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Environmental Disaster: Linking Partners To Tuberculosis Prevention Around The Aral Sea

BACKGROUND

The Aral Sea has shrunk to just one third of its original size over the past three decades, creating a humanitarian disaster for millions of people who live around its shores. Soviet-era irrigation canals have siphoned off the waters of the Syr-Darya and Amu-Darya rivers which used to feed the Aral Sea, leaving behind a wasteland of white sand. Salt levels have tripled, devastating the fishing industry and leaving large tracts of farmland unfertile.

Farmers compensated by using more pesticides and fertilizers, but poisoned their soils and left the region's water undrinkable for animals or humans alike. Summers have become hotter and winters colder, since the sea's moderating influence on the regional climate has declined. As ecological and economic stability have crumbled, thirst, malnutrition and disease have followed. More than 20 million people across the Aral region suffer poor health as a result. Female anaemia is as high as 97 per cent. Kidney failure, immunodeficiency and tuberculosis have soared, as well as a host of other diseases attributable to malnutrition. Tuberculosis (TB) infection rates are estimated at between 250-370 cases per 100,000 people - a major epidemic. Hospitals lack the resources to cope. Many of the region's people are resistant to the drugs used to combat TB. Perhaps worst of all, TB sufferers are stigmatized. In Uzbek culture, TB is associated with poverty. TB sufferers are traditionally excluded from employment. Girls from infected families may suffer poor marriage prospects. TB is also known to be a leading killer of those suffering from HIV/AIDS. Hence, many families go to great lengths to hide the fact that family members may suffer from TB.



ACTIVITIES

Drugs are not the only weapons in the war on TB - good nutrition is also essential. Since 1998, the Red Crescent Society of Uzbekistan (RCSU),

supported by the American Red Cross (ARC) and the International Federation of Red Cross and Red Crescent Societies (Federation), has carried out an extensive program of humanitarian food aid in order to reduce the negative impacts of TB among those living in the Aral Sea zone.

■ The programme was based on the findings of detailed sociological research, conducted by the RCSU, in collaboration with the Federation and the Uzbekistan government's Public Centre for Social Ideas in four regions around the Aral Sea (the Autonomous Republic of Karakalpakstan, and the provinces of Khorezm, Navoi and Bukhara). The research analyzed the vulnerability of the populations living around the Aral Sea and recommended a program focused on increasing their capacity to cope with the disaster's consequences. In particular, the study found that nutritional assistance would be the intervention most likely to reduce vulnerability.

■ The ARC, with support from the US government, responded by donating approximately 5,500 tons of basic food aid (oil, rice, beans, high protein corn soy blend, and flour) to the RCSU annually. The RCSU organized around 60 distribution sites and trained their personnel to deliver the relief aid to vulnerable populations both in their homes and in selected institutions.

■ Early 2000, an evaluation indicated that the programme's focus should be sharpened to optimize its effectiveness: TB victims became the principal beneficiaries. To date, 70,000 TB sufferers have benefited from the Red Cross's nutritional assistance.

■ An educational component was introduced in 2002. Knowledge of proper nutrition and hygiene can help prevent people from contracting TB - as well as helping them to recover. Accordingly, the RCSU formed nutrition education teams (NETs), staffed by qualified medical or educational experts and aimed at helping those suffering from TB and their carriers. The NETs have implemented training modules specifically developed for the language and culture of the regions in which they operate. They have also trained community leaders (training of trainers) in order to reach the widest possible audience. To date, nearly 9,000 people have benefited from the Red Crescent's health education.

■ To mark the occasion of World TB Day, over 60 volunteers from Red Crescent youth clubs in the cities of Urgench and Kiva organized a week-long series of theatre productions to promote healthier lifestyles. The actors performed in schools across the country, using popular youth themes to encourage behavioral change - such as

the importance of proper hygiene and nutrition in preventing and curing TB. They were enthusiastically received.

ACHIEVEMENTS

■ According to Uzbek doctors, deaths from TB have fallen in Khorezm province over the past five years, pointing to the program's success in improving recovery rates of TB patients.

■ There has been a considerable increase in the number of newly registered TB patients. This indicates that the program has encouraged individuals to come forward and seek treatment voluntarily. The earlier patients present themselves with the disease, the easier it is to treat.

■ The positive publicity which the program has attracted, along with the program's strong advocacy of the needs of TB victims, has lessened the social stigma associated with the disease.

■ The four successive programs to tackle TB since 1998 have greatly increased the capacity of the RCSU to manage the operational complexities of a large humanitarian relief effort, including the detailed customs clearance, transport, physical accountability and central storage of relief commodities in four regions of the country. This reinforces the RCSU's disaster preparedness to respond to future disasters requiring emergency relief operations.

■ The Uzbek government supported the relief program by providing free transport and storage at distribution sites, and facilitated duty-free customs clearance.

■ The combination of supplemental nutrition and education targeting TB sufferers has complemented drug therapy programs provided by Médecins Sans Frontières and Uzbekistan's TB institutions.

■ Youth volunteers have helped organize communities to fight TB through educating primary school children, producing relevant literature and creating theatre productions focused on building awareness of TB and changing risky behavior.

LESSONS

■ After four years of donating food aid, refining beneficiary lists and eliminating those no longer eligible, there is some evidence of relief dependency.

■ The addition of an educational component to reinforce the impact of free food donations has helped to promote positive behavioral change among many of those affected by TB.

■ Programs of supplemental nutrition and education could also be implemented to reduce the risks posed by other diseases prevalent in

the region (e.g. anaemia, iodine deficiency)

■ Vulnerable people will not retain the educational messages relevant to TB prevention and recovery without ongoing training and outreach by RCSU staff.

■ The costs of the health education component of the program amount to around US\$ 20,000 per year. Ongoing donor funding is needed to sustain this initiative.

CONCLUSION

■ Better nutrition and health education have helped to save lives and improve livelihoods among TB sufferers.

■ Collaboration between the Red Cross Red Crescent, researchers, local government, volunteers, school children and NGOs is crucial to ensure the program is integrated into the lives of ordinary Uzbeks.

■ Extending this two-pronged approach to tackle other diseases in the region would improve lives further.



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70 Towards Effective Earthquake Disaster Reduction: Uzbekistan Case Study

BACKGROUND

Uzbekistan is located in high-level seismic zone. The Tashkent area experienced devastating earthquake in 1966, Gazli area in 1976 and 1984, Pap area in 1984. Last earthquakes in republic took place in the Kashkadarya oblast in 2000 and 2001, affecting thousands persons.

Earthquakes always struck unexpectedly. They bring many troubles, especially to ordinary peoples, which live in vulnerable individual houses, constructed using adobe and stone materials. Especially suffered may be the children, which are studying in schools, constructed from the same materials. Peoples usually become more attentive after major disasters, but tend to forget as time passes by. So question is - what are the missing and urgent tasks in disaster preparedness?

OBJECTIVES

Individuals and communities in many developing countries in general are not well informed on how to cope with disasters, including in mere attitude and behavior practices towards these threats. Thus there is the need to focus activities on improving skills and knowledge of community members, especially in the following areas: awareness raising on disasters and precaution measures at various levels, as well as mobilization of resources for preparedness and response systems at community level.

The analysis of consequences of Kamashi (Uzbekistan) and Lugovaya (Kazakhstan) earthquakes once again has confirmed a high vulnerability of buildings erected from "pahsa" or adobe or silicate brick even at moderate intensity earthquake. These types of buildings without special measures on their strengthening are unsuitable for implementation on earthquake prone territories with intensity 7 and more units. Recent Bam earthquake in Iran once again dramatically showed probable consequences of earthquake impact to such structures.

It is necessary also to point out, that this kind of building in many countries, such as, Iran, Afghanistan, Turkey, countries of Southern America and Central Asia, India, Pakistan is not

controlled by governments of these countries, less involved in anti-seismic strengthening and is restricted by legislative force of the building codes. Though buildings from local weak materials in countryside of these countries are almost basic type.

ACTIVITIES

It was found that that application of safer building practice, rooted in local culture and tradition and climatic conditions, was the key point of effective risk management process. On the base of compilation of national and international experience in the field of seismic resistant construction from local weak materials, the album with technical decisions for reinforcement of self constructed buildings from adobe and stone materials was developed with support of World Bank Provention Consortium grant.

In the framework of GHI project "Central Asia Region Earthquake Safety Initiative" were prepared different materials for public disaster awareness education in local languages- "Basic Disaster Awareness Handbook", "Community Disaster Volunteers Training", "How to construct seismic resistant building yourself?"

ACHIEVEMENTS

Post-event programs enjoy more political appeal and financial support, so implementation of recommended simple measures of reinforcement of existing buildings and new construction found great interest in local communities in Kashkadarya oblast. Authors of initiative carried out training seminars with local masons in many villages of region. Local masons had picked up skills in earthquake safe construction technologies with use of local materials, including the retrofitting of existing houses. Due to simple and affordable recommendations to increase earthquake resistance of vulnerable type of construction this practice was replicated in all region. So regulation of safety of such structures by the way of development of new technologies will give possibility for mass scale implementation of local materials without threat to life of

population. Implementation of recommended simple measures of reinforcement of existing buildings and new construction from weak local materials may essentially mitigate risk in earthquake prone areas.

In all developed educational materials we tried to provide that they correspond to the respective knowledge of those for whom the material is designed. The material is based not only on world, but on local experiences so that the users of the information can relate to it effectively.

LESSONS

Mitigating future disaster impacts involves a wide range of interests, broad participation and action. A very important part of action to reduce our vulnerability is a series of small steps by different approaches. The main factors limiting disaster preparedness is un-sufficient awareness among the stakeholders and lack of confidence in disaster resistant practices.

Distribution of educational materials on various disaster related topics among the community should result in increased awareness among the population for their need of engagement in preventing and mitigating the consequences of disasters. The awareness campaign thus will pave the way for the mitigation projects and attract involvement of many stakeholders.



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