diseases

- The introduction and the gradual expansion of tuberculosis control using the DOTS strategy was supported. The DOTS programme reached 100% geographical coverage by the end of 2003.
- WHO has been the lead international agency supporting the national malaria programme with anti-malarial drugs, microscopes, and other laboratory equipment, impregnated bed-nets, and technical assistance and training. Malaria incidence has substantially declined partly due to these efforts.
- The establishment of the National Polio Laboratory and polio eradication activities, including acute flaccid paralysis (AFP) surveillance throughout the country was supported.
- Regular immunization and cold chain was strengthened in cooperation with UNICEF.
- Technical and material support for SARS prevention was provided in 2003.

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