

## The Aral Sea disappears while tuberculosis climbs

The rate of infection here is among the highest in the world. In Uzbekistan about 13 percent of new cases are multi-resistant, while among those patients who have been treated previously for tuberculosis, 40 percent have MDR-TB. This type of tuberculosis hits harder here than most other places in the world. By Petter Hveem  
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**Uzbekistan** - A coughing woman stands outside the tuberculosis sanatorium supervised by Médecins Sans Frontières (MSF) in Nukus in Uzbekistan. The hospital was started and designed in 1988, and is a grey landmark building of the Soviet era.

- People do not want to have anything to do with us, says a young patient. They say there is no cure for the disease. When asked about the future for the 1.5 million inhabitants of the autonomous republic of Karakalpakstan in Uzbekistan, another patient answers: We are waiting for the water. They are living more or less in a semi-desert, where the temperature can drop to about minus 20 degrees Celsius in the winter and go up to +40, even +50 degrees during the summer. The area is flat and bare with brown bushes as far as the eyes can see, with just a few industrial sites and one or two dromedaries. Beyond that there is the semi-desert.

### The Aral Sea is sinking

The shrinking Aral Sea is further north. Aral means island, and the lake now lays sadly alone in the desert. It was not always like this; The Aral Sea was once the 4th largest in-land body of water in the world, and teeming with life. Now it is down to a fourth of its former size, and 10th place on the list.

The ruined lake shows us the megalomania of man in his attempt to tame nature. In order to irrigate the cotton and rice fields in this dry region, the Soviet Union built irrigation channels from the river of Amu Darya. The river was known back through history to the times of Alexander the Great, and was the biggest river in Central Asia, broader than the Nile. Now it does not even reach the Aral Sea, and has lost its greatness. The loss of its major fresh water source has caused the extinction of all the 20 different kinds of species of fish that lived in the Aral Sea. The salt content of the lake is now three times that of the ocean. Salt and pesticides are blown along in the wind, resulting in poor drinking water and pollution of the earth. The United Nations calls it the largest manmade environmental disaster in the world.



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There has been a tremendous growth of the "white death" that strikes the people in Karakalpakstan. The rate of tuberculosis here is now among the highest in the world.

The disaster puts an even heavier burden on a people already hit by a strong economic downturn and health services that lack most everything, now after the downfall of the Soviet regime. All this together creates the tremendous growth for the "white death" that strikes the people in Karakalpakstan. The rate of tuberculosis here is now among the highest in the world.

### **Fishing boats on dry land**

During its heyday, Muynak was a lively place, situated right on the Aral Sea. Fishing boats filled with their catch came straight to the factories and delivered fresh fish to the fisheries and canneries. About 2000 people worked here then. Now the town is 150 km away from the lake. No boats come to the harbour, they are all beached like whale skeletons from another area, stripped of everything.

Reymov Birdiebek works as a medical doctor with MSF at the tuberculosis hospital in Muynak. He has lived and worked in this town for 36 years. At first he was a fisherman for 2 years. During the Soviet regime, anybody taking a higher education had to get some experience as a worker first. He is retiring in August. -I am tired now, says Birdiebek. -But I worry about my patients. What will happen to them? More and more people contract tuberculosis.

There are no cries from seagulls anymore, and nobody is bringing in their daily catch to the village. -I remember the old days, Birdiebek says. At high tide we often had to roll up our pants in order to get from the hospital to the school without getting wet.

From 2001 to 2002 the number of tuberculosis cases increased by nearly 70 percent in Muynak, and there are few youngsters left in the town. -The ecological disaster creates poverty, Birdiebek continues. -And poverty contributes to the spread of tuberculosis.

### **The white death**

The WHO (World Health Organization) has defined the lower limit for a tuberculosis epidemic at 50-70 infected people per 100 000. In Karakalpakstan the number is about 220 per 100 000.

- People have become poorer and cannot afford healthy food, they grow weak and therefore easy victims to tuberculosis, says the doctor Urungul Mendelbaeva at the TB sanatorium in Nukus. Other health problems like anaemia, heart problems and respiratory diseases are rampant in Karakalpakstan.

The four women are dressed in lively colored clothes, but their faces are serious. Two of



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During its heyday, Muynak was a lively place, situated right at the Aral Sea. Fishing boats filled with their catch came straight to the factories and delivered fresh fish to the fisheries and canneries. About 2,000 people worked here then. Now the town is 150 km away from the lake.

them have been treated at tuberculosis hospitals since the mid nineties. They have put green plants in the window of their room.

- The lack of water in the river has worsened the tuberculosis and the general health situation, says Dauletbike Nasirova (aged 64) at the tuberculosis sanatorium. She comes from Kurgazaut, several hours away from Nukus. She is nearly at the end of her intensive phase, and is soon no longer a carrier of the disease. But she still has 4-5 months to go before she is fully treated.

During the Soviet era, people were treated for tuberculosis "the Soviet way".

- The system worked when the economy was stable, and the tuberculosis was under control. But after 1991 the expensive treatment has not worked because the medicines have not been available. As a result, people have terminated their treatment too early. In addition, the growing poverty has resulted in more cases of tuberculosis. The disease has become dramatically more widespread, Roy Male, who heads the MSF project in Uzbekistan says. – We try to convince the government of the importance of DOTS treatment, and to get them to take over the responsibility of the program.

### **Treatment with DOTS**

Currently, people are treated with DOTS (Direct Observation Treatment Short-course), which is recommended by the World Health Organisation (WHO). MSF is supervising the system, and does the training of the staff. DOTS means 2-3 months of intensive treatment in a hospital, until the patient is no longer a carrier of the disease. After that they need 6-8 months of medication, 3 days a week, during which time the patient has to come to a so-called "DOTS-corner" in order to get their medicines. By the end of 2003, the DOTS program will cover a population of 4 million people in Uzbekistan and Turkmenistan.

There are several problems that need to be solved in order to make the DOTS treatment effective in Karakalpakstan.

- Two of the biggest obstacles to a successful DOTS program are the enormous distances and the poor transport facilities, together with the general poverty, which generates a great deal of corruption, says Jean Takken, who is MSF field coordinator in Nukus. – It is difficult for people to get to the places where the medication is being distributed. As for the corruption, the problem is that doctors around here are paid 18 dollars a month. Obviously that is not enough to pay for housing, heating, food and electricity. The doctors therefore prefer the old system, where they can make some extra money, rather than DOTS, where they gain nothing extra. The worst example is at the tuberculosis sanatorium in Nukus where currently only 20 percent of the patients are DOTS patients, while 80 percent are given the old treatment. We are working hard to change this.



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At the tuberculosis centre in Nukus, only 20 percent of the patients are DOTS patients, while 80 percent are given the old treatment. MSF is working hard to change this.

## **A neglected disease**

Not only has the number of cases of tuberculosis grown enormously in Karakalpakstan, in addition drug resistant strains have developed, and are therefore very difficult to treat effectively. MSF are now in the process of establishing a pilot project against multi-resistant tuberculosis (MDR-TB) in Karakalpakstan, the first such programme in Uzbekistan

- The rate of patients with multi-drug resistant tuberculosis here is now higher than in any country in Africa, Roy Male says.

In Uzbekistan about 13 percent of new cases are multi-resistant, while among those patients who have been treated previously for tuberculosis, 40 percent have MDR-TB. This type of tuberculosis hits harder here than most other places in the world because at the end of the Soviet era the supply of medicines was erratic. In this environment, multidrug resistant TB has developed and infected people became resistant to certain types of tuberculosis medication.

- It is therefore of the utmost importance that we treat this type effectively, Richard Mowll, the coordinator of the program says. – It infects a lot of people, and poor people are unable to afford the medication that is available on the world market, although even satisfactory administration of this medication is not presently available in Uzbekistan. We will start out with 50 patients from the local population. In comparison with DOTS, a MDR treatment means 8-10 months in a hospital, and the complete treatment lasts 19-24 months. In about 2-3 years time we will have treated about 100 patients.

The fact that the medicines are quite expensive is a big problem for MDR TB treatment in general, and also that they were developed many years ago and have serious side effects.

-Tuberculosis is a neglected disease, Mowll continues. Patients get very nauseous, and about 10 percent become psychotic, from side effects of these drugs. We therefore need to treat the patients additionally for the side effects that they develop. The pharmaceutical industry has not developed new drugs recently, as TB is a disease of the poor, it sees no profit developing medicines for tuberculosis.

## **Illusionary hopes**

Pjotr Ivanisovich uses a cane. He has become an invalid due to his tuberculosis. He was a technical manager in the fisheries in Muynak, and worked there for 46 years. He is a fourth generation Muynak resident. A ferry was earlier the towns only connection with the mainland. Together with his wife he has a pension of 45 000 suhm (about 35 dollars) a month. As a retired person, Ivanovich is the manager of the Russian culture centre for those Russians still left in the town. Because the diminishing Aral Sea and the collapse of the Soviet regime, more than half of them have left Muynak.

The Soviet propaganda said that the irrigation project would make the water come back every 10 years. When that did not happen, they changed it to every 20 years. Now they say every 40 years.

- Soon the water will be back, says Ivanovich to a fellow citizen that he encounters at the old fishing harbour right outside his house. All around him a heartbreaking sight of stranded fishing boats can be seen. Pjotr Ivanovich hobbles back home.