1) Introduction

In response to an appeal from the government of DPRK for international assistance following severe floods that occurred during the months of July and August 1995, an MSF team arrived in Pyong Yang on 4th September. Its objectives were:

- to assess the impact of the disaster on the health system in the affected areas.
- to design and propose a project of emergency assistance.

2) Meeting with the National Emergency Commission

On the 4th of September, a briefing about the general situation of the affected areas was held in Koryo hotel, Pyong Yang. The following information was delivered by the National Emergency Commission: The flooding arose during three episodes of heavy rainfall over the periods 7 to 15 July, 26 July to 12 August, and 17 to 20 August (average daily rainfall: 580 mm).

- 145 counties (among the 200 of the country) were damaged,
- 5.2 millions people were severely affected,
- 100,000 households were totally destroyed (500,000 inhabitants).

Most of the damages was to agriculture (crops and livestock) and to infrastructure (especially the water system supply).

Regarding the public health facilities the following structures were reported lost or damaged:

- 85 hospitals
- 214 clinics
- 1351 day care centers
- 120 kindergartens
- important quantities of medicines, medical equipment and vaccines have been destroyed.

In view of such an extensive and exceptional flood damage the government of DPRK require emergency relief aid to the floods victims, giving priority attention to the provision of food and health care services.
3) Field evaluation

3.1) Places and structures visited:

On the 09/05/95

Pakchon county (North Pyongan Province):
- Pakchon county Hospital (damaged).

Huichon county (Chagang Province)
- Kalgol Don hospital (completely destroyed)
- Huichon Factory hospital
- Huichon county hospital

On the 09/06/95

Hiangsan County (North Pyongan Province)
- Hiangsan county hospital (not affected)

On the 09/07/95

Unpa County (North Hwanghae Province)
- Usong Ri (work unit 1) hospital (destroyed).
- Usong Korean Red Cross relief center,
- Unpa County Hospital (completely destroyed)
- Unpa county temporary hospital

3.2) Results of the evaluation

Sources: Administration and public health representatives at the county and provincial level.

Population affected:

- Pakchon County (250 000 inhabitants) 5 000 homeless relocated, 20 casualties.

- Huichon County (272 000 inhabitants): 50 000 severely affected, 6500 homeless relocated, several thousands people injured, 170 casualties.

- Unpa County (92 000 inhabitants): 30 000 severely affected, no casualties reported.

Health infrastructures and staff:

- Pakchon County: 1 county hospital (damaged), 10 Ri hospital (5 damaged or destroyed).

- Huichon county: 1 City hospital, 5 regional hospitals, 32 Ri or Dong hospitals (5 damaged or destroyed).

- Unpa county: 1 county hospital (destroyed), 1 mine hospital, 12 Ri hospitals, 22 industrial or Ri clinics.
Staff

- 50 doctors in Pakchon County Hospital.
- 900 health workers in Huichon County among which were 650 doctors.
- 145 doctors in Unpa County.

The medical and paramedical staff seems to be highly motivated.

Health Services

- Curative activities:

The number of consultations and admissions in the affected area has increased since the flooding. The main causes of morbidity are reported to be diarrhoea, acute respiratory infections and chronic diseases. The incidence rate of diarrhoea diseases has particularly increased and is still of concern. An immunisation campaign against cholera has been done in some areas (Unpa County).

The stocks of allopathic drugs have been destroyed in most of the structures visited and there is an obvious lack of essentials medicines (antibiotics, antalgics, antipyretics, vitamins, ...)

Usually, 50% of healthcare is provided with traditional treatment. But many farms, where these ingredients are produced have been destroyed, supplies of this kind of medicine could be also disrupted.

- Preventive activities

The public health system is very well organised in DPRK. The immunisation coverage for all the EPI antigens is particularly high (over 95%) in the counties visited. However a shortage of vaccine could happen, the local production unit having been affected by the flooding. Another matter of concern is the quality of the cold chain. Most of the refrigerators and freezers having been damaged. Therefore, an epidemic of contagious disease (measles) might appear in the following months. Health education is a routine activity in all the visited sites and ante-natal and postnatal consultations are done on a regular basis. The nutritional status of children under five years old has not been assessed during this visit. It is likely to deteriorate in the following months, if the supply of food to the population is not sufficient.

Water Supply system:

It has not been deeply assessed. In Pakchon County center, the four reservoirs have been damaged or destroyed during the flooding. Since then, one of them (situated 500 meters from the hospital) had been repaired. In Usong Ri (Work unit 1, Unpa County) the well is cracked. In many affected villages, the water supply system has been deteriorated and despite the rapid response of the government trying to settle down transitory installation, epidemics of water-born diseases can still appear.
4) Medecins Sans Frontières Emergency assistance project.

4.1) Target population

The affected population of the affected areas of:
- Pakchon County
- Huichon County
- Unpa County

4.2) Objectives

-to maintain the mortality and morbidity rates of the main diseases at an acceptable level for the area.
-to detect and prevent outbreak of epidemics and malnutrition.

4.3) Activities

In collaboration with the ministry of Public Health, the following activities could be implemented:

- supply of drugs (kits and training of the staff on their utilisation.
- participation to the implementation of an early detection system for infectious diseases and malnutrition.
- evaluation of the water supply system in the health structure and rehabilitation, if needed.
- exploratory missions in others affected areas (Sinuiji) if needed.

4.4) Means

- Drugs and medical materials:
  - medical dispensary kits (1000 people for 3 months).
  - emergency kits (10 000 people for 3 months).
  - others kits (dressing sanitation) or items if needed.

- Staff
  - 3 MSF staff in each county (1 doctor, 1 nurse, 1 logistician-sanitarian).

- Transportation
  - 1 car per county

4.5) Evaluation

After a period of 3 months, an evaluation of the results should be implemented and after agreement between the Ministry of Public Health of DPRK and MSF a new project could be implemented.
5) Conclusion

The DPRK has been stricken by a huge catastrophe, which harmed most of its organisations in particular public health, food supply and water supply systems. An appeal for international assistance has been launched by the government who need help to surmount the following month.

MSF is willing to urgently assist the People of Korea and made a proposal for an emergency medical assistance in three counties amongst the most damaged. A Memorandum of Understanding has been submitted to the government and is under consideration and we hope that it will be accepted as soon as possible.

We would like to thank the People of Korea, Its government and more particularly the Ministry of Public Health and the Ministry of Foreign affairs for their hospitality and their kindness.

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