HEALTH SYSTEM STRENGTHENING PROPOSAL

DPRK

September 22 2006

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PART 1 DETAILED PROPOSAL

Executive Summary

Rationale

Economic downturn, natural disasters and limited international support have resulted in a decline the quality of health system infrastructure, quality and capacity in DPRK over recent years. These issues represent considerable barriers to immunization performance in terms of management systems and human resource capacity, and financing and infrastructure for operations. The GAVI Health System Strengthening (HSS) program of assistance in DPRK proposes to link with broader MOPH / WHO initiatives to strengthen health systems In order to rehabilitate the system and improve and sustain immunization coverage.

Goal

The goal of the GAVI supported program of health system strengthening (HSS) support is to promote sustainable gains in immunization coverage through targeted investments in health systems strengthening. This goal is in support of wider national efforts to achieve sustainable social and economic development in DPRK by contributing to improved health status of women and children as well as to the achievements of the Millennium Development Goals 4 and 5 by the year 2015.[1]

Strategic Focus

The strategic focus of this program of assistance is on strengthening health management and service delivery systems at the implementing agency levels of *county* (district) and *ri* (PHC). [2]

Although most resources will be targeted at the *ri* level, involvement of county and provincial managers in systems development, implementation and monitoring will be critical to sustaining the program of HSS over the longer term.

This HSS investment in health management systems will complement a wider national health systems strengthening program being undertaken by WHO in collaboration with the Ministry of Public Health and financed through the Republic of Korea (ROK). This wider program of HSS has four major expected outputs that include (1) quality improvement (2) infrastructure (3) health management systems and (4) communication. The GAVI HSS program will focus on the scaling up nation wide of output 3, but with complementary inputs to the other health sector strategic areas. The linking of the two HSS programs (MOPH/WHO/ROK with GAVI) will be the first step towards a sector wide management approach that will result in the development of a health sector master plan in 2008 through the GAVI program of support.

Approach

Strengthening health management systems alone is not sufficient to improve and sustain immunization coverage. However, it is a necessary condition for improving immunization coverage in association with improvements to quality of care, infrastructure and health communication. This has several implications for approach. Firstly, the GAVI program of

[1] See goal of "Improving Women's and Children's Health in Democratic Republic of Korea: Framework for Multi-Year Assistance" WHO 2005. See also goal of National Immunization Program Strategic Plan 2007 - 2011

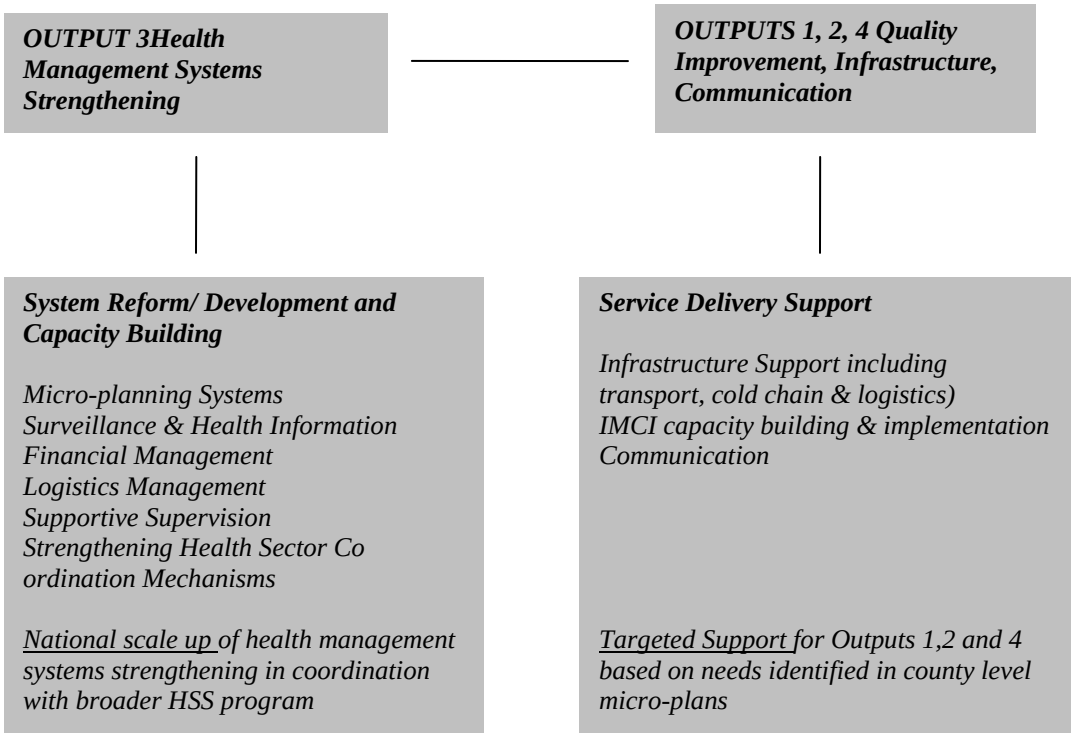
[2] County is equivalent to district. There are 206 Counties in DPRK. Ri is the PHC level in the rural area, and Dong is the PHC level in the urban area. There are 7000 Ri in DPRK.

HSS support will need to link with a wider program of HSS being undertaken by the MOPH and WHO, in order to ensure that all conditions are in place for sustainable improvements to health systems an immunization coverage. Secondly, the requirement to take a wider approach to systems strengthening will mean that national co ordination mechanisms will need to be strengthened to ensure that MOPH Departments and health partners (WHO, UNICEF, GAVI) are targeting their HSS investments in a coordinated and efficient way. The strengthening of national co ordination mechanisms will be the prelude to development of a DPRK health sector master plan in 2008 through GAVI support.

Activities

The two overarching components of the GAVI HSS program are (1) system development and capacity building for health management and (2) support for service delivery at *county* and *ri* level (co-financed with MOPH and GAVI partners WHO & UNICEF). The second component is critical to ensure adequate flow of funds in the early stages of project implementation to enable practical implementation of planning systems developments. The main areas of service delivery support are expected to be supervision, transport, cold chain, communication and IMCI. Specific service delivery needs will be identified in county micro-plans, which will be an outcome of the health management systems capacity building program. The GAVI HSS activities will be integrated into a wider package of HSS support as provided through the sector wide MOPH/WHO "Improving Women's and Children's Health." Major MOPH/GAVI HSS component activities are summarized in the figure below:

Figure 1 Framework of Activities for GAVI supported HSS activities in DPRK



Initial program activities (first 6 months) will involve a health management systems review *(Activity 1)*, followed by the design of integrated management system guidelines for *county* and *ri* level (planning, financing, health information, surveillance, supervision). This will be followed by the implementation of a health management systems capacity building program *(Activity 2)* and the development and implementation of *county* and *ri* micro-plans in selected counties in Year 1. This will be followed by provision of service delivery support based on the needs identified in the micro-plans *(Activity 3)*. Given the scale of the project and the operation of other HSS programs of assistance, GAVI HSS will assist to strengthen health sector co ordination mechanisms, and provide technical support and international exposure for health sector planning development in 2008 *(Activity 4).* HSS support through WHO has already been provided to 60 counties in 2006, and this is expected to reach 90 counties in 2007. In the first year, GAVI HSS will focus on one province that has already been a beneficiary of the WHO HSS assistance. Following evaluation at the end of year 1, the project will be scaled up to cover the remaining provinces in the period 2008 to 2011.

Expected Impact of Health Management Systems Development on Immunization Coverage and Health System Development

In partnership with other key strategic areas of the broader HSS initiative of the MOPH/WHO, the GAVI HSS program of assistance will assist to lay the basis for sustainable improvements in immunization coverage by targeting support for management strengthening at the implementation level of the health system. This linking of management systems development with broader infrastructure, quality improvement and communication support will ensure best value for investment through leveraging of technical capacity and finance from a range of sources in support of a common sector strategy of health systems strengthening. These 4 strategic areas referred to above directly address the main health system barriers to immunization performance as identified in the National Immunization Program Strategic Plan 2007 – 2011.

Management, Monitoring and Evaluation

The project will be co coordinated at central level by the Sector Co ordination committee for maternal, child and neo natal health. Operational aspects of the project will be overseen by the management committee of the Women's and Children's project (MOPH/WHO/ROK). The Immunization Co ordination Committee (ICC) will provide technical oversight of the HSS program, particularly in relation to impact on immunization. The project will be managed and monitored by health bureaus of the MOPH at provincial and county level. The main outcome indicators will be improved DPT-HebB3 and measles immunization coverage. Health system indicators (planning, finance, surveillance, utilization) have also been identified, and attempts will be made to develop a common monitoring framework with (MOPH/WHO/ROK).project in 2007.

Costs

The current value of the MOPH/WHO HSS project is $10 million in 2006 and a further $10 million in 2007 with good prospects for continuation for an additional 3 years. The GAVI contribution to HSS will be an additional $4.32 million over 5 years. This is equivalent to $86,000 per province per year or $4257 per county per year, divided between capacity building for health management systems strengthening and co financing with government and partners for the recurrent costs of implementation of micro-plans at the service delivery level. 32% of the GAVI HSS funds will be taken up by HSS systems development and capacity building, with the remaining balance of funds being targeted to areas of service delivery support that are identified in county micro-plans. Technical assistance and administrative costs have also been factored into the budget plan.

1 Background

Economic downturn, natural disasters and limited international support have resulted in a decline the quality of health system infrastructure, quality and capacity in DPRK over recent years. Despite these setbacks, the situation of children appears to have improved gradually over the last 5 years. This is evidenced by sharp declines levels of child malnutrition that have been described in national nutrition surveys between 1998 and 2004. The prevalence of stunting in children has declined from 62.3% in 1998 to 37% in 2004 *(UNICEF 2006).*

Figure 1 Map of DPRK

The Govt. of DPRK "maintains a commitment to the universality of services, including a complete set of entitlements for children and women, against a backdrop of severe and protracted hardships." *(UNICEF – 2006)* (see also details of public health policy in documents 1 and 3). DPRK also has an extensive network of more than 800 general and specialized hospitals at the central, provincial and county levels, and about 1000 hospitals and 6500 polyclinics at *Ri* (rural county) and *Dong* (urban county) levels, with an estimated 50,000 section level doctors working at the community level *(WHO Co operation Strategy 2004, FSP 2004, NIP Strategic Plan 2006).* Section doctors administer immunization services at the primary care level and are technically supported by the EPI Doctor at County level. Nationally and provincially, the NIP program is situated within a network of Anti Epidemic Health Stations that manage a wide range of communicable disease control programs.

The National Immunization Program (NIP) has demonstrated important improvements in recent years. National estimates accepted by the Ministry of Public Health, WHO and UNICEF suggest a continuing upturn in immunization coverage. National Immunization Days have been extremely successful, and have now evolved into National Child Health Days resulting in similar high coverage levels of Vitamin A and de-worming medication. *(UNICEF 2006)* (2) The AFP surveillance system is strong. This provides the basis for developing integrated vaccine preventable disease surveillance (including measles and tetanus) *(NIP Strategic Plan 2007 – 2011)*

2 Rationale

Figure 1 Health System barriers (MYP)

- DPRK has a strong health system - there is 1 section doctor to manage primary care services for 100 to 130 households across the country (a total of approx. 50,000 doctors)
- Health infrastructure is limited in provinces, particularly in relation to transport services, and reliable electricity supply. Principal weaknesses are lack of transport capital and financing of operational costs. This effects service delivery as well as the operation of the waste management system
- There are integrated micro-plans at county level for household doctors. However, skills in health planning & use of health information at county level can be improved.
- Another problem is the insufficiency of finance for transportation of vaccines and maintenance of the cold chain.
- There are opportunities at Provincial and Central levels for closer program co ordination of immunization with MCH and IMCI and service delivery

2.1 Health System Barriers

The National Program undertook an analysis of health system barriers to immunization during a recent strategic planning pROKess. (see figure on the left from the National Strategic Plan for Immunization 2007 – 2011). Health system issues represent considerable barriers to immunization coverage and quality performance in relation to: (a) health finance, (b) health system infrastructure (c) human resource management and development (d) health management systems and (e) service delivery.

(A) HEALTH FINANCE There has been a massive contraction in the national economy in the 1990s, associated with (1) the end of the socialist economic system in the Soviet Union, (2) a series of natural calamities in the same period (flooding and drought), and (3)

economic sanctions. This has resulted in serious financial constraints for the functioning of the health sector, particularly in terms of energy supply and hospital and medical supplies. (FSP 2004) (WHO, 2004), *(UNICEF 2006).*(3) DPRK so far has no access to international finance institutions such as World Bank, IMF, Asia Development Bank. Very limited funds are available for development assistance, and by and large international support has mostly been in the form of humanitarian aid. There are very few international NGOs functional in the country *(WHO 2004)*. (5) There is insufficiency of finance for transportation of vaccines and maintenance of the cold chain. Principal weaknesses are lack of transport capital and financing of operational costs. This affects service delivery as well as the operation of the waste management system *(NIP Strategic Plan 2007 – 2011).*

(B) HEALTH SYSTEM INFRASTRUCTURE The above mentioned problem has resulted in increasingly difficult access to energy supplies. Hospitals and clinics are affected by electricity, water and heating problems *(WHO – 2004).* Mobility of health staff and transportation of vaccines is constrained by limited access to transport. Principal weaknesses are lack of transport capital and financing of operational costs for fuel and repairs. This affects service delivery as well as the operation of the waste management system. Less than 60% of counties have motorcycles. *(Immunization Strategic Plan 2007 – 2011).* Limited roads and communication infrastructure also poses serious obstacles to health systems performance. It takes 4 days for example to travel from the capital city Pyongyang to the northern coastal province that borders Russia (see map).

(C) HUMAN RESOURCE DEVELOPMENT Capacity building is a critical factor in the modernization of the health sector. However, some practices and health standards are outdated *(WHO 2004).* Skills and methodologies in public health management (micro-planning and use of health information at county level) are lacking. *(Immunization Strategic Plan 2007 – 2011).* Most current health care managers are not trained in management and supervision *(WHO 2004)*

(D) HEALTH MANAGEMENT SYSTEMS Data is often lacking in terms of accuracy and completeness. This limits management and planning capacity to identify high risk areas and take corrective action *(NIP Strategic Plan 2007 – 2011) (WHO 2004) (UNICEF 2006)*. Efforts to improve existing systems have had limited success due to lack of evidence based planning *(UNICEF 2006)* The need has been identified at Provincial and Central levels for closer program co ordination of immunization with MCH and IMCI (as well as at service delivery points). *(Immunization Strategic Plan 2007 – 2011).*

(E) SERVICE DELIVERY The following constraints have been identified in relation to the service delivery system:

> (1) There are indications of over capacity in hospitals, with hospital beds and human resources somewhat underused. This is related to constraints of quality of care, availability of medicines and in winter, lack of heating. *(UNICEF 2006)*
> (2) Families in provinces where the immunization coverage is low are often unaware or unconvinced of the need for immunization. The low rate of DPT3 is a concern, and is due to lack of health education and lack of response to AEFI. In some provinces the coverage is stagnating, and there is no timely response to drop out. *(Immunization Strategic Plan 2007 – 2011).*

(3) A chronic shortage of medicines and supplies at all levels is an ongoing constraint to quality of care *(WHO 2004, UNICEF 2006)*

2.2 Framework for Health Systems Strengthening

DPRK currently has no national multi year health sector plan. National Departmental Plans are mostly conducted on an annual basis. An exception is the NIP Strategic Plan which provides a multi year framework (2007 – 2011) for immunization services strengthening. Health systems analysis is contained within this document, as well as in the WHO Co operation Strategy 2004 – 2008 and UNICEF's Analysis of the Situation of Women and Children in DPRK 2006.

A more comprehensive framework for health systems strengthening is provided by MOPH/WHO/ROK project "Improving Women's and Children's Health in DPRK: Framework for Multi Year Assistance." This multi year plan for HSS focuses on 4 outcome areas of quality improvement, health infrastructure, health management systems and communication. The current value of the MOPH/WHO/ROK (Republic of Korea) HSS project is $10 million in 2006 and a further $10 million in 2007 with good prospects for continuation for an additional 3 years.

The specific objectives of this program of assistance are as follows:

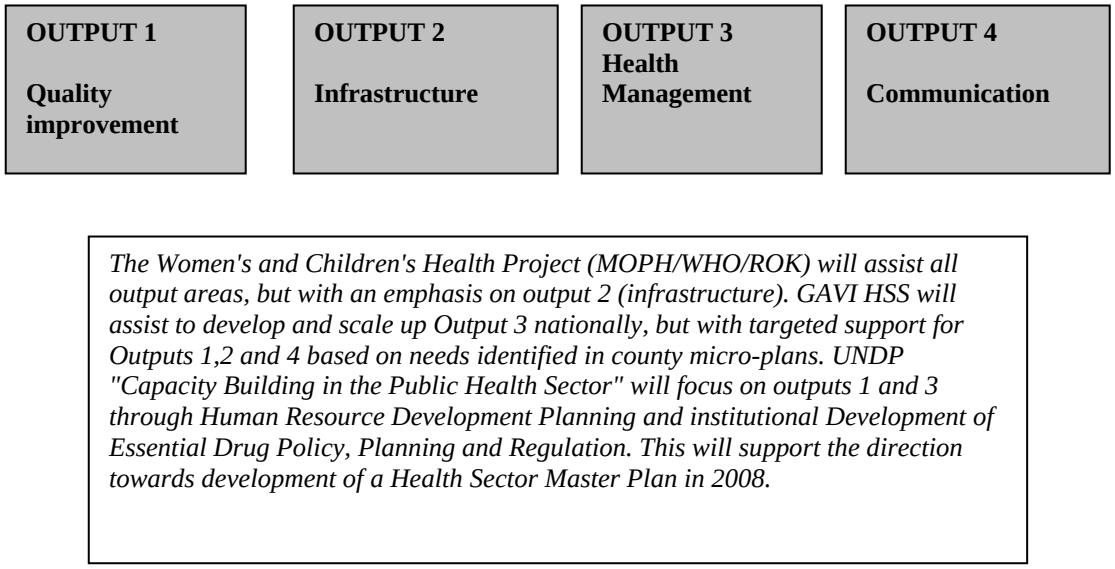
1. To increase availability and sustainability of, and access to essential quality health services to population, especially women and children.
2. To improve capacities and readiness of health facilities to deliver quality maternal and child health services, including support services.
3. To promote involvement of individuals, families and communities in improving the health of women and children.
4. To improve health information system and strengthen management capacity for results-based programme management and monitoring for quality maternal and child health care at all levels.

This wider program of HSS can be summarized into four major output areas that include (1) quality improvement (2) infrastructure (3) health management systems and (4) communication. The GAVI HSS program will focus on the scaling up nation wide of output 3, but with complementary inputs to the other health sector strategic areas.

The linking of the two HSS programs (MOPH/WHO/ROK with GAVI) will be the first step towards a sector wide management approach that will result in the development of a health sector master plan in 2008 through the GAVI program of support (see activity 4 for details on the process for developing the health sector master plan).

The figure that follows summarizes the strategic framework for HSS, and the role of the GAVI HSS program implementation in linking with this framework.

Figure 2 HSS Framework



3 Goal

The goal of the GAVI supported program of health system strengthening (HSS) support is to promote sustainable gains in immunization coverage through targeted investments in health systems strengthening.

This goal is in support of wider national efforts to achieve sustainable social and economic development in DPRK by contributing to improved health status of women and children as well as to the achievements of the Millennium Development Goals 4 and 5 by the year 2015.[3]

3 Strategic Focus

The strategic focus of this program of assistance is on strengthening health management and service delivery systems at the implementing agency levels of *county* (district) and *ri* (PHC).

Although most resources will be targeted at the *ri* level, involvement of county and provincial managers in systems development, implementation and monitoring will be critical to sustaining the program of HSS over the longer term. The proposed program of assistance directly addresses the three GAVI theme areas of management and organization (health management systems), human resource development (capacity building) and logistics and infrastructure support (service delivery support).

[3] See goal of "Improving Women's and Children's Health in Democratic Republic of Korea: Framework for Multi-Year Assistance" WHO 2005. See also goal of National Immunization Program Strategic Plan 2007 - 2011

4 Approach

Strengthening health management systems alone is not sufficient to improve and sustain immunization coverage. However, it is a necessary condition for improving immunization coverage in association with improvements to quality of care, infrastructure and health communication. This has several implications for approach.

Firstly, the GAVI program of HSS support will need to link with a wider program of HSS being undertaken by the MOPH and WHO, in order to ensure that all conditions are in place for sustainable improvements to health systems an immunization coverage.

Secondly, the requirement to take a wider approach to systems strengthening will mean that national co ordination mechanisms will need to be strengthened to ensure that MOPH Departments and health partners (WHO, UNICEF, GAVI) are targeting their HSS investments in a coordinated and efficient way.

Thirdly, given the need in the early years of the program to focus on system review, development and capacity building, the GAVI program of HSS support will adopt a phased approach to implementation in co ordination with the scale up of the wider HSS strategy of MOPH and WHO.

Finally, the requirement for co ordination and efficiency is the basis for any effective system strategy. This means that the GAVI HSS program will ensure that all management systems component activities (planning, financing, surveillance, supervision etc) are implemented within a framework of an integrated health management systems approach. This principle will guide and co ordinate implementation in relation to guideline development, capacity building and planning and supervision operations.

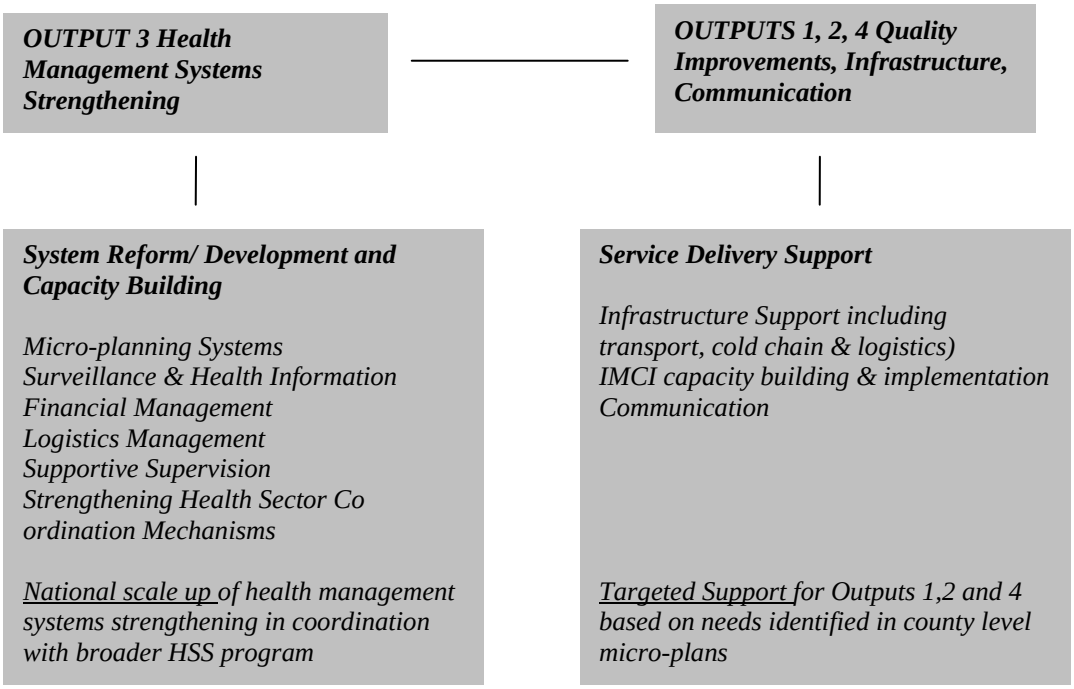
Each of these four approaches will build the capacity of the MOPH to strategize a sector wide approach to health management, and will create favourable conditions for development of a longer term health sector master plan in 2008 through GAVI partner technical and financial assistance (see activity 4 for details).

5 Activities

The two component activities of the GAVI HSS program are (1) guideline development and capacity building for health management systems and (2) support for service delivery at *county* and *ri* level (co-financed with MOPH and GAVI partners WHO & UNICEF). The second activity area is critical to ensure adequate flow of funds in the early stages of project implementation to enable practical implementation of planning systems developments. The main areas of service delivery support are expected to be infrastructure support including transport, cold chain & logistics, IMCI capacity building & implementation and communication.

The figure below summarizes GAVI HSS activities into 2 component areas.

Figure 3 Details of GAVI supported HSS activities



Initial program activities (first 6 months) will involve a health management systems review, followed by the design of integrated management system guidelines for *county* and *ri* level (planning, financing, health information, surveillance, supervision). This will be followed by the implementation of a capacity building program and the development and implementation of *county* and *ri* micro-plans in 1 Provinces in Year 1. The project will be scaled up to 3, 6 and 10 provinces in the period 2008 to 2010.

Specific activities are described below under 4 major activity headings.

1. Health Management System Review and Guideline Revision and Development
2. Conduct a Capacity Building Program in Health Management Systems
3. Service Delivery Support
4. Health Sector Co ordination Mechanism

Major Activity 1 – Health Management System Review and Guideline Revision and Development

As described in the rationale and in a range of data sources (see application form), the collection and analysis of data for health planning and evaluation is a major constraint to health system performance. As the National Immunization Strategic Plan describes, "data is often lacking in terms of accuracy and completeness. Micro-planning skills need to be developed and improved data management in order to identify high risk areas and take corrective action." *(National Immunization Strategic Plan 2007 – 2011).* In terms of *financial management*, it is not possible at this stage to track expenditures and match

them with planned budgets. There has been no systematic training program in public health management and *supervision* for counties. There are shortcomings in *logistical systems* associated with the fact that vaccines and vaccine supplies do not operate within the same distribution system.[4]

The main objective of this major activity area will be to design integrated health management systems procedures for county level and below, focussing on health planning, health information and surveillance, financial and logistics management and supportive supervision.

At Provincial and County level, health bureaus employ planning, surveillance, financing and immunization officers (4 distinct positions). It is proposed that the GAVI HSS program review, in collaboration with other funded HSS inputs, strengthen health systems performance. It will achieve this by developing and integrated health management systems package for *county* and *ri* level, and undertake a capacity building program to install the systems nationally.

The initial activity of this program will be to undertake a review of health management systems at county level and below. The purpose of this review will be to recommend and develop integrated operational guidelines for health planning, incorporating health information, surveillance, logistics management, financing and micro-planning.

Expected outcomes of such a review would be:

- PLANNING Definition of a system for county and ri level micro-planning. The guidelines would define planning cycles and the procedures of planning (objective setting, activity planning, indicators and targets etc). The main outcome will be strengthened decentralized micro-planning process.
- SURVEILLANCE AND HEALTH INFORMATION Development of guidelines and reporting forms for integrated VPD surveillance. There will be a phased introduction of a routine immunization monitoring systems (RIMS) as a first step towards development of integrated national surveillance systems.
- SUPERVISION There will be development of monitoring tools and guidelines for supervision and data analysis, and identification of action points based on monitoring feedback. Monitoring checklists and standardized tools for supportive supervision will be developed, with possible computerization of Province / County for planners and surveillance officers.
- FINANCIAL MANAGEMENT Guidelines will be produced for financial management which will include the costing of micro-plans, procedures for tracking planned budgets against actual expenditures and definition of financial indicators.
- LOGISTICS MANAGEMENT Guidelines and procedures will be developed to streamline distribution and reporting of essential drugs and vaccine supplies from the Central Level Medical Warehouse to the lower levels of the health system.

[4] Vaccines are distributed through a network of anti epidemic stations, whereas vaccine supplies are distributed through medical warehouses.

A potential outcome of this review is a Middle Level Manager Operations Manual on Public Health Management for County Level and below. [5] This manual of operations would incorporate procedures for development, implementation and monitoring of costed annual micro-plans for county and ri level. Leading performance indicators in the micro-plans will be immunization (DPT-HepB3 and measles) and other child health program performance measures (to be decided).

A program of technical assistance will be provided through the MOPH / WHO / ROK project in late 2006 to develop a "management package" for county level will accelerate the implementation of this approach.

Major Activity 2 – Conduct a Capacity Building Program in Health Management Systems

The main objective of this area of assistance will to improve health system performance by establishing integrated health management systems at county level and below.

As a first step, master trainers in health management systems will be developed at central and provincial level in the first year of operations (2007)

The target group for central and provincial level will be Planning Dept, Finance Dept., and National Immunization Program. International short courses and study tours will also be identified for central managers in the area of public health management. Contacts will be established with Public Health Institutes in the region, with a focus on identifying best practice systems for health management at district level and below.

Following development of the public health operations guidelines/manual, a curriculum will be developed and implemented at County and Ri level. The target group at county level will be the planning officer, finance officer, surveillance officer, county hospital director and immunization manager at County Level. A 5 day training program is envisaged with public health management modules in the areas of planning, financial management, surveillance, supportive supervision and logistics. A key outcome of the county level training will be a costed integrated micro-plan that will identify key annual objectives and activities, the package of services to be delivered, indicators of success and resources required and finances available. Shorter courses will then be designed for the Ri level utilizing trainers from county level (planning officers).

It is proposed that the system development and capacity building program be trialled in 1 province in 2007, in a Province that has already been a beneficiary of the wider MOPH / WHO HSS project. Following evaluation in late 2007, the program will be gradually scaled up nationally by Province in co ordination with other programs of assistance. (3 Provinces 2008,6 provinces 2009, 10 Provinces 2010.)

Major Activity 3 - Provide Service Delivery Support

The National Immunization Strategic Plan identifies a range of health system and program activities that are partially unfunded between 2007 and 2011 (see annex 3 for details). These include logistics and transport costs and communication, surveillance

[5] This is described as a "Management Package" in the MOPH / WHO Women's and Children's Health Project

and supervision activities. The main objectives of this area of support are to increase coverage and quality of immunization and other MCH services, particularly in lower performance areas.

The HSS program to co finance and support these activities will be based on the outcome of activity 2 (development of county micro-plans through health management systems capacity building). Financing of these activities will need to be targeted based on the needs identified in these plans and targeted according to geographic area (for example counties with lower coverage rates).

Although more detailed analysis of service delivery support can be identified in the National Immunization Strategic Plan 2007 – 2011 and the MOPH/WHO Women's and Children's Health Project, below is a summary of the main sub activity areas for service delivery support.

Transport – Transport has been identified as a major system barrier that impacts on immunization services in terms of mobility of county and ri health staff for service provision and transport of vaccines and waste for disposal. Current fuel shortages in DPRK are also restricting mobility. Micro-plans are likely to identify needs for bicycles at the ri level and motorcycles at county level (depending on availability of fuel)

Cold Chain and Logistic Systems – The national Immunization Strategic Plan proposes to install solar refrigeration systems across the country from 2008. The plan also identifies the need to strengthen maintenance systems for cold chain and other equipment at county and Ri level.

Communication – Families in provinces where the immunization coverage is low are often unaware or unconvinced of the need for immunization. More information is required on knowledge, attitude and practice to guide updating of the communication strategy. The low rate of DPT3 in some areas is a concern, and is due to lack of health education and lack of response to AEFI. Based on needs identified in micro-plans, communication activities could be financed at county and ri level, especially in areas with low coverage. Other options for investment include KAP studies, mass media and printed materials production and activation of community and county networks.

Surveillance and Supervision – Activities to be supported will include phased introduction of routine immunization monitoring systems, promotion of increased use and accuracy of data at local levels, operational support for supportive supervision and provision of incentives for data collection and specimen transportation.

IMCI – IMCI is the main child health strategy in DPRK. Currently the program has been implemented in 2 counties only, with the proposal to extend by 50 counties per year. Based on the needs identified in the county annual plans, GAVI HSS could finance extension of this strategy in a complementary manner with other donor investments, either through capacity building of ri health staff or through managerial capacity building for county staff.

Major Activity 4 - Strengthen Health Sector Co ordination Mechanism

Heath sector strategic plans characteristically provide the framework for HSS activities. In the absence of this plan, the MOPH and WHO will use the framework of the Women's and Children's Health project as the framework for HSS strengthening. The co financing of a health sector strengthening program of assistance will be a first step towards strengthening sector wide approaches to health management. The main objective of this area of support is to strengthen the capacity of the MOPH to manage internal operations and external assistance on a sector wide basis.

This activity, although not requiring substantial financial commitment, is critical to longer term development of the health sector, particularly in relation to the evolution of sector wide management approaches.

Based on this consideration, the GAVI program will support the MOPH to develop a longer term health sector plan and planning process in 2008. Given the fact that there is likely to be increasing levels of external assistance to DPRK in coming years, the MOPH management systems are at risk of becoming fragmented along separate vertical program or project management lines. One way to manage this risk is to develop a longer term health sector master plan which will provide a framework for development assistance as well as for MOPH operations.

This being the case, finance has been budgeted in 2008 for technical assistance, international exchange, national consultation and a health sector review with the objective to develop a DPRK MOPH Multi Year Health Sector Master Plan in 2008. The development of the health management systems package in 2007 should form the basis for a wider health system review in 2008. International exposure to countries in the region with developed long term health sector planning processes such as in Mongolia and Cambodia will provide central planners with additional conceptual frameworks and systems for developing a DPRK plan and sector planning process in 2008. A national consultation process using the experience from the health management systems development, existing sector coordination mechanisms and experience from neighbouring countries will enable the plan to be developed on a well informed basis.

6 Expected Impact of Health Management Systems Development on Immunization Quality and Coverage

In partnership with other key strategic areas of the broader HSS initiative of the MOPH/WHO, the GAVI HSS program of assistance will assist to lay the basis for sustainable improvements in immunization coverage by targeting support for management strengthening at the implementation level of the health system. This linking of management systems development with broader infrastructure, quality improvement and communication support will ensure best value for investment through leveraging of technical capacity and finance from a range of sources in support of a common strategy of health systems strengthening. These 4 strategic areas referred to above directly address the main health system barriers to immunization performance as identified in the National Immunization Program Strategic Plan 2007 – 2011 (refer to section on rationale for details).

In summary, coverage and quality will be improved through:

- Strengthening of *health planning and information systems* will enable detection of areas of low coverage and at risk areas and disease outbreak which will be enable rapid follow up action from county level and above.

- Development of guidelines for *financial management* will improve financial flows which will improve the timeliness of vaccine supplies and waste management for immunization.

- Strengthening of guidelines and procedures for *logistics management* will improve the efficiency and timeliness of vaccine and equipment supply to Ri levels.

- Strengthening the quality of *supervision systems* will improve quality of services through reinforcement of quality standards for health management and service delivery.

- Targeting *service delivery supports* to lower coverage areas through provision of finance and equipment for cold chain, communication, and transport. This will strengthen the capability of county and ri health services to increase demand for services in lower coverage areas, as well as expand the capacity of the health managers to provide quality immunization services with effective vaccines.

7 Management, Monitoring and Evaluation

The project will be co coordinated at central level by the Sector Co ordination committee for maternal, child and neo natal health. Operational aspects of the project will be overseen by the management committee of the Women's and Children's project (MOPH/WHO/ROK). The Immunization Co ordination Committee (ICC) will provide technical oversight of the HSS program, particularly in relation to impact on immunization. The project will be managed and monitored by health bureaus of the MOPH at provincial and county level. The main outcome indicators will be improved DPT-HebB3 and measles immunization coverage. Health system indicators (planning, finance, surveillance, utilization) have also been identified and are described below. This is the first step towards developing a common monitoring framework between WHO/HSS project and GAVI HSS.

An independent Data Quality Audit was conducted in DPRK in 2004 and the results demonstrated good co relation between data at Ri Level and data at central MOPH level. The recommendations of this DQA will be followed up during the lifetime of the GAVI HSS program to ensure data quality.

Figure 4 List of Indicators

INPUT INDICATORS
Numbers of staff trained in integrated health management systems **Guidelines developed for micro-planning** **Guidelines developed / updated for financial management** **Guidelines developed / updated for integrated VPD surveillance** **Guidelines developed / updated for supportive supervision** **Co Ordination Mechanism established for HSS**
HEALTH SYSTEM IMPACT INDICATORS
% counties that identify package of services to be delivered in integrated micro-plans **% counties that implement an integrated supportive supervision program using agreed guidelines and information feedback procedures** **% counties that are utilizing integrated VPD report and follow up systems** **No of Provinces that have a focal point for VPD surveillance and monitoring and is able to use a database for planning immunization activities';** **% counties that routinely integrate Vitamin A and De worming into EPI activity** **% of counties that are able to show tracked budget versus expended resource** **% *Ri* that have at least 2 or 3 bicycles** **% counties identified with 90% functioning cold chain equipment**
IMMUNIZATION IMPACT INDICATORS
% counties with > 80% DPT-HEPB3 **% counties with > 90% Measles**
INDICATOR
Child Mortality (under 5)

8 Costs

The current value of the MOPH/WHO HSS project is $10 million in 2006 and a further $10 million in 2007 with good prospects for continuation for an additional 3 years. The GAVI contribution to HSS will be an additional $4.32 million over 5 years (.86 M$ per year). This is equivalent to $86,000 per province per year or $4257 per county per year, divided between capacity building for health management systems strengthening and co financing with government and partners for service delivery support based on the needs identified in micro-plans at the service delivery level. Detailed co financing of HSS is outlined in the document "Improving Women's and Children's Health in DPRK". Detailed co financing of immunization programming is outlined in the National Immunization Strategic Plan 2007 – 2011.Detailed budget planning is in the figure that follows.

Costs have been divided between 4 activity areas of system review and development, capacity building for health management systems, service delivery support and health sector co ordination. The budget plan is based on the project plan to trial one province for health management systems development in 2007, with the capacity building programs being expanded to 3 more provinces each in 2008 and 2009, and the remaining 4 provinces in 2010.

Costs for service delivery support are central level estimates only at this stage, and will require co financing from government, UNICEF and the MOPH /WHO HSS program.

Technical assistance for health management systems and health sector co ordination has been budgeted. The remaining two activities will be supported from existing in country GAVI partner (WHO and UNICEF) technical assistance sources.

Figure 5 GAVI HSS Budget

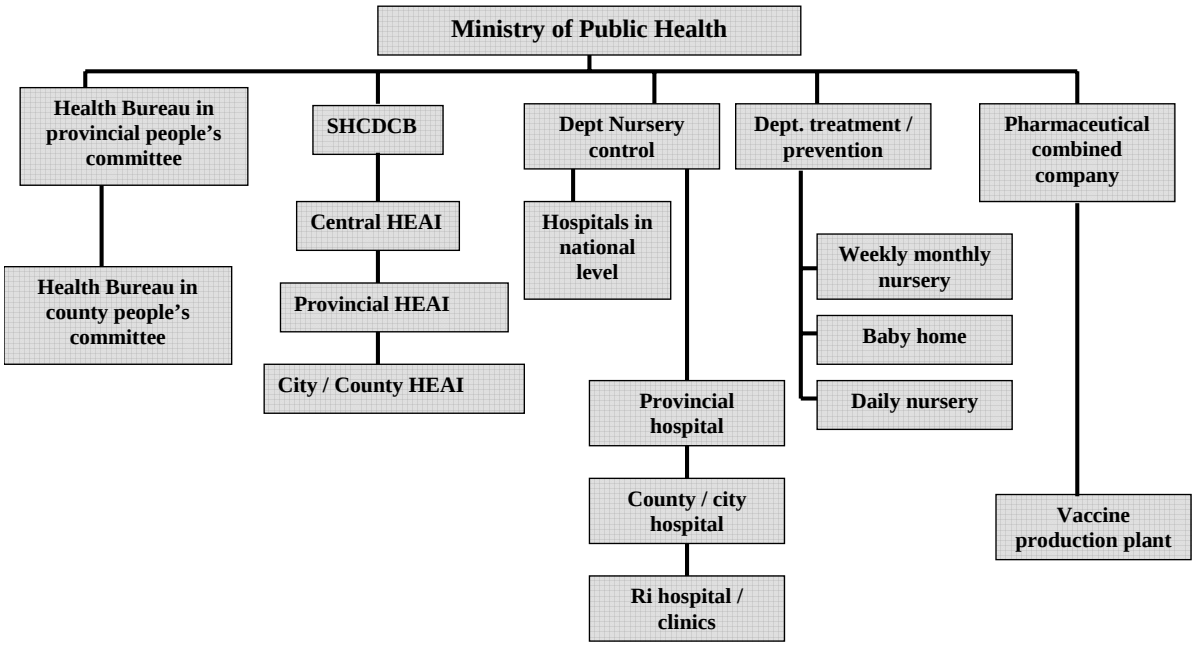
GAVI HSS BUDGET PLAN

ACTIVITY		2007	2008	2009	2010	2011	TOTALS
Activity 1	**System Review and Guideline Development**						
	Technical assistance	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 150,000
	Operational research costs	$ 5,000					$ 5,000
	National Workshop	$ 3,000					$ 3,000
	Public Health Manual Production	$ 3,000					$ 3,000
	Evaluation	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
SUB TOTAL 1		$ 46,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	**$ 186,000**
Activity 2	**Capacity Building Health Management Systems**	**2007**	**2008**	**2009**	**2010**	**2011**	
	International public health short courses/linkages	$ 30,000	$ 30,000	$ 30,000	$ 30,000		$ 120,000
	Health Management Training Program Central / Provincial levels	$ 5,000	$ 15,000	$ 15,000	$ 20,000		$ 55,000
	Health Management Training programs County Level	$ 33,000	$ 100,000	$ 100,000	$ 132,000		$ 365,000
	Health Management Training Programs Ri level	$ 50,000	$ 200,000	$ 200,000	$ 200,000		$ 650,000
	Evaluation	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
	Printing costs	$ 10,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 30,000
SUB TOTAL 2		$ 133,000	$ 355,000	$ 355,000	$ 392,000	$ 10,000	**$ 1,245,000**
Activity 3	**Service Delivery Support**	**2007**	**2008**	**2009**	**2010**	**2011**	
	Transport	$ 50,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 450,000
	Surveillance and Supervision	$ 50,000	$ 150,000	$ 110,000	$ 150,000	$ 108,000	$ 568,000
	Cold Chain	$ 50,000	$ 300,000	$ 138,000	$ 100,000	$ 100,000	$ 688,000
	IMCI Capacity building program	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
	Communicat.	$ 50,000	$ 150,000	$ 150,000	$ 110,000	$ 120,000	$ 580,000
SUB TOTAL 3		$ 250,000	$ 750,000	$ 548,000	$ 510,000	$ 478,000	**$ 2,536,000**
Activity 4	**Health Sector Co Ordination**	**2007**	**2008**	**2009**	**2010**	**2011**	
	Technical Assistance		$ 47,381	$ 40,000	$ 40,000		$ 127,381
	Study Tour Health Sector Planning		$ 30,000				$ 30,000
	Health Sector Review		$ 10,000				$ 10,000
	National Health Sector Planning Conference		$ 10,000				$ 10,000
	Printing costs		$ 8,000				$ 8,000
SUB TOTAL 4		$ -	$ 105,381	$ 40,000	$ 40,000	$ -	**$ 185,381**
TOTAL		$ 429,000	$ 1,245,381	$ 978,000	$ 977,000	$ 523,000	
Admin Costs 5%		$ 21,450	$ 62,269	$ 48,900	$ 48,850	$ 26,150	**$ 207,619**
TOTAL COSTS BY YEAR		$ 450,450	$ 1,307,650	$ 1,026,900	$1,025,850	$ 549,150	$ 4,360,000
TOTAL							**$ 4,360,000**

Annex 1 Key References

1. GAVI – Country Guidelines for Development of HSS proposal
2. WHO / UNICEF Joint Reporting Forms 2004,2005
3. MOPH DPRK National Strategic Immunization Plan 2007 - 2011
4. WHO A Multi Year Framework for Women's and Children's Health in DPRK 2006 - 2007
5. UNICEF Situation of Women's and Children's Health in DPRK 2006
6. WHO, WHO Co Operation Agreement 2004 – 2008
7. MOPH Financial Sustainability Plan 2004

Annex 2 Health System Structure DPRK



Annex 3 Composition of Funding Gaps for Immunization 2007 - 2011

Composition of the funding gap	2007	2008	2009	2010	2011	2007 - 2011
Vaccines and injection equipment		$2,217,183	$2,117,611	$2,584,981	$2,521,582	$9,441,357
Personnel						
Transport	$31,309	$82,907	$268,953	$186,216	$211,171	$780,556
Activities and other recurrent costs	$477,097	$565,596	$2,431,480	$2,518,386	$2,523,830	$8,516,388
Logistics (Vehicles, cold chain and other equipment)	$726,335	$1,238,040	$606,056	$561,891	$462,720	$3,595,042
Campaigns	$188,087	$190,391	$192,741	$195,138	$197,583	$963,939
Total Funding Gap*	**$1,422,827**	**$4,294,117**	**$5,616,840**	**$6,046,611**	**$5,916,886**	**$23,297,281**

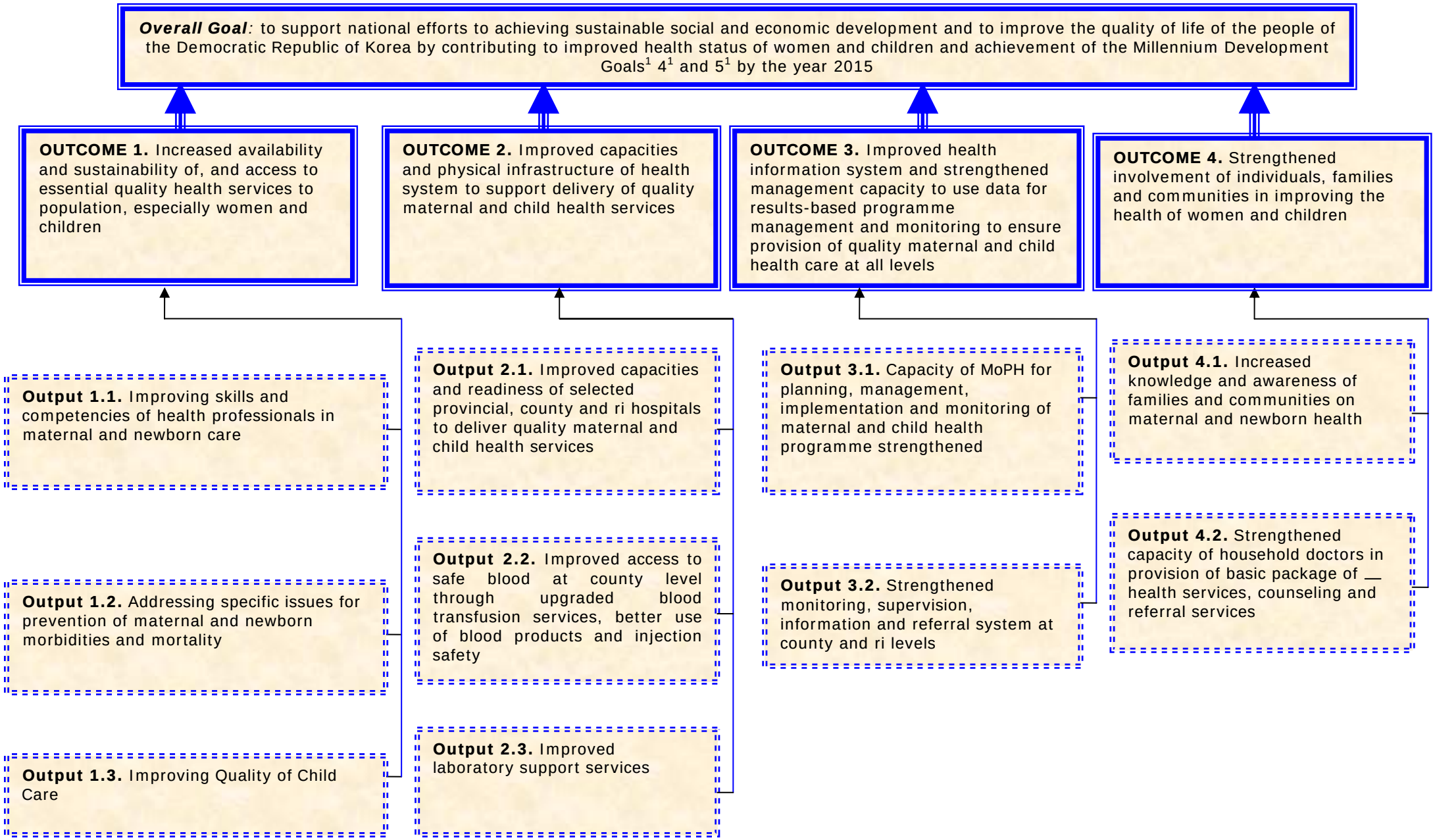
* Immunization specific resource requirements, financing and gaps. Shared costs are not included.

Annex 4 Detailed Government Financing of the National Immunization Program 2007 - 2011

Governement Funding	2007	2008	2009	2010	2011	2007-2011
	US$	US$	US$	US$	US$	US$
Routine Immunization	**$ 3,318,437**	**$ 3,616,145**	**$ 3,830,000**	**$ 3,940,000**	**$ 4,240,000**	**$ 18,944,582**
Recurrent Costs	**$ 3,318,437**	**$ 3,616,145**	**$ 3,830,000**	**$ 3,940,000**	**$ 4,240,000**	**$ 18,944,582**
Traditional vaccines	$ 346,321	$ 358,187	$ 358,270	$ 376,455	$ 380,973	**$ 1,820,205**
New and underused vaccines	$ -	$ 236,548	$ 336,690	$ 571,972	$ 674,829	**$ 1,820,039**
Injection supplies	$ -	$ -	$ -	$ -	$ -	**$ -**
Personnel	$ 1,036,648	$ 1,057,381	$ 1,078,529	$ 1,100,100	$ 1,122,102	**$ 5,394,760**
Transportation	$ 224,296	$ 299,056	$ 347,788	$ 225,261	$ 261,697	**$ 1,358,098**
Maintenance and overhead	$ 635,787	$ 668,104	$ 701,576	$ 648,783	$ 682,681	**$ 3,336,932**
Training	$ 75,650	$ 75,650	$ 75,650	$ 75,650	$ 75,650	**$ 378,250**
IEC/social mobilization	$ 550,000	$ 550,000	$ 560,000	$ 570,000	$ 570,000	**$ 2,800,000**
Disease surveillance	$ 110,000	$ 110,000	$ 110,000	$ 110,000	$ 110,000	**$ 550,000**
Programme management	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000	**$ 150,000**
Other routine recurrent costs	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 300,000	**$ 1,100,000**
Capital Costs	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Vehicles	$ -	$ -	$ -	$ -	$ -	**$ -**
Cold Chain	$ -	$ -	$ -	$ -	$ -	**$ -**
Other equipment	$ -	$ -	$ -	$ -	$ -	**$ -**
Campaigns	**$ 109,734**	**$ 31,220**	**$ 31,497**	**$ 31,780**	**$ 32,069**	**$ 236,299**
Shared Health Systems Costs	**$ 3,520,498**	**$ 3,590,908**	**$ 3,662,726**	**$ 3,735,981**	**$ 3,810,700**	**$ 18,320,814**

(not included in immunization specific financing from the government)

Annex 5 Framework for HSS – Improving Women's and Children's Health in DPRK



Global Alliance for Vaccines and Immunization (GAVI)

APPLICATION FORM

Health System Strengthening Proposal

DPR Korea

September 22 2006

This document is accompanied by an electronic copy on CD for your convenience. Please return a copy of the CD with the original, signed hard-copy of the document to: GAVI Secretariat; c/o UNICEF, Palais des Nations, 1211 Geneva 10, Switzerland.

Enquiries to: Dr Julian Lob-Levyt, jloblevyt@unicef.org or representatives of a GAVI partner agency. All documents and attachments must be in English or French.

CONTENTS

Executive Summary

Rationale
Economic downturn, natural disasters and limited international support have resulted in a decline the quality of health system infrastructure, quality and capacity in DPRK over recent years. These issues represent considerable barriers to immunization performance in terms of management systems and human resource capacity, and financing and infrastructure for operations. The GAVI Health System Strengthening (HSS) program of assistance in DPRK proposes to link with broader MOPH / WHO initiatives to strengthen health systems In order to rehabilitate the system and improve and sustain immunization coverage.

Goal
The goal of the GAVI supported program of health system strengthening (HSS) support is to promote sustainable gains in immunization coverage through targeted investments in health systems strengthening. This goal is in support of wider national efforts to achieve sustainable social and economic development in DPRK by contributing to improved health status of women and children as well as to the achievements of the Millennium Development Goals 4 and 5 by the year 2015.[6]

Strategic Focus
The strategic focus of this program of assistance is on strengthening health management and service delivery systems at the implementing agency levels of *county* (district) and *ri* (PHC). [7]

Although most resources will be targeted at the *ri* level, involvement of county and provincial managers in systems development, implementation and monitoring will be critical to sustaining the program of HSS over the longer term.

This HSS investment in health management systems will complement a wider national health systems strengthening program being undertaken by WHO in collaboration with the Ministry of Public Health and financed through the Republic of Korea (ROK). This wider program of HSS has four major expected outputs that include (1) quality improvement (2) infrastructure (3) health management systems and (4) communication. The GAVI HSS program will focus on the scaling up nation wide of output 3, but with complementary inputs to the other health sector strategic areas. The linking of the two HSS programs (MOPH/WHO/ROK with GAVI) will be the first step towards a sector wide management approach that will result in the development of a health sector master plan in 2008 through the GAVI program of support.

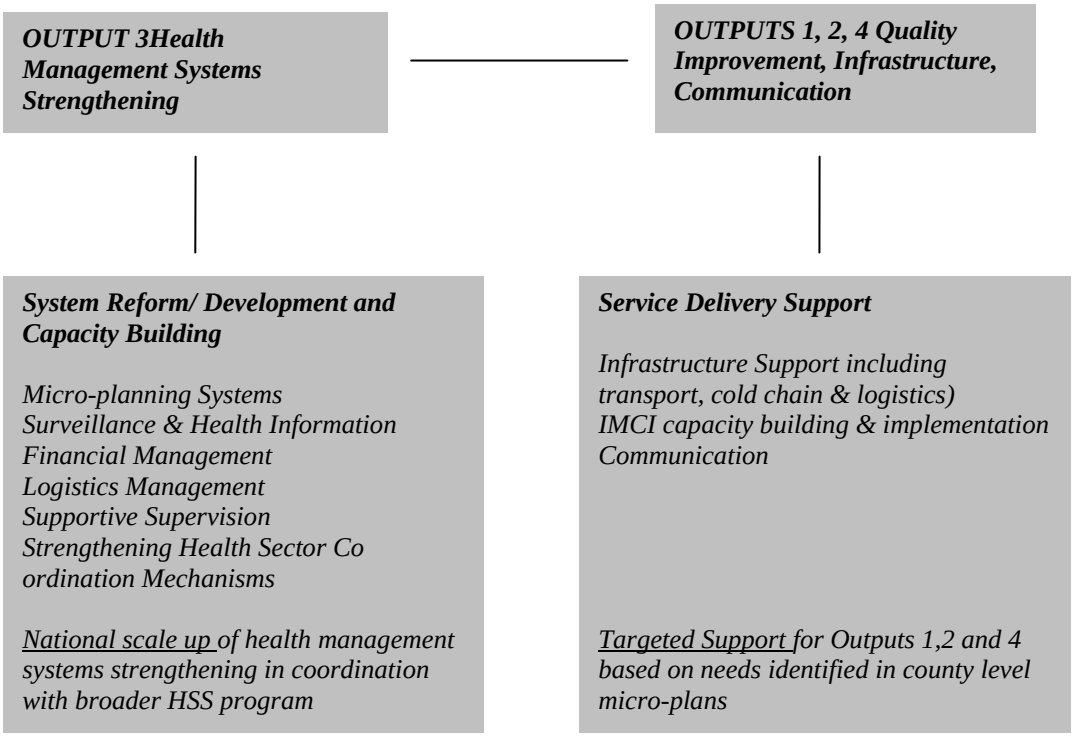
Approach
Strengthening health management systems alone is not sufficient to improve and sustain immunization coverage. However, it is a necessary condition for improving immunization coverage in association with improvements to quality of care, infrastructure and health communication. This has several implications for approach. Firstly, the GAVI program of HSS support will need to link with a wider program of HSS being undertaken by the MOPH and WHO, in order to ensure that all conditions are in place for sustainable improvements to health systems an immunization coverage. Secondly, the requirement to take a wider approach to systems strengthening will mean that national co ordination mechanisms will need to be strengthened to ensure that MOPH Departments and health partners (WHO, UNICEF, GAVI) are targeting their HSS investments in a coordinated and efficient way. The strengthening of national co ordination mechanisms will be the prelude to development of a DPRK health sector master plan in 2008 through GAVI support.

[6] See goal of "Improving Women's and Children's Health in Democratic Republic of Korea: Framework for Multi-Year Assistance" WHO 2005. See also goal of National Immunization Program Strategic Plan 2007 - 2011
[7] County is equivalent to district. There are 202 Counties in DPRK. Ri is the PHC level in the urban area, and Dong is the PHC level in the urban area. There are 7000 Ri in DPRK.

Activities

The two overarching components of the GAVI HSS program are (1) system development and capacity building for health management and (2) support for service delivery at *county* and *ri* level (co-financed with MOPH and GAVI partners WHO & UNICEF). The second component is critical to ensure adequate flow of funds in the early stages of project implementation to enable practical implementation of planning systems developments. The main areas of service delivery support are expected to be supervision, transport, cold chain, communication and IMCI. Specific service delivery needs will be identified in county micro-plans, which will be an outcome of the health management systems capacity building program. The GAVI HSS activities will be integrated into a wider package of HSS support as provided through the sector wide MOPH/WHO "Improving Women's and Children's Health." Major MOPH/GAVI HSS component activities are summarized in the figure below:

Figure 1 Framework of Activities for GAVI supported HSS activities in DPRK



Initial program activities (first 6 months) will involve a health management systems review *(Activity 1)*, followed by the design of integrated management system guidelines for *county* and *ri* level (planning, financing, health information, surveillance, supervision). This will be followed by the implementation of a health management systems capacity building program *(Activity 2)* and the development and implementation of *county* and *ri* micro-plans in selected counties in Year 1. This will be followed by provision of service delivery support based on the needs identified in the micro-plans *(Activity 3)*. Given the scale of the project and the operation of other HSS programs of assistance, GAVI HSS will assist to strengthen health sector co ordination mechanisms, and provide technical support and international exposure for health sector planning development in 2008 *(Activity 4).* HSS support through WHO has already been provided to 60 counties in 2006, and this is expected to reach 90 counties in 2007. In the first year, GAVI HSS will focus on one province that has already been a beneficiary of the WHO HSS assistance. Following evaluation at the end of year 1, the project will be scaled up to cover the remaining provinces in the period 2008 to 2011.

Expected Impact of Health Management Systems Development on Immunization Coverage and Health System Development

In partnership with other key strategic areas of the broader HSS initiative of the MOPH/WHO, the GAVI HSS program of assistance will assist to lay the basis for sustainable improvements in immunization coverage by targeting support for management strengthening at the implementation level of the health system. This linking of management systems development with broader infrastructure, quality improvement and communication support will ensure best value for investment through leveraging of technical capacity and finance from a range of sources in support of a common sector strategy of health systems strengthening. These 4 strategic areas referred to above directly address the main health system barriers to immunization performance as identified in the National Immunization Program Strategic Plan 2007 – 2011.

Management, Monitoring and Evaluation

The project will be co coordinated at central level by the Sector Co ordination committee for maternal, child and neo natal health. Operational aspects of the project will be overseen by the management committee of the Women's and Children's project (MOPH/WHO/ROK). The Immunization Co ordination Committee (ICC) will provide technical oversight of the HSS program, particularly in relation to impact on immunization. The project will be managed and monitored by health bureaus of the MOPH at provincial and county level. The main outcome indicators will be improved DPT-HebB3 and measles immunization coverage. Health system indicators (planning, finance, surveillance, utilization) have also been identified, and attempts will be made to develop a common monitoring framework with (MOPH/WHO/ROK).project in 2007.

Costs

The current value of the MOPH/WHO HSS project is $10 million in 2006 and a further $10 million in 2007 with good prospects for continuation for an additional 3 years. The GAVI contribution to HSS will be an additional $4.32 million over 5 years (.86 M$ per year). This is equivalent to $86,000 per province per year or $4257 per county per year, divided between capacity building for health management systems strengthening and co financing with government and partners for the recurrent costs of implementation of micro-plans at the service delivery level. 32% of the GAVI HSS funds will be taken up by HSS systems development and capacity building, with the remaining balance of funds being targeted to areas of service delivery support that are identified in county micro-plans. TA and administrative costs have also been factored into the budget plan.

Signatures of the Government and National Coordinating Bodies

Government and the Health Sector Strategy Committee (for HSS only)

The Government of DPR Korea commits itself to developing national immunization services on a sustainable basis in accordance with the multi-year plan presented with this document.

Districts' performance on immunization will be reviewed annually through a transparent monitoring system. The Government requests that the Alliance and its partners contribute financial and technical assistance to support immunization of children as outlined in this application.

Ministry of Health:

Signature: ……

Title: Prof. Dr Choe Chang Sik,
Minister of Public Health
Date: 19 October. 2006……

Ministry of Finance:

Signature: ……

Title: Mr Kim Yong Gil……
Vice-Minister, Ministry of Finance
Date: 19 October 2006

National Coordinating Body: Health Sector Strategy Committee:

We, the members of the met on the .....to review this proposal. At that meeting we endorsed this proposal on the basis of the supporting documentation which is attached.

- The endorsed minutes of this meeting are attached as DOCUMENT NUMBER:

Agency/Organisation	**Name/Title**
Ministry of Public Health	Pro. Dr Choe Chang Sik, Minister
Ministry of Finance	Mr Kim Yong Gik, Vice Minister
Ministry of Public Health	Dr Kim Jong Ung, Vice –Minister
Ministry of Public Health	Dr Jang To Gyong, Director Dept. public Health
Ministry of Public Health	Dr Han Pong Won. Dept. Director , Health Planning
Ministry of Public Health	Dr Kim :Pok Sil, Director, Dept. Financ
Ministry of Public Health	Dr Jong Pong Ju, Vice _director, Dept. external affairs
Institute of Management of Public Health	Dr. Ri Yong Hwa, Head of Institute

In case the GAVI Secretariat has queries on this submission, please contact:

Name: Dr Nagi M Shafik Project Officer WHO
Dr Vason Pinyowiwot Project Officer WHO
Title: Medical Officer

Tel No.:+ 85 02 381 7913
……

Address: Munsu Dong, Pyongyang, DPR Korea
……

Fax No.: + 85 02381 7916
……

……

Email: vasonp@whodprk.org
shafikn@whodprk.org
……

……

The GAVI Secretariat is unable to return submitted documents and attachments to individual countries. Unless otherwise specified, documents may be shared with the GAVI partners and collaborators.

Government and the Inter-Agency Coordinating Committee for Immunization

The Government of DPR Korea commits itself to developing national immunization services on a sustainable basis in accordance with the multi-year plan presented with this document.

Districts' performance on immunization will be reviewed annually through a transparent monitoring system. The Government requests that the Alliance and its partners contribute financial and technical assistance to support immunization of children as outlined in this application.

Ministry of Health:

Signature: ……

Title: Dr Choe Ung Jun,
Director, State Hygiene and communicable diseases control board, MoPH

Date: 19 October. 2006……

Ministry of Finance:

Signature: ……

Title: Mr O Myong Il
Dept. Director, Ministry of Finance

Date: 19 October 2006

National Coordinating Body: Inter-Agency Coordinating Committee for Immunization:

We, the members of the ICC met on the 18th September 2006 to review this proposal. At that meeting we endorsed this proposal on the basis of the supporting documentation which is attached.

- The endorsed minutes of this meeting are attached as DOCUMENT NUMBER: 4

Name/Title	**Agency/Organisation**
Dr Jong Pong Ju	Vice-Director, Focal Point for GAVI project, MoPH
Mrs Kim Pok Sil	Dept. Finance, MoPH
Dr Han Yong Sik	MOPH / EPI Manager, MoPH
WHO	Representative WHO Dr Tej Walia
WHO	Dr Nagi M Shafik Project Officer
WHO	Mr John Grundy Short Term Consultant
UNICEF	Dr Ezatullah Majeed project office health
UNCEF	Dr Tuya Muugun project office health
UNICEF	Mr. Rim Yong Chol NPO

In case the GAVI Secretariat has queries on this submission, please contact:

Name: Dr Nagi M Shafik Project Officer WHO Title: Medical Officer
Dr Vason Pinyowiwot Programme officer, WHO

Tel No.:+ 85 02 381 7913 Address: Munsu Dong, Pyongyang, DPR Korea

Fax No.: + 85 02381 7916

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shafikn@whodprk.org

The GAVI Secretariat is unable to return submitted documents and attachments to individual countries. Unless otherwise specified, documents may be shared with the GAVI partners and collaborators.

The Inter-Agency Coordinating Committee for Immunization

Agencies and partners (including development partners, NGOs and Research Institutions) that are supporting immunization services are co-ordinated and organised through an inter-agency coordinating mechanism (ICC). The ICC are responsible for coordinating and guiding the use of the GAVI ISS support. Please provide information about the ICC in your country in the spaces below.

Profile of the ICC

Name of the ICC Immunization Co Ordination Committee DPRK…….

Date of constitution of the current ICC:……..

Organisational structure (e.g., sub-committee, stand-alone): Stand Alone

Frequency of meetings:Quarterly.

Composition:

Function	**Title / Organization**	**Name**
Chair	External Affairs Department MOPH	Dr Jong Bong Ju
Secretary	WHO	
Members	• Dr Jong Pong Ju Dept. of External Affairs • Mrs Kim Pol Sil Dept. Finance • Dr Han Yong Sik MOPH / EPI Manager • WHO Representative • UNICEF Representative • Project Officers WHO and UNICEF	

Major functions and responsibilities of the ICC:

Periodically review new proposals for strengthening immunization
Co ordination of international investment in immunization
Problem solving immunization programming

Three major strategies to enhance the ICC's role and functions in the next 12 months:

1. Critically review health system strengthening proposal development and implementation

2. Oversee implementation of first year of multi year plan

3. Relate immunization programming to health sector planning development

1. Immunization Programme Data

Please complete the immunization fact sheet below, using data from available sources.

Immunization Fact Sheet

Table 1: Basic facts for the year 2005 (most recent; specify dates of data provided)

Population	23,777,000 (2006)	GNI per capita	$US 566 (2006)
Surviving Infants*	401,926 (2006)	Infant mortality rate	23/ 1000 (2005)
Percentage of GDP allocated to Health	5% (2005)	Percentage of Government expenditure on Health	91.2% (2006)

* Surviving infants = Infants surviving the first 12 months of life

Table 2: Trends of immunization coverage and disease burden
(as per last two annual WHO/UNICEF Joint Reporting Form on Vaccine Preventable Diseases)

Trends of immunization coverage (in percentage)						**Vaccine preventable disease burden**		
Vaccine		**Reported**		**Survey**		**Disease**	**Number of reported cases**	
		2004	**2005**	**2004**	**2005**		**2004**	**2005**
BCG		94.9	93.8	95.2	93.8	Tuberculosis*	0	0
DTP	DTP1	75.1	83	75	83	Diphtheria	0	0
	DTP3	71.6	78.7	71.9	78.7	Pertussis	1930	493
Polio 3		98.8	97.4	99.2	97.4	Polio	0	0
Measles (first dose)		95.3	96.2	95.3	96.2	Measles	0	0
TT2+ (Pregnant women)		96.9	94.2	97.6	94.2	NN Tetanus	0	0
Hib3		-	-		-	Hib **	-	-
Yellow Fever		-	-		-	Yellow fever	-	-
HepB3		98.8	NR	99.4	93.8	hepB sero-prevalence*	-	-
Vit A supplement	Mothers (<6 weeks post-delivery)	NR	NR	98.7	99			
	Infants (>6 months)	3,115,000	NR	96.8	98			

* If available ** Note: JRF asks for Hin meningitis

If survey data is included in the table above, please indicate the years the surveys were conducted, the full title and if available, the age groups the data refers to:

Government survey was conducted in 2004 and 2005 in 2 Provinces and 5 counties.

These survey in 2005 indicated "The reports to the national level on the immunization rates prove to be correct at the level of 97%. The number corresponding to 3 %was omitted households covered with supplementary immunization".

Comprehensive Multi-Year Immunization Plan

- A complete copy (with an executive summary) of the Comprehensive Multi-Year Plan for Immunization is attached, as DOCUMENT NUMBER 2
-

The following tables record the relevant data contained in the cMYP, indicating the relevant pages.

Table 3: Current Vaccination Schedule: Traditional, New Vaccines and Vitamin A Supplement *(cMYP pages……)*

Vaccine *(do not use trade name)*	**Ages of administration** *(by routine immunization services)*	**Indicate by an "x" if given in:**		**Comments**
		Entire country	**Only part of the country**	
BCG	At Birth	X		
OPV	6,10,14 weeks	X		
DPT-HepB	6,10,14 weeks	X		
Hep B	At Birth	X		From 2007
JE	3 doses @ 12 months. 1 dose every year until aged 15		X	
Vitamin A	6-59 months	X		
TT1	As early as possible during pregnancy	X		
TT2	1 month after 1st dose	X		
Mumps	1 dose @ 8 months	X		
Pertussis	3 doses @ 3rd,4th and 5th years	X		

Summary of major action points and timeframe for improving immunization coverage identified in the cMYP

Major Action Points *(cMYP pages 11)*	**Timeframe**
1. Counties will provide equitable, efficient and safe immunization services to all infants and pregnant women	2011: 100% counties achieve DPT3 coverage of >80% and BCG-measles drop-out rate of <5% 2011: 100% of counties have installed the solar refrigeration 2011: 100% of counties with no measles vaccine s tock-out. 2007-2011: All counties are supplied with and are using AD syringes and needle cutters 2011: 100% counties have motorcycle
2. Contribute to global polio eradication, measles mortality reduction and neonatal tetanus elimination	2008: Certification of polio eradication in SEARO 2011: 100% of provinces have > 90% TT2 for pregnant women 2011: 10 Provinces have established active measles surveillance
3. The EPI will have sufficient and sustainable funding with established	2007: A national core immunization financing team is established and functioning

adequate, accountable and efficient fund flow	2007: 100% of counties are able to show tracked budget versus expended resource
4. There is sustained demand and reduced social barriers to access immunization services	2007: KAP study on immunization conducted 2011: 100% of counties in the country have integrated communication plans
5. Accelerate introduction of licensed new and under used vaccines against diseases with significant mortality and morbidity in DPRK	2007: Guidelines for timely administration of Hep B 2008: JE is integrated into regular surveillance 2009: Country Decision on new vaccine (HIB, MMR) vaccine are disseminated 2009: All counties will be covered with Hep B DPT combined vaccine
6. To monitor and use accurate, complete and timely data on vaccine-preventable diseases, AEFIs, antigen coverage and dropout rates by counties.	2007: All provinces have established an AEFI investigation team 2008: 30% provinces are able to electronically report on VPDs to national level 2009: All counties are able to report AEFIs on a monthly basis 2009: 50% of counties with less than 10% discrepancy between evaluated and reported DPT3 coverage
7. To strengthen integration of EPI with the health system in terms of planning, surveillance, program co ordination and service delivery.	2007: Guidelines developed for integrated VPD surveillance 2007: Guidelines for integrated micro-plans for county level are developed and disseminated 2007: Vitamin A and de-worming are merged into EPI activity 2008: Review and recommendations completed on strategies for integration of EPI with MCH/IMCI at central and provincial level 2008: Training programs designed and conducted on integrated micro-planning for county level 2008: 100% counties are utilizing integrated VPD report systems 2010: 100% of counties identify package of services to be delivered in integrated micro-plans

Table 4: Baseline and annual targets *(JRF 2004,2005 and MYP 2007 - 2011)*

Number		Baseline and targets							
		Base-year	Year of GAVI application	Year 1 of Program	Year 2 of Program	Year 3 of Program	Year 4 of Program	Year 5 of Program	Year 6 of Program
		2005	2006	2007	2008	2009	2010	2011	20…
Births		401926	ND	426,144	423,864	423,963	429,051	434,199	
Infants' deaths		NR	ND	8,949	8,053	7,631	7,294	6,947	
Surviving infants		401926	ND	417,195	415,811	416,332	421,757	427,252	
Pregnant women		420,000	ND	447,451	445,058	445,161	450,503	455,909	
Infants vaccinated with BCG		401926	ND	426,144	423,864	423,963	429,051	434,199	
BCG coverage*		93.8	ND	90%	95%	95%	95%	95%	
Infants vaccinated with OPV3		391410	ND	426,144	423,864	423,963	429,051	434,199	
OPV3 coverage**		97.4	ND	80%	85%	85%	90%	90%	
Infants vaccinated with DTP3***		316488	ND	426,144	423,864	423,963	429,051	434,199	
DTP3 coverage**		78.7	ND	80%	85%	85%	90%	90%	
Infants vaccinated with DTP1***		419801	ND						
Wastage[8] rate in base-year and planned thereafter		30%	ND	30%	30%	30%	30%	30%	
Infants vaccinated with **3rd dose** of ……			ND						
…… Coverage**			ND						
Infants vaccinated with **1st dose** of ……			ND						
Wastage[1] rate in base-year and planned thereafter			ND						
Infants vaccinated with Measles		384599	ND	426,144	423,864	423,963	429,051	434,199	
Measles coverage**		96.2	ND	80%	85%	85%	90%	90%	
Pregnant women vaccinated with TT+		395987	ND	447,451	445,058	445,161	450,503	455,909	
TT+ coverage****		94.2	ND	80%	85%	85%	90%	90%	
Vit A supplement	Mothers (<6 weeks from delivery)	ND							
	Infants (>6 months)	ND							

* Number of infants vaccinated out of total births
** Number of infants vaccinated out of surviving infants
*** Indicate total number of children vaccinated with either DTP alone or combined
**** Number of pregnant women vaccinated with TT+ out of total pregnant women

Please indicate the method used for calculating TT and coverage:

……
……
……
……

[8] The formula to calculate a vaccine wastage rate (in percentage): [(A – B) / A] x 100. Whereby : A = The number of doses distributed for use according to the supply records with correction for stock balance at the end of the supply period; B = the number of vaccinations with the same vaccine in the same period. For new vaccines check **table α** after Table 7.1.

Table 5: Estimate of annual DTP drop out rates

Number	Actual rates and targets							
	20…	2005	2006	2007	2008	2009	2010	2011
Drop out rate [(DTP1 - DTP3) / DTP1] x 100		30%	30%	30%	30%	30%	30%	30%

Table 6: Summary of current and future immunization programme budget

	Estimated costs per annum in US$ (,000)					
Budget chapter	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Traditional Vaccines	ND	$517,979	$546,423	$539,195	$572,952	$579,828
New and underused vaccines	ND	$2,245,266	$2,365,479	$2,366,029	$2,528,261	$2,558,600
Injection supplies	ND	$513,860	$532,244	$535,938	$558,426	$566,702
Personnel	ND	$1,036,648	$1,057,381	$1,078,529	$1,100,100	$1,122,102
Transportation	ND	$389,074	$514,734	$596,741	$391,477	$452,868
Other routine recurrent costs	ND	$3,583,001	$3,792,735	$3,986,370	$4,024,939	$4,164,541
Vehicles	ND	$317,577	$1,566,166	$430,161	$382,477	$279,719
Cold chain equipment	ND	$808,758	$171,874	$175,895	$179,413	$183,001
GRAND TOTAL	ND	$9,521,897	$10,578,256	$9,740,354	$9,769,824	$9,939,429

Table 7: Summary of current and future financing and sources of funds

		Estimated financing per annum in US$ (,000)					
Budget chapter	**Funding source**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Traditional Vaccines	Govt./UNICEF	ND	517,979	546,423	539,195	572,952	579,828
New and underused vaccines	GAVI	ND	2,245,266	2,365,479	2,366,029	2,528,201	2,558,600
Injection supplies	GAVI / UNICEF	ND	513,860	532,244	535,938	558,426	566,702
Personnel	Govt.	ND	1,036,648	1,057,381	1,078,529	1,100,100	1,122,102
Transportation	Govt. / UNICEF	ND	324,296	399,056	447,788	325,261	361,697
Other routine recurrent costs	Govt. / WHO UNICEF	ND	2,618,304	2,710,979	2,814,582	2,799,419	2,964,905
Vehicles	Govt. / UNICEF	ND	150,000	150,000	150,000	150,000	150,000
Cold chain equipment	Govt / UNICEF	ND	250,000	150,000	150,000	250,000	250,000
GRAND TOTAL		ND	7,656,353	7,911,562	8,082,061	8,284,359	8,553,834

2. Immunization Services Support (ISS)

Please indicate below the total amount of funds you expect to receive through ISS:

Table 8: Estimate of fund expected from ISS

	Baseline Year	Current Year *	Year 1**	Year 2**	Year 3**	Year 4**	Year 5**
DTP3 Coverage rate							
Number of infants reported / planned to be vaccinated with DTP3 (as per table 4)							
Number of *additional* infants that annually are reported / planned to be vaccinated with DTP3							
Funds expected ($20 per additional infant)							

* Projected figures
** As per duration of the cMYP

If you have received ISS support from GAVI in the past, please describe below any major lessons learned, and how these will affect the use of ISS funds in future.

Please state what the funds were used for, at what level, and if this was the best use of the flexible funds; mention the management and monitoring arrangements; who had responsibility for authorising payments and approving plans for expenditure; and if you will continue this in future.

Major Lessons Learned from Phase 1	Implications for Phase 2
1.	
2.	
3.	
4.	
5.	
6.	

If you have not received ISS support before, please indicate:

a) when you would like the support to begin:

b) when you would like the first DQA to occur:

c) how you propose to channel the funds from GAVI into the country:

d) how you propose to manage the funds in-country:

e) who will be responsible for authorising and approving expenditures:

- Please complete the banking form (annex 1) if required

3. Health Systems Strengthening Support (HSS)

Please provide details of the most recent assessments of the health system in your country (or significant parts of the system) that have been undertaken and attach the documents that have a relevance to immunization (completed within three years prior to the submission of this proposal).

- Please also attach a complete copy (with an executive summary) of the Comprehensive Multi-Year Plan for Immunization, as DOCUMENT NUMBER……..

Recent assessments, reviews and studies of the health system (or part of the system):

Title of the assessment	Participating agencies	Areas / themes covered	Dates	DOCUMENT NUMBER
National Immunisation Strategic Plan 2007 - 2011	Dept. Planning, Dept Finance, NIP, UNICEF, WHO	Immunization Planning Health System Barriers to Immunization Performance Financial Sustainability Planning	2007 - 2011	1
Analysis of the Situation of Children and Women in the Democratic People's Republic of Korea	UNICEF, WFP, WHO, UNFPA	Country Context Environmental Health Education Child and Reproductive Health Health System capacity	Final Draft June 2006	2
Financial Sustainability Plan National Immunization Program	Dept. Planning, Dept Finance, NIP, UNICEF, WHO	Country Economic Context Program Characteristics Resource Requirements Financing Strategies	2004	3
WHO Co Operation Strategy	WHO DPRK Govt. International Agencies NGOs	National Health Policy National Health Priorities Anticipated Needs for National Health Development	2004 - 2008	4

The major strengths identified in the assessments:

	Strengths
1.	**THERE IS COMMITTMENT TO UNIVERSAL SOCIAL SERVICE PROVISION BY THE GOVT. OF DPRK.** The Govt. of DPRK "maintains a commitment to the universality of services, including a complete set of entitlements for children and women, against a backdrop of severe and protracted hardships." *(UNICEF – 2006)* (see also details of public health policy in documents 1 and 3)
2.	**THERE IS EXTENSIVE AND COMPREHENSIVE HEALTH SYSTEMS INFRASTRUCTURE**. DPRK has an extensive network of more than 800 general and specialized hospitals at the central, provincial and county levels, and about 1000 hospitals and 6500 polyclinics at *Ri* (rural county) and *Dong* (urban county) levels, with an

	estimated 50,000 section level doctors working at the community level *(WHO Co operation Strategy 2004, FSP 2004, NIP Strategic Plan 2006)*
3.	**THERE HAVE BEEN RECENT IMPROVEMENTS IN CHILD NUTRITIONAL STATUS AND SURVIVAL.** The situation of children appears to have improved gradually over the last 5 years. This is evidenced by sharp declines levels of child malnutrition that have been described in national nutrition surveys between 1998 and 2004. The prevalence of stunting in children has declined from 62.3% in 1998 to 37% in 2004 *(UNICEF 2006).*
4.	**THE NATIONAL IMMUNIZATION PROGRAM HAS DEMONSTRATED IMPORTANT IMPROVEMENTS IN RECENT YEARS.** (1) National estimates accepted by the Ministry of Public Health, WHO and UNICEF suggest a continuing upturn in immunization coverage. National Immunization Days have been extremely successful, and have now evolved into National Child Health Days resulting in similar high coverage levels ofr Vitamin A and deworming medication. *(UNICEF 2006)* (2) The AFP surveillance system is strong. This provides the basis for developing integrated vaccine preventable disease surveillance (including measles and tetanus) *(NIP Strategic Plan 2007 – 2011)*

The major problems with relevance to immunization services identified in the assessments:

	Problems (obstacles / barriers)
1.	**HEALTH FINANCE.** There has been a massive contraction in the national economy in the 1990s, associated with (1) the end of the socialist economic system in the Soviet Union, (2) a series of natural calamities in the same period (flooding and drought), and (3) economic sanctions. This has resulted in serious financial constraints for the functioning of the health sector, particularly in terms of energy supply and hospital and medical supplies. *(FSP 2004) (WHO, 2004), (UNICEF 2006).*(3) DPRK so far has no access to international finance institutions such as World Bank, IMF, Asia Development Bank. Very limited funds ae available for development assistance, and by and large international support has mostly been in the form of humanitarian aid. There are very few international NGOs functional in the country *(WHO 2004).* (5) There is insufficiency of finance for transportation of vaccines and maintenance of the cold chain. Principal weaknesses are lack of transport capital and financing of operational costs. This affects service delivery as well as the operation of the waste management system *(NIP Strategic Plan 2007 – 2011).*
2.	**INFRASTRUCTURE.** The above mentioned problem has resulted in increasingly difficult access to energy supplies. Hospitals and clinics are affected by electricity, water and heating problems. *(WHO – 2004)*. Mobility of health staff and transportation of vaccines is constrained by limited access to transport. Principal weaknesses are lack of transport capital and financing of operational costs. This effects service delivery as well as the operation of the waste management system. Less than 60% of counties have motorcycles. *(Immunization Strategic Plan 2007 – 2011).*
3.	**HUMAN RESOURCES.** Capacity building is a critical factor in the modernization of the health sector. Some practices and health standards are outdated. *(WHO 2004).* Skills and methodologies in public health management (micro-planning and use of health information at county level) are lacking. *(Immunization Strategic Plan 2007 – 2011).* (3) Most current health care managers are not trained in management and supervision *(WHO 2004)*
4.	**MANAGEMENT SYSTEMS.** (1) Data is often lacking in terms of accuracy and completeness. This limits management and planning capacity to identify high risk areas

	and take corrective action. *(NIP Strategic Plan 2007 – 2011) (WHO 2004) (UNICEF 2006).*(2) Efforts to improve existing systems have had limited success due to lack of evidence based planning *(UNICEF 2006)* (3) There is a need at Provincial and Central levels for closer program co ordination of immunization with MCH and IMCI (as well as at service delivery points). *(Immunization Strategic Plan 2007 – 2011).*
5.	**SERVICE DELIVERY.** (1) There are indications of over capacity in hospitals, with hospital beds and human resources somewhat underused. This is related to constraints of quality of care, availability of medicines and in winter, heating. *(UNICEF 2006)* (2) Families in provinces where the immunization coverage is low are often unaware or unconvinced of the need for immunization. The low rate of DPT3 is a concern, and is due to lack of health education and lack of response to AEFI. In some provinces the coverage is stagnating, and there is no timely response to drop out. *(Immunization Strategic Plan 2007 – 2011).* (3) A chronic shortage of medicines and supplies at all levels is an ongoing constraint to quality of care *(WHO 2004, UNICEF 2006)*

The major recommendations in the assessments:

	Recommendations
1.	**FINANCE** • A higher level of spending is vital to the maintenance of an effective health system (WHO 2004) • The EPI will have sufficient and sustainable funding with established adequate, accountable and efficient fund flow *(National Immunization Strategic Plan 2007 – 2011)* • Increase national government financial contribution to immunization *(Immunization Strategic Plan 2007 – 2011)*
2.	**INFRASTRUCTURE** • Health infrastructure will require large scale restructuring and improvement, particularly in terms of electricity, water and sanitation, and provision of basic equipment and supplies *(WHO 2004)* • Investments are required in material and human support in order to strengthen national capacity for management practices and quality control of in order to produce essential drugs locally. *(WHO 2004)* • Due to weak monitoring and break down of cold chain equipment, investment will be required to expand a solar powered cold chain system. *(National Immunization Strategic Plan 2007 – 2011)* • Ensure adequate transport systems for delivering vaccines, service delivery and supervision *(Immunization Strategic Plan 2007 – 2011)*
3.	**HUMAN RESOURCES** • Skills and knowledge of staff needs to be reoriented to new health challenges such as management of emerging communicable and non communicable diseases. *(WHO 2004)* • Urgent attention is needed to capacities for collection, analysis and use of health information on the situation of women and children and the efficiency and effectiveness of health programs *(UNICEF 2006)*
4.	**MANAGEMENT AND ORGANIZATION** • Micro-planning skills need to be developed, and improved data management in

	order to identify high risk areas and take corrective action *(Immunization Strategic Plan 2007 – 2011)* • There is a need to improve systems and capacity to generate and analyze health information in order to ensure better targeting of programs and support policy and system development *(WHO 2004)* • Strengthen national co ordination mechanisms between EPI and the national health system and relevant Ministries *(Immunization Strategic Plan 2007 – 2011)* • Strengthen integration of EPI with the health system in terms of planning, surveillance, program co ordination and service delivery. *(Immunization Strategic Plan 2007 – 2011)* • Monitor and use accurate, complete and timely data on vaccine-preventable diseases, AEFIs, antigen coverage and dropout rates by counties. *(Immunization Strategic Plan 2007 – 2011)* • External resources must be used in a highly targeted manner aimed primarily at improving human capacities as the basis for future development *(UNICEF 2006)* • Conduct a comprehensive situation analysis and accordingly carry out health sector reform to improve and sustain health system performance *(WHO 2004)* • Develop integrated surveillance and planning systems at county level and below *(Immunization Strategic Plan 2007 – 2011)* • The AFP surveillance system is strong. This provides the basis for developing integrated vaccine preventable disease surveillance (including measles and tetanus) *(Immunization Strategic Plan 2007 – 2011)*
5.	**SERVICE DELIVERY** • It may be necessary to focus more on improving quality of care in primary care facilities with timely access to to well functioning and quality referral hospitals at district levels *(WHO 2004)* • The most strategic and effective entry point (for system development) is to continue focusing on early childhood development, inclusive of maternal care *(UNICEF 2006)* • Provide appropriate supplies and equipment to all health facilities *(WHO 2004)* • More information is required on knowledge, attitude and practice to guide updating of the communication strategy *(Immunization Strategic Plan 2007 – 2011)* • Ensure there is sustained demand and reduced social barriers to access of immunization services *(Immunization Strategic Plan 2007 – 2011)*

Progress with implementation of the recommendations of the assessment reports:

Recommendations	**Progress**
1. FINANCE	Under discussion through GAVI HSS is to develop guidelines o financial management at county level and below.
2. INFRASTRUCTURE	A $10 million annual project is being conducted by MOPH / WHO with funding through Republic of Korea to rehabilitate county hospitals across the country (90 counties out of 202 will be supported by 2007) The National Immunization plan proposes to establish a solar powered cold chain – this could be funded by GAVI HSS but is also under consideration by UNICEF. Transport systems are still affected by fuel shortages centrally and in rural areas.
3. HUMAN RESOURCE	Capacity building programs are now being conducted through the

DEVELOPMENT	MOPH / HSS Project (funded through ROK) in IMCI
4. MANAGEMENT	GAVI HSS will likely be the first opportunity to develop a capacity building program in the area of public health management.
5. SERVICE DELIVERY	As stated above, the MOPH / HSS is approaching health system reconstruction nationally in 4 areas of quality improvement, infrastructure, health management and communication.

Components or areas of health systems that are yet to be reviewed (with dates if planned):

	Component or area to be reviewed (with review month / year if planned)
1.	DEMOGRAPHY UNFPA will conduct a health and mortality survey nationally in DPRK in 2007.

Proposed GAVI Health Systems Strengthening Support

In the two boxes below, please give:

(i) a description of the HSS proposal for your country including the objective, the main areas that GAVI HSS will support, how your proposal links to the core themes identified by GAVI, the major action points and activities, and the expected timeframe for success; and

(ii) a justification for why these areas and activities are a priority for strengthening capacity, and how the proposed activities will achieve sustained or increased immunization coverage.

- Please give a summary below, and attach the full document outlining the proposed programme of activities and justification for support (stand-alone document or the relevant parts of existing documents or strategies, e.g. Health Sector Strategic Plan) as DOCUMENT NUMBER 8 " Proposal for Health Systems Strengthening in DPRK."

Description

Goal
The goal of the GAVI supported program of health system strengthening (HSS) support is to promote sustainable gains in immunization coverage through targeted investments in health systems strengthening. This goal is in support of wider national efforts to achieve sustainable social and economic development in DPRK by contributing to improved health status of women and children as well as to the achievements of the Millennium Development Goals 4 and 5 by the year 2015.[9]

Strategic Focus
The strategic focus of this program of assistance is on strengthening health management and service delivery systems at the implementing agency levels of *county* (district) and *ri* (PHC).

Although most resources will be targeted at the *ri* level, involvement of county and provincial managers in systems development, implementation and monitoring will be critical to sustaining the program of HSS over the longer term.

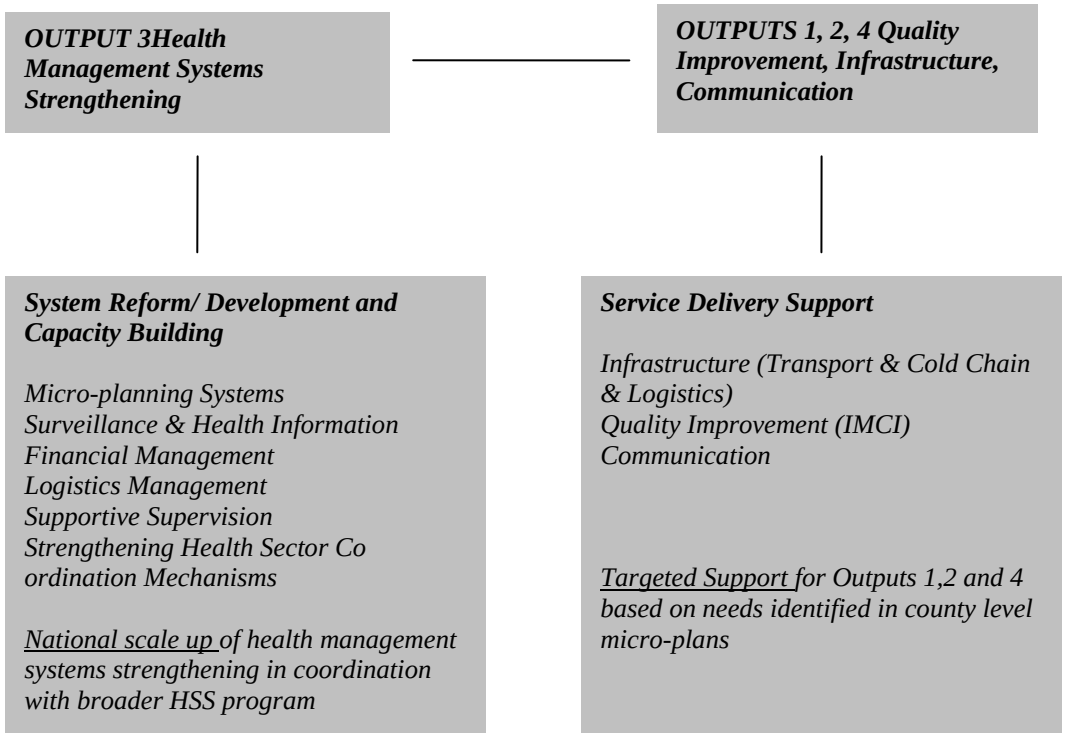
This HSS investment in health management systems will complement a wider national health systems strengthening program being undertaken by WHO in collaboration with the Ministry of Public Health. This wider program of HSS has four major expected outputs that include (1) quality improvement (2) infrastructure (3) health management systems and (4) communication. The GAVI HSS program will focus on the scaling up nation wide of output 3, which has been identified as a major strategic direction in sustaining and improving immunization coverage in the National Immunization Strategic Plan 2007 – 2011. The expected scope of impact of the GAVI program of health management systems strengthening is therefore nationwide.

Approach
Strengthening health management systems alone is not sufficient to improve and sustain immunization coverage. However, it is a necessary condition for improving immunization coverage in association with improvements to quality of care, infrastructure and health communication. This has several implications for approach. Firstly, the GAVI program of HSS support will need to link with a wider program of HSS being undertaken by the MOPH and WHO, in order to ensure that all conditions are in place for sustainable improvements to health systems an immunization coverage. Secondly, the requirement to take a wider approach to systems strengthening will mean that national co ordination mechanisms will need to be strengthened to ensure that MOPH Departments and health partners (WHO, UNICEF, GAVI) are targeting their HSS investments in a coordinated and efficient way.

Activities
The two overarching components of the GAVI HSS program are (1) system development and

capacity building for health management and (2) support for service delivery at *county* and *ri* level (co-financed with MOPH and GAVI partners WHO & UNICEF). The second component is critical to ensure adequate flow of funds in the early stages of project implementation to enable practical implementation of planning systems developments. The main areas of service delivery support are expected to be supervision, transport, cold chain and communication. Specific service delivery needs will be identified in county micro-plans, which will be an outcome of the health management systems capacity building program. The GAVI HSS activities will be integrated into a wider package of HSS support as provided through the sector wide MOPH/WHO "Improving Women's and Children's Health." Major MOPH/GAVI HSS component activities are summarized in the figure below:

Framework of Activities for GAVI supported HSS activities in DPRK



Initial program activities (first 6 months) will involve a health management systems review *(Activity 1)*, followed by the design of integrated management system guidelines for *county* and *ri* level (planning, financing, health information, surveillance, supervision). This will be followed by the implementation of a health management systems capacity building program *(Activity 2)* and the development and implementation of *county* and *ri* micro-plans in selected counties in Year 1. This will be followed by provision of service delivery support based on the needs identified in the micro-plans *(Activity 3)*. Given the scale of the project and the operation of other HSS programs of assistance, GAVI HSS will assist to strengthen health sector co ordination mechanisms, and provide technical support and international exposure for health sector planning development in 2008 *(Activity 4).* HSS support through WHO has already been provided to 60 counties (districts) in 2006, and this is expected to reach 90 counties in 2007 (out of total of 202). In the first year, GAVI HSS will focus on one province that has already been a beneficiary of the WHO HSS assistance. Following evaluation at the end of year 1, the project will be scaled up to cover the remaining provinces in the period 2008 to 2011.

Justification

Rationale

Economic downturn, natural disasters and limited international support have resulted in a decline the quality of health system infrastructure, quality and capacity in DPRK over recent years. These issues represent considerable barriers to immunization performance in terms of management systems and human resource capacity, and financing and infrastructure for operations. The GAVI Health System Strengthening (HSS) program of assistance in DPRK proposes to link with broader MOPH / WHO initiatives to strengthen health systems In order to rehabilitate the system and improve and sustain immunization coverage.

Resource Co Ordination for Health Sector Development

Co ordination and efficiency is the basis for any effective system strategy. This means that the GAVI HSS program will ensure that all management systems component activities (planning, financing, surveillance, supervision etc) are implemented within a framework of an integrated health management systems approach. This principle will guide and co ordinate implementation in relation to guideline development, capacity building and planning and supervision operations.

Each of these four approaches will build the capacity of the MOPH to strategize a sector wide approach to health management, and will create favourable conditions for development a health sector master plan through GAVI support in 2008.

Overall Framework of Activities for GAVI supported HSS activities in DPRK in relation to wider HSS program of MOPH/WHO

OUTPUT 1 **Quality improvement**	**OUTPUT 2** **Infrastructure**	**OUTPUT 3** **Health Management**	**OUTPUT 4** **Communication**

The Women's and Children's Health Project (MOPH/WHO/ROK) will assist all output areas, but with an emphasis on output 2 (infrastructure). GAVI HSS will assist to develop and scale up Output 3 nationally, but with targeted support for Outputs 1,2 and 4 based on needs identified in county micro-plans. UNDP "Capacity Building in the Public Health Sector" will focus on outputs 1 and 3 through Human Resource Development Planning and institutional Development of Essential Drug Policy, Planning and Regulation. This will support the direction towards development of a Health Sector Master Plan in 2008.

Expected Impact of Health Management Systems Development on Immunization Coverage

In partnership with other key strategic areas of the broader HSS initiative of the MOPH/WHO, the GAVI HSS program of assistance will assist to lay the basis for sustainable improvements in immunization coverage by targeting support for management strengthening at the implementation level of the health system. This linking of management systems development

with broader infrastructure, quality improvement and communication support will ensure best value for investment through leveraging of technical capacity and finance from a range of sources in support of a common strategy of health systems strengthening. These 4 strategic areas referred to above directly address the main health system barriers to immunization performance as identified in the National Immunization Program Strategic Plan 2007 – 2011.

In summary, GAVI HSS will support coverage and quality of immunization through:

- Strengthening of *health planning and information systems* will enable detection of areas of low coverage and at risk areas and disease outbreak which will be enable rapid follow up action from county level and above.

- Development of guidelines for *financial management* will improve financial flows which will improve the timeliness of vaccine supplies and waste management for immunization.

- Strengthening of guidelines and procedures for *logistics management* will improve the efficiency and timeliness of vaccine and equipment supply to Ri levels.

- Strengthening the quality of *supervision systems* will improve quality of services through reinforcement of quality standards for health management and service delivery.

- Targeting *service delivery supports* to lower coverage areas through provision of finance and equipment for cold chain, communication, and transport. This will strengthen the capability of county and ri health services to increase demand for services in lower coverage areas, as well as expand the capacity of the health managers to provide quality immunization services with effective vaccines.

The proposed program of assistance `directly addresses the three GAVI theme areas of management and organization (health management systems), human resource development (capacity building) and logistics and infrastructure support (service delivery support).

Please outline the indicators selected to show progress at every stage of the GAVI HSS support.

Table 9: How progress will be monitored

	Indicator(s)	**Data source(s)**
HSS Inputs	1. Numbers of staff trained in integrated health management systems 2. Guidelines developed for micro-planning 3. Guidelines developed / updated for financial management 4. Guidelines developed / updated for integrated VPD surveillance 5. Guidelines developed / updated for supportive supervision 6. Co Ordination Mechanism established for HSS	Project Reporting (Integrated Women's and Children's Health Project and GAVI HSS)
HSS Activities (3 main)	1. % counties that identify package of services to be delivered in integrated micro-plans 2. % counties that implement an	Project Reporting (Integrated Women's and Children's Health Project and GAVI HSS)

	integrated supportive supervision program using agreed guidelines and information feedback procedures 3. % counties that are utilizing integrated VPD report and follow up systems 4. No of Provinces that have a focal point for VPD surveillance and monitoring and is able to use a database for planning immunization activities';	
Outputs (Impact on the capacity of the system)	1. % counties that routinely integrate Vitamin A and De worming into EPI activity 2. % of counties that are able to show tracked budget versus expended resource 3. % Ri that have at least 2 or 3 bicycles 4. % counties identified with 90% functioning cold chain equipment	Project Reporting (Integrated Women's and Children's Health Project and GAVI HSS) Proposed Logistics Information System (currently being trialled by UNFPA)
Impact on immunization	1. % counties with > 80% DPT-HEPB3 2. % counties with > 90% Measles	Routine Health Information System
Impact on child mortality	• Under 5 Mortality	

Table 10: Expected progress in indicators over time *(from pages……):*

Indicator(s)	**Indicators: baseline and targets**						
	Base-year	Year of GAVI application	Year 1 of implementation	Year 2 of implementation	Year 3 of implementation	Year 4 of implementation	Year 5 of implementation
	2005	2006	2007	2008	2009	2010	2011

HSS Inputs 1. Numbers of staff trained in integrated health management systems 2. Guidelines developed for micro-planning 3. Guidelines developed / updated for financial management 4. Guidelines developed / updated for integrated VPD surveillance 5. Guidelines developed / updated for supportive supervision	0	0	150 Yes Yes Yes Yes	450	750	1000	1500
HSS Activities (3 main) 1. % counties that identify package of services to be delivered in integrated micro-plans 2. % counties that implement an integrated supportive supervision program using agreed guidelines and information feedback procedures 3. % counties that are utilizing integrated VPD report and follow up systems 4. No of Provinces that have a focal point for VPD surveillance and monitoring and is able to use a database for planning immunization activities';	0%	0%	10% 10% 10% 10%	30% 30% 30% 30%	60% 60% 60% 60%	100% 100% 100% 100%	100% 100% 100% 100%

Outputs (Impact on capacity of the system)							
1. % counties that routinely integrate Vitamin A and De worming into EPI activity	100%	100%	100%	100%	100%	100%	100%
2. % of counties that are able to show tracked budget versus expended resource	0%	0%	10%	30%	60%	100%	100%
3. % Ri that have at least 2 or 3 bicycles						100%	100%
4. % counties identified with 90% functioning cold chain equipment						100%	100%
Impact on Immunization							
1. DPT- Hep B 3			80%	85%	85%	90%	90%
2. Routine Measles			80%	85%	85%	90%	90%
Impact on Child Mortality *							
1. Under 5							

** Please note – a mortality survey will be conducted by UNFPA in 2007 which will enable updated mortality targets to be set.*

HSS Financial Analysis and Planning

Please indicate the total funding required from government, GAVI and other partners to support the identified activities and areas for support.

- Please refer to existing plans and estimates where relevant (please attach).

Table 11: Cost of implementing HSS activities:

Activity / Area for Support	Cost per year (US$)						
	Year of GAVI application	Year 1 of implementation	Year 2 of implementation	Year 3 of implementation	Year 4 of implementation	Year 5 of implementation	**TOTAL COSTS**
	20…	2007	2008	2009	2010	2011	
Activity 1. Health Management System Review and Development		$ 46,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 146,000
Activity 2. Capacity Building Health Management Systems		$128,000	$ 355,000	$ 355,000	$ 392,000	$ 10,000	$1,240,000
Activity 3. Service Delivery Support		$200,000	$ 800,000	$ 600,000	$ 550,000	$450,000	$2,600,000
Activity 4. Health Sector Co Ordination		$ -	$ 78,000	$ 30,000	$ 30,000	$ -	$ 138,000
Management costs *		$ 18,700	$ 62,900	$ 50,500	$ 49,850	$ 29,250	$ 211,200
Technical support **							$200,000
TOTAL COSTS							**$4,330,200**

* Management Costs at 5% of total project costs
** TA costs have been costed into Activity 1 and Activity 4. See budget for details.

Table 12: Sources of funding (including Government, GAVI & 3 main named contributors):

Funding Sources	Cost per year (US$)						
		Year 1 of implementation	Year 2 of implementation	Year 3 of implementation	Year 4 of implementation	Year 5 of implementation	**TOTAL FUNDS**
		2007	2008	2009	2010	2011	
Government							
MOPH / WHO Republic of Korea		$10,000,000	$10,000,000	10,000,000	$10,000,000	10,000,000	$50,000,000
MOPH EPI		$3,318,437	$3,616,145	$3,830,000	$3,940,000	$4,240,000	$18,944,582
GAVI (HSS proposal)		$392,700	$ 1,320,900	$ 1,060,500	$1,046,850	$509,250	$4,330,200
UNICEF EPI		$1,389,258	$1,343,159	$1,362,433	$1,515,712	$1,539,020	$7,149,581
WHO EPI		$729,620	$766,294	$803,514	$659,611	$677,390	$3,636,430
UNDP (HRD)		$1,000,000					
TOTAL FUNDING		$16,830,015	$17,046,498	$17,056,447	$17,162,173	$16,965,660	$85,060,793
Total unfunded *							

** Please note: In the absence of a health sector review or Medium Term Expenditure Framework, it is not possible to estimate total resource required for health systems strengthening or the funding gap. The above table represents international funds committed. Government funds committed to immunization are demonstrated in the Immunization Strategic Plan.*

Management and Accountability of GAVI HSS Funds

Please describe the management and accountability arrangements for the GAVI HSS Funds

a) Who is responsible for approving annual plans and budgets for use of GAVI HSS?
Annual plans and budgets for GAVI HSS will be reviewed and recommended by the Management Committee of the Women's and Children's Health Project. These plans will then be reviewed by the Planning Department of the Ministry of Public Health. Budget approval will be by the Ministry of Finance.

b) Which financial year is proposed for budgeting and reporting?
January 2007 – December 2007 and annually for the same period up to 2011

c) How will HSS funds be channelled into the country?[10]
HSS funds will be channelled in the same manner as ISS funds. The funds will be channelled through UNICEF to the ministry of Public Health Account.

d) How will HSS funds be channelled within the country?
Funds will be transferred by normal channels through MOPH procedures. Provincial and County levels have specific bank account numbers in which to transfer funds at each level.

d) How will reporting on use of funds take place (financial and activity/progress reports)?
Each level of the health system completes a financial report quarterly. The MOPH at central level summarises and makes financial quarterly reports. Activity reports at lower levels will be included in supervision reports. At the national level, quarterly reports will be made to the Women's and Children's Health Project. Annual activity reports will be integrated within the GAVI annual Progress Report.

e) If procurement is required, what procurement mechanism will be used?
There is a procurement department within the MOPH. The procurement procedures are standardized within this department.

f) How will use of funds be audited?
There is an independent agency that audits financial reports of the MOPH. At each level, the bank responsible for holding MOPH accounts audits the financial transactions of the health bureaus.

g) What is the mechanism for coordinating support to the health sector (particularly maternal, neonatal and child health programs)? How will GAVI HSS be related to this?
There are a range of sector co ordination mechanisms at central and sub national level that are of relevance to health sector and GAVI HSS co ordination. These are:

(1) The project will be co coordinated at central level by the Sector Co ordination committee for maternal, child and neo natal health. (refer to detailed proposal)
(2) Operational aspects of the project will be overseen by the management committee of the Women's and Children's project (MOPH/WHO/ROK) (refer to detailed proposal).
(3) The Immunization Co ordination Committee (ICC) will provide technical oversight of the HSS program, particularly in relation to impact on immunization.
(4) The project will be managed and monitored by health bureaus of the MOPH at provincial and county level. (refer to proposal for details).

Involvement of Partners in GAVI HSS Implementation

The active involvement of many partners and stakeholders is necessary for HSS to be successful.

Please describe the key actors in your country and their responsibilities below. Please include key representatives from the Ministry of Health, Ministry of Finance, the Immunization Programme Manager, the key Bilateral and Multilateral partners, relevant co-ordinating committees and NGOs.

Title / Post	Organisation	Roles and Responsibilities related to GAVI HSS
Minister Prof. Dr Choe Chang Sik	MOPH	Overall responsibility for health sector coordination. Chair of Sector Co ordination committee for maternal, child and neo natal health
Dr Choe Ung Jun	MOPH	Coordination of Communicable Disease Control
Dr Jang To Gyong	MOPH	IMCI Coordination
Mr.O.Myong IL	Ministry of Finance	Responsible for Financial Auditing
Dr Jo Won Ryong	Dept. of Planning	Responsible for Health Planning
Dr Jong Pong Ju	Dept. of External Affairs	Focal Point for GAVI project
Mrs Kim Pok Sil	Dept. Finance	Financial planning
Dr Han Yong Sik	MOPH / EPI Manager	Immunization planning
WHO Representative	Dr Tej Wallia	Health Sector Planning
UNICEF	Dr Majeed Ezatullah	Project Officer Health – Adviser on Proposal Development
WHO SEARO	Dr Pem Namgyal	Regional Medical Officer Immunization - Co Ordination with Region and GAVI Geneva
WHO	Dr Nagi M Shafik	Project Officer Health – Adviser on Proposal Development
WHO STC	John Grundy	Proposal Drafting
WHO	Dr. Vason Pinyowiwat	Medical Officer Communicable Disease & Surveillance

4. Injection Safety Support

- Please attach the National Policy on Injection Safety including safe medical waste disposal (or reference the appropriate section of the Comprehensive Multi-Year Plan for Immunization), and confirm the status of the document: DOCUMENT NUMBER……

- Please attach a copy of any action plans for improving injection safety and safe management of sharps waste in the immunization system (and reference the Comprehensive Multi-Year Plan for Immunization). DOCUMENT NUMBER……

Table 13: Current cost of injection safety supplies for routine immunization

Please indicate the current cost of the injection safety supplies for routine immunization.

	Annual requirements		***Cost per item (US$)***		***Total Cost (US$)***
Year	***Syringes***	***Safety Boxes***	***Syringes***	***Safety Boxes***	
20…					

Table 14: Estimated supply for safety of vaccination with …….. vaccine

(Please use one table for each vaccine BCG(1 dose), DTP(3 doses), TT(2 doses) [1], Measles(1 dose) and Yellow Fever(1 dose), and number them from 6.1 to 6.5)

		Formula	**20…**	**20…**	**20…**	**20…**	**20…**
A	Number of children to be vaccinated [2]	#					
B	Percentage of vaccines requested from GAVI [3]	%					
C	Number of doses per child	#					
D	Number of doses	*A x B/100 x C*					
E	Standard vaccine wastage factor [4]	*Either 2.0 or 1.6*					
F	Number of doses (including wastage)	*A x B/100 x C x E*					
G	Vaccines buffer stock [5]	*F x 0.25*					
H	Number of doses per vial	#					
I	Total vaccine doses	*F + G*					
J	Number of AD syringes (+ 10% wastage) requested	*(D + G) x 1.11*					
K	Reconstitution syringes (+ 10% wastage) requested [6]	*I / H x 1.11*					
L	Total of safety boxes (+ 10% of extra need) requested	*(J + K) / 100 x 1.11*					

[1] GAVI supports the pROKurement of AD syringes to deliver two doses of TT to pregnant women. If the immunization policy of the country includes all Women in Child Bearing Age (WCBA), GAVI/The Vaccine Fund will contribute to a maximum of two doses for Pregnant Women (estimated as total births)
[2] To insert the number of infants that will complete vaccinations with all scheduled doses of a specific vaccine.
[3] Estimates of 100% of target number of children is adjusted if a phased-out of GAVI/VF support is intended.
[4] A standard wastage factor of 2.0 for BCG and of 1.6 for DTP, Measles, TT, and YF vaccines is used for calculation of INS support
[5] The buffer stock for vaccines and AD syringes is set at 25%. This is added to the first stock of doses required to introduce the vaccination in any given geographic area. Write zero under other years. In case of a phased introduction with the buffer stock spread over several years, the formula should read: [F – number of doses (incl. wastage) received in previous year] * 0.25.
[6] It applies only for lyophilized vaccines; write zero for other vaccines.

- If you do not intend to pROKure your supplies through UNICEF, please provide evidence that the alternative supplier complies with WHO requirements by attaching supporting documents as available

5. Additional comments and recommendations from the National Coordinating Body (Health Sector Strategic Committee / ICC)

6. DOCUMENTS REQUIRED FOR EACH TYPE OF SUPPORT

Type of Support	Document	DOCUMENT NUMBER	Duration *
ALL	WHO / UNICEF Joint Reporting Forms	1	2004,2005
ALL	National Strategic Immunization Plan	2	2007 - 2011
ALL	Endorsed minutes of the National Coordinating Body meeting where the GAVI proposal was endorsed	3	2006
If relevant	Endorsed minutes of the ICC meeting discussing the requested GAVI support	4	2006
HSS	A Multi Year Framework for Women's and Children's Health in DPRK	5	2006 - 2007
HSS	Medium Term Expenditure Framework **	N/A	-
HSS	Situation of Women's and Children's Health in DPRK	6	2006
HSS	WHO Co Operation Agreement	7	2004 - 2008
HSS	Proposal for Health Systems Strengthening in DPRK MOPH/GAVI	8	2007 - 2011
HSS	Capacity Building in the Public Health Sector MOPH/UNDP/WHO	9	2007
Injection Safety	National Policy on Injection Safety including safe medical waste disposal (if separate from cMYP)	N/A	
Injection Safety	Action plans for improving injection safety and safe management of sharps waste (if separate from cMYP)	N/A	
Injection Safety	Evidence that alternative supplier complies with WHO requirements (if not pROKuring supplies from UNICEF)	N/A	

** Please indicate the duration of the plan / assessment / document where appropriate*
*** Where available*