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## THE ARAL SEA AREA DISASTER: Information on the current status of the crisis

The Aral Sea and the whole Aral Sea Area has achieved worldwide notoriety due to a human-induced environmental disaster. It is a stern warning to the international community and illustrates how fast – in less than 20 years – this environmental disaster can threaten a whole region and a population large enough for a European country.

The Aral Sea tragedy must persuade everyone that, if nations do not realize the full impact of environmental disasters such as the Aral Sea Crisis and do not take practical interventions to stop the further irrational use of nature, to restore the ecological balance and protect the population, they will jeopardize the health of human kind.

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### Geography of Central Asia and Aral Sea Area

Central Asia ([view map](#)) totaling an area of 1.7 million km<sup>2</sup>, lies in the middle of the Eurasian continent, at the crossroads of the old "Silk Road" caravan routes that led from Asia to Europe and from the Far East to the Middle East.

The whole region consists in vast desert and semi-desert lands in the west and alpine mountains in the east. The Aral Sea, which prior to 1960 was the fourth largest inland body of water in the world, now reduced to a destroyed ecosystem.

Today, the Aral Sea which still forms the only water catchment of the region is drying up. The Amu Darya and Syr Darya Rivers originating in the Pamir Mountains, that once were its only inflow source of water no longer reach the Aral Sea.

We refer to the **Aral Sea Area** as it is not only just a sea that is disappearing from the surface of the planet, nor is it only Uzbekistan whom is affected but an entire region irrespective of borders and the health of 5 million people which is severely implicated.

There are three different administrative regions found within the Aral Sea Area:

- The Republic of Karakalpakstan and Khoresm in Western Uzbekistan,

- Dashhowuz Velyat in Northern Turkmenistan and
- Kyzl Orda Oblast in Western Kazakhstan.

All three regions are over 800 km's from their respective capitals, separated by expansive deserts.

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### History of the cotton mono-culture

Prior to the arrival of the colonizing Czarist Russia, the population living in the region of the Aral Sea Area was predominantly nomadic. This way of life was to an extent essential given the carrying capacity of the desert environment. The first task of Russia was to settle the population into agricultural communities. When the Soviets took absolute control of the region further collectivization was developed and different cultural groups were settled in the region, such as Kazaks, Uzbeks, Turkmens and of course Russians.

Beginning in the late 1950's Moscow instituted a regime of cotton mono-culture, whereby the entire way of life became focused on the production of cotton, with few benefits incurred by the populations and the indigenous cultural ways were destroyed. In order to achieve massive increases in cotton production, the Amu Darya and Syr Darya rivers were tapped all the way along in order to feed the ever-thirsty cotton crops.

Largely inefficient and ineffective, the huge demand of water resulted in the drying up of the Aral Sea. On the other hand, Central Asian people have been dependent for ages on these water resources. And irrigated farming always assured the main source of livelihood. Water was the essential source of life.

The Soviet regime also developed the health infrastructure along the same approach - massive, inefficient and unsustainable. These policies made the regional economy totally dependent on the center and resulted in the complete exhaustion of water resources.

In the region, one can speak of a situation of **environmental scarcity**, which is the combination of a drastic environmental disaster and a high population growth rate (increase in demand on the environment and its resources). Hence environmental scarcity heightens issues of equity (a smaller resource pie having to be divided into smaller pieces and a disproportionate amount going to feed the ever thirsty cotton crops).

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### **The environmental degradation in the last 15-20 years**

- the Armu Darya and the Syr Darya no longer reach the Aral Sea,
- In less than twenty years, its surface area has shrunk in half, its water level has dropped 16 meters owing to the decrease by 75 % in the volume of the water flowing into the Sea. The Sea should now be ranked around the tenth largest and falling faster than the mapmakers can keep up,
- a new desert of 38 000 km<sup>2</sup> emerged, increasing the desert area of the region by 30 %,
- the shoreline receded up to 150 km in some places, leaving a thick crust of toxic salt behind (520kg/ha),
- the salinity of the waters have been multiplied by a factor of 3, so that the Sea going from slightly brackish, now has a higher salt content than the oceans.
- salt windstorms are common, and it is estimated that over 75 million tons of salts and dust are spread each year across Central Asia and have been detected as far as the Himalayas. It is estimated that should the Sea completely disappear there will be a devastating 15 billion tons of salts left behind for the wind to carry into the eyes and lives of the population.
- 10 million hectares of pasture have been lost, 50 000 hectares of reeds in the former wetlands have disappeared
- fishing – formerly a thriving economic resource and source of protein has completely stopped, flora and fauna have died off or migrated millions of
- The natural climate balance is affected, with colder winters (down to minus 35 degrees Celsius) and hotter summers (up to 50 degrees Celsius), with an evaporation rate up to 1.700 mm a year, making agriculture impossible without extensive irrigation.

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### **The economical and social decline of the last 10 years**

Not only the environmental disaster resulted in the deterioration of health services and the overall health of the population. There has been a devastating economic collapse:

- Factories closing, unemployment increasing,
- Reduced food production,
- Pervasive poverty, particularly in the rural areas,
- Loss in financial and logistical support from Moscow
- A demise in the standard of living since independence,

The preposterous economical policy of the past is haunting the present. With the break-up of the Soviet Union, the region encounters even greater strain on its ability to adapt and survive.

The water crisis in the region continues on today. Despite countless specialists conducting assessments of the environmental disaster and its ensuing effects, little change has occurred and even less humanitarian assistance has been delivered.

Given the environmental catastrophe, the physical isolation of the region, the strain of independence and the general neglect of the international community, it became evident to MSF that there are drastic health needs arising from the context.

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### **Worrying humanitarian consequences**

- A high percentage of the available water supplies are biologically contaminated.
- Central Asia in general has the worst level of sanitation of anywhere in the world and closely related is a poor level of hygiene awareness and practice.
- The health infrastructure is declining given a poor economic state, caused largely by the environmental disaster and the break-up of the Soviet Union.
- Infectious diseases are increasing (whereby the tuberculosis (TB) situation as quoted by WHO, is the worst in all of Europe and the FSU) ; cholera and typhoid epidemics have broken out in neighboring regions, and sexually transmitted diseases (STD's) are becoming more prevalent in a society not used to and able to cope with the new surges of this decade.
- The region has the highest level of anemia, in terms of prevalence and severity in the world, reducing the general population's ability to fight infection. Pregnant mothers are extremely susceptible to complications during labor.
- Acute respiratory infections (ARI) and diarrheal diseases are the number one and two causes of morbidity and mortality among children, whereby ARI accounts for almost half of all children's deaths.
- Kidney diseases, various cancers and birth defects all show alarming increases, way out of demographic considerations.

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### **Future Prospects**

The population in the region has little prospect for improving their environment and thus their health, unless action is taken.

In fact, as the population continues to grow and demand a higher standard of living, the situation of environmental scarcity continues to spiral

downward. At this point, one can only hope for a potential to adapt to the changed and changing environment.

However, and part of the wider visionary goal of the MSF Aral Sea Area Programme, is to substantiate the fact that there are other causes of a decline in health besides being a victim of a war or living the life of a refugee and that is, in this case, when the environment has played a role in deteriorating human health and the population can not cope. The population living in the Aral Sea Area, as we are on the door-step of the 21st century, stand to be left behind.

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