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Disaster Risk Reduction – Development Case Study **WHO - UNDP Collaboration on Improving Hospital Safety in Tajikistan**

**Disaster Risk Management Program
United Nations Development Program (UNDP) Tajikistan
and
The World Health Organization (WHO) Office in Tajikistan**



Damaged Tavildara Hospital before Placement of Seismic Beam, Tavildara District, Rasht Valley, Tajikistan (Photo by UNDP DRMP)

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Introduction

Disaster risk management is a focus of a number of UN Agencies. Risk management practice is shifting from a predominant focus on disaster warning and response to reducing the causes of

disaster damage. This shift puts a priority on incorporating disaster risk reduction into the actual process of development to improve the resilience and sustainability of developmental efforts in the field of disaster management.

While this progressive approach will yield results over time, there remains an immediate threat of disasters damaging the existing infrastructure, and particularly vital infrastructures used by the health care system. This case study reviews on how the UNDP and the WHO collaborated in Tajikistan on a pilot project to reduce disaster risk and to improve the safety of health care facilities in rural areas of the country. Despite numerous challenges, the collaboration between the WHO and the UNDP through its Disaster Risk Management Program (DRMP) identified a number of useful lessons on implementing risk reduction involving existing infrastructure.

The Programme

The UNDP Tajikistan received funding from the UNDP's Bureau for Crisis Prevention and Response (BCPR) to implement a wide-ranging program involving disaster risk reduction in 2012. Part of this funding was dedicated towards implementing an actual risk reduction projects.

An initial review identified seismic risk reduction as an appropriate target area for the project. Tajikistan faces a significant risk from frequent small intensity seismic events as well as the likelihood of a catastrophic earthquake. An assessment indicated that both educational and health facilities were on high risk because of the types of construction involved and resident populations. UNDP and other organizations already had experience with seismic retrofitting for schools, but similar experience was lacking at the district-level health facilities. Furthermore, the assessment indicated that due to the nature of the population (patients often with limited mobility, lack of capacity to replace with qualified staffs and numerous visitors) residing in the district-level hospitals made an alarming focus for a much needed efforts to reduce seismic risk.

The Collaboration

UNDP through its Disaster Risk Management Programme identified the level of actual risks faced by district level hospitals as the basis for selecting four pilot facilities to conduct DRR activities. In order to fully analyze the level of risks faced by possible pilot hospitals, a detailed vulnerability and safety assessment was required. UNDP identified the Hospital Safety Index¹ (HSI) developed by WHO/PAHO and being utilized by the WHO in Tajikistan as an ideal tool for this assessment work.

UNDP approached WHO on the HSI and found that WHO had been in the process of conducting 33 *Hospital Safety Index* assessments for targeted district hospitals in Tajikistan beginning in 2009. Funding for the HSI work provide by the European Community Humanitarian Office, the Swiss Agency for Development and Cooperation, USAID's Office of U.S. Foreign Disaster Assistance, and the Government of Japan.

¹ WHO (2012) Hospitals Safe from Disasters: Hospital Safety Index, http://safehospitals.info/index.php?option=com_content&task=view&id=30&Itemid=185.

The primary focus of the WHO efforts was on assessing hospital vulnerability and improving capacity through technical support to increase the ability to respond. Limited funding was available for physical risk reduction works, especially for structural improvements. The funding that was available for facility safety improvements did prove to be cost-effective by targeting non-structural elements within critical areas of the hospitals that could fail or that were non-functional.



Mastcho Central District Hospital, Mastcho District, Sughd Region, Tajikistan (Photo by UNDP DMRP)

The HSI findings indicated that the overall current safety levels in the majority of the country's hospitals placed their occupants, and their ability to function during or after a disaster, at significant risk (the case for 50% of the facilities surveyed) or could be considered inadequate to protect the lives of patients and staff. Urgent intervention measures were needed to address these problems. Additional information on the local capacity to mobilize in planning for disaster risk reduction (DRR) was also obtained through the HSI. Drawing from the WHO support, local health system managers produced relevant local plans based on the HSI assessments. As well, a series of public health emergency management trainings were provided during the course of the WHO activities.

Through a series of meetings in early 2012, the UNDP and the WHO were able to use the *Hospital Safety Index* findings to develop a criteria in selecting four hospitals for risk reduction activities. The hospitals in Rushan, Tavildara, Shaartuz and Mastchoh, were all identified as facing significant seismic risk while having management teams, which would enable the BCPR funding to be used effectively.

The WHO and the UNDP collaboration continued through preliminary site visits and discussions on how to effectively use the BCPR funding to reduce disaster risks. Following more detailed technical assessments, the WHO and the UNDP reviewed the risk management options for the four hospitals.

The Challenges

The project faced a number of challenges. The *Hospital Safety Index* assessment and hospital DRR plans significantly facilitated the selection of the facilities to be assisted by UNDP. However, further technical assessments were needed to define the specific risk reduction actions as a basis for developing engineering contracts.

To this end, the UNDP engaged a government institute to conduct a seismic and engineering assessment for each of the four selected hospitals. The work led to the realizations that:

- Technical risk assessment capacities are limited in Tajikistan, leading to a considerable time being required to complete satisfactory assessments, and
- The selected hospitals faced many risks beyond seismic events, often as a result of under-maintenance over the past two decades. Given the significance which these risks posed to basic safety and health care delivery, it was decided to expand the risk reduction effort to improve the overall hospital safety including seismic risk reduction.

The delay in the technical assessments led to the delays in contracting engineering works for the four locations which led to a concern as to whether hospital-specific projects could be completed before the end of 2012. As a result, only one hospital risk reduction contract was executed in 2012, although risk reduction technical assessments were completed for two other facilities. One hospital, in Tavildara, was damaged by an earthquake in mid-2012. Project funds were used to rehabilitate part of the facility while incorporating seismic risk reduction into these works.

Lessons

The WHO - UNDP collaboration worked well in identifying district hospitals for risk reduction activities. The *Hospital Safety Index* was sufficient for an initial screening of the 33 district hospitals to select four of the most vulnerable facilities for further technical assessments. At the same time, it would have been useful to both the UNDP and the WHO if risk reduction efforts would have been coordinated earlier (e.g., through a multi-year plan) so that a closer link between work on the *Hospital Safety Index* assessments, capacity building and the physical work needed to reduce risk could have occurred.

The WHO - UNDP collaboration shortened the hospital selection process by using the WHO risk assessment information and experience with the health system. The impact of the WHO's efforts to reduce risk were augmented by the UNDP's ability to provide significant funding for physical risk reduction actions.

It became evident that risk reduction in the hospital sector is best achieved by addressing a combination of functional, non-structural and structural elements taking into consideration, local conditions and priorities along with available resources. Such an approach increases the cost-effectiveness and the local support of risk reduction as a governance priority.

Completing more detailed technical engineering assessments of each hospital proved to be a challenge and delayed the overall implementation of the risk reduction work. Alternative approaches to completing these technical assessments need to be considered, possibly involving the use of a private engineering company.

Conclusions

The WHO - UNDP collaboration was successful in piloting both seismic and safety improvements to one of the district hospital in Tajikistan (and the second hospital as part of a disaster recovery). Despite the delays in detailed technical assessments, UNDP would have had to spend considerable more time in hospital selection if the WHO *Hospital Safety Index* information was not available.

With the *Hospital Safety Index* information available, the WHO's past and on-going work towards improving the hospital disaster resilience and the UNDP's experience in managing seismic and safety physical improvements to district hospitals, the WHO and the UNDP have laid a strong foundation for further collaboration on reducing disaster risk in Tajikistan.