

## **WHAT HAVE WE LEARNED AFTER THE POLISH FLOOD LESSON IN 1997**

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*Mr. Chairman, Ladies and Gentlemen,*

I would like to share with you the Polish experience during the recent floods that happened in Poland, especially in 1997. My presentation will consist of four parts: 1) basic information about Poland, 2) the flood impacts, 3) our response to the flood, and 4) conclusions, lessons learned, and implementation of new organizational solutions.

### **The Basic Information about the Republic of Poland**

The Republic of Poland is situated in central Europe between the Baltic Sea in the north and the Sudeten and Carpathian mountains in the south.

The Climate of Poland is transitional, between oceanic and continental, with severe winters and hot summers. The largest rivers in Poland are the Vistula and the Odra. The main part of our country is lowland or plateau. Additionally, we have a large number of lakes. The large lakes are situated in northeast part of the country. There are also some uplands in the southern part of the country. The territory of Poland is about 312,000 sq km; the length of the land border is 3,144 km; and the length of the sea border is 528 km. The neighbour countries to Poland are Germany, the Czech Republic, Slovakia, Ukraine, Belarus, Lithuania, and the Russia. The capital of the 40 million population country is Warsaw with 1.7 million inhabitants.

The two major groups of disasters in Poland are:

1. Natural disasters. Fires; wild fires; floods; storms; snow-storms; low temperatures.
2. Two subgroups of man-made disasters:
  - Technical accidents such as. Radiological accidents, chemical pollution, hydro-technical accidents.
  - Construction and communication accidents such as: Collapse of buildings and construction, explosions of gas; accidents in railway, road, air, sea, lake and river transport-routes; public disorder; and a separate subject is terrorism.

### **The Flood Effects in 1997**

#### *Outline of the Emergency Situation*

In July 1997, most southern and western provinces of Poland suffered from serious flooding as a result of which almost 6,000 sq km of land and 1,360 towns and villages were flooded. This flood has been described as the worst in our history

The first heavy rainfall occurred on the 5<sup>th</sup> and continued to the 11<sup>th</sup> of July 1997. The cumulative rainfall locally was 200 to 250 mm; and sometimes in some places, rainfall was even more than 300 mm. It must be emphasized that the average annual rainfall for this area of Poland amounts to only 600 mm per year.

The water level in rivers and reservoirs rapidly increased from the heavy rainfall. Locally, it exceeded 2 or even 3 meters over the highest level which was last recorded in 1903.

The flood wave moved very fast, locally at a rate of 5 meters per second, and overflowed river banks. The situation became very difficult. More than 50 towns and villages were completely under water.

The second heavy rainfalls lasted from the 18<sup>th</sup> to the 22<sup>nd</sup> of July and affected some areas that were

previously flooded. Locally, the level of this rainfall was 100 mm. Obviously the second flood wave escalated the effects of the first flood wave. It was necessary to discharge water from full reservoirs what caused an even higher increase of water levels in rivers downstream from the reservoirs.

#### *The Effects of the Disaster*

The flood caused the death of 55 people and necessitated the evacuation of 164,200 people. Homeless evacuees were accommodated in schools, fire stations, and military barracks; as well as in hostels and in tents. The flood affected 652 communes in 29 provinces (at this time we had in Poland 49 provinces). More than 6 thousand square kilometers were under water, which constitutes nearly 2% of Poland's total territory. This territory has a high population density and extensive industrialization. At this moment, 1.6 thousand sq km still needs reclamation.

Approximately 1,115 km of embankments, 480 bridges, and 1,376 km of roads were damaged or totally destroyed. We had 62 sewage treatment plants, 7 landfill sites and 17 petrol stations completely flooded; while 79 sewage treatment plants and 33 landfills were partially flooded. The flood also caused the death of:

- 8,100 livestock,
- 2 million poultry,
- 4,000 foxes from fox farms,
- 80 animals from zoos, and
- Many wild animals in our forests.

It is worth noting that we did not record any outbreaks of epidemic disease, although some journalists published such information.

#### **National Response**

The Polish Government coordinated all activities through a special Governmental Team. The main tasks of the Team included

- To coordinate the operation of rescue services;
- To integrate action of every potential service which was engaged in preventing and mitigating the flood's effects,
- To provide expertise as well as technical and financial assistance to the provinces affected;
- To estimate the situation and prepare reports for the Government.

Whenever necessary the Governmental Team appointed highly qualified experts to prepare reports on specific problems related to the emergency situation. Additionally, foreign experts from Switzerland, Sweden, Denmark, the Netherlands, the United Kingdom, the USA and international organizations like UN OCHA were also asked for advice.

There was a need to co-ordinate rescue operations with other countries; especially with Germany because the Odra River is the border between Germany and Poland

Nearly 30,000 professional fire fighters, soldiers and policemen, and more than 60,000 volunteers from non-governmental organizations, were involved in rescue, support and humanitarian operations under the authority of Province heads. The human resources were supported by technical equipment that included:

- 275 amphibious vehicles;
- 80 helicopters;
- Over 500 boats and pontoons,
- 3,800 fire-fighting engines,
- 2,000 special cars;
- Over 1000 water pumps including about 100 high capacity pumps, and
- 4 transport aircraft.

It is very important to know that many towns, of which the best example is the town of Slubice, were well protected against the flood, especially in the second stage of the disaster.

Each participant of this workshop knows very well how complicated is the process of co-ordination in flood operations; especially when there are many different units in action. One of the main goals in the flood response operation was the evacuation of people and their property. The quality of this coordination was very good. During the 1<sup>st</sup> flood wave, the majority of affected people were evacuated within two days in the affected area (wet evacuation). During the 2<sup>nd</sup> flood wave, people were evacuated two days before the wave struck (dry evacuation).

### *International Support*

Significant international assistance was received during this dramatic period in Poland. The first transport with international assistance passed the Polish border on the 5<sup>th</sup> day of the disaster; this was spontaneous help from our neighbouring countries.

The first application for international support was sent on the 9<sup>th</sup> day of the disaster by the Chairman of the Governmental Team for Co-ordination of Anti-Flood Activities to the Liaison Officer of the UNDP in Warsaw. Several days later, after a special session of the Polish Parliament, the Polish Foreign Minister appealed through all Polish Embassies and Diplomatic Corps to the whole world for flood assistance. Those activities brought results later than the actions initiated spontaneously by our neighbouring countries. In the second and especially the third week of the flood however, offers began flowing in and experts from several organizations visited Poland such as the UN and US FEMA. The participation of such agencies improved the efficiency of the international support.

Aid offers reached Poland from many organizations and institutions, representing different authority levels and branch organizations. The earliest support came from institutions representing the government level, professional, and non-government institutions including the German THW, the Red Cross, Church Organizations, and Caritas. During the *wet* days nearly 500 convoys and air transports reached Poland.

The most significant support came from Germany with a total of 295 convoys; but this doesn't mean that support from other countries wasn't relevant. We received help from Ukraine, Hungary, France, Japan, the U.K., Slovene, Sweden, Belarus, the Netherlands, Denmark, Austrian, Spain, Lithuania, the USA, Switzerland, Italy, Canada, Belgium, Israel, Norway, and Bulgaria.

### **Organizational Solutions**

As a result of the reform of the National Central Government Structure effective on 1 January 1997, the Chief of Civil Defence is subordinated to the Ministry of Interior and Administration. The civil defence structures were removed from the responsibility of the Ministry of Defence and entered the scope of competence of the Ministry of Interior and Administration.

On 15 April 1998, the Prime Minister created the Committee of the Council of Ministers for Crisis Management (Crisis Management Committee).

On 21 April 1998, the Minister of Interior and Administration created the Crisis Response Group. This is a body responsible for coordination of activities aimed to prevent and minimize threats to the population and the environment from disasters; both natural and man-made.

On 26 November 1998, the Office of the Chief of Civil Defence of Poland changed its name to the Crisis Management and Protection of Population Agency, as executive Agency of the Chief of Civil Defence. Civil Defence has the distinction of protection of population, working plans, installations for public use, cultural heritage, rescue, aid to victims of war, collaboration in fighting against natural disasters, and threats to the environment as well as elimination of their consequences

The Chief of Civil Defence is the Central Body of the State Administration, that is responsible for:

- Preparing projects, foundations, and principles of civil defence activities;

- Assigning general principles of civil defence task actions;
- Co-ordinating specified undertakings and control of executing these tasks at local and self-government levels;
- Giving orders, guidelines, instructions, and regulations within its own area of activities.

The chiefs of Civil Defence at the province and municipal level are obliged to the direction, co-ordination, as well as planning and preparation of civil defence undertakings, executed by government institutions, enterprises and other organisations working in their own areas.

There are civil defence formations in Poland - basic organizational units - which carry out civil defence tasks. They consist of civil defence divisions and other units for performing duties of general and special nature.

Detailed principles of general self-government organization are determined by a Decree of the Council of Ministers on the matter of general self defence of the population.

Based on our solutions, the key to the efficiency of crisis management is an *Information Management System*. The optimum decision for preparation on every level of administration depends on timely, reliable, and comprehensive information with analyses and prognosis. In the spring of this year (1999), the Ministry of Interior and Administration prepared new instructions for the dissemination of information in times of crisis.

During the last two years the following disaster management structures were created to develop better crisis management in Poland:

- The *Crises Management and Protection of Population Agency- Crises Management Center (1)*,
- The Offices of Provinces - *Crises Management and Protection of Population Departments with Provincial Crises Management Centers (16)*,
- Analogous structures at the local level (350).

The National Crises Management System joins together four administrative levels, two central governments and two self-governments. The lowest level is an executive level and three remain coordination levels. The National Crisis Management System is constructed with elements as follows:

#### *Central Level:*

- Crises Management Committee of the Cabinet,
- Crises Response Team of the Ministry of Interior and Administration,
- Crises Response Team of the Ministry of Defense,
- Crises Management and Protection of Population Agency with Crises Management,
- Center subordinated by the Chief of Civil Defense

#### *Provincial and Regional Levels.*

Crises Management and Protection of Population Departments with Crises Management Centers

National Crises Management System based on several fundamental principles, such as:

- Management and responsibility by one person,
- Support by higher levels to lower levels,
- Joining of resources and powers on a particular level,
- Decentralisation of decision and centralisation of coordination.

The Polish system for crisis management is a successfully developing system. It was tested during the latest crises, and will be tested again over time:

- Almost every year Poland has floods on a large scale, which will further test the system,
- Polish government international emergency response to energy transmission systems destroyed

during severe disasters in other countries;

- Coordination of Polish humanitarian relief to other countries including the Ukraine, Honduras, Macedonia, and Albania;
- In international exercises.

Thank you for your attention.

