

## Aral Sea Disaster

The Aral Sea borders Uzbekistan and Kazakhstan and has two rivers running into it, the Amu Daria from Uzbekistan and the Syr Daria from Kazakhstan. It used to be the fourth largest sea in the world but it has been shrinking and now, in some places, the shoreline lies 80km from where it used to be.

The main cause for this is the government; they did not care about the environment, they just saw it as an obstacle to be beaten. Their only aim was to make as much profit as possible, the area around the Aral Sea was mainly desert and had no economy so was making no profit. The government came up with a plan to grow cotton and rice. They built a dam across the river to collect water into reservoirs to be used for irrigating the crops.

Cotton and rice are very thirsty plants so they need a lot of water to grow, the farmers had no restrictions on how much water they could use and used a method called flood irrigation to water the crops which is not a very effective method as a lot of the water is lost, this meant that a lot of water was being used up and wasted. Also almost half of the water was lost or evaporated before it reaches the plant. Because of this the sea was not being supplied with enough water.

Locals could see that the Aral Sea was shrinking but they could not speak out as Uzbekistan and Kazakhstan used to be part of the Soviet Union which was communist. If anyone spoke out against the government they were sent to Siberia where they often died in poor conditions.

This problem is damaging local economy, what used to be fishing villages by the sea are now in the middle of the desert and only 4 out of the 38 species of fish living in the sea have survived due to all the fertilisers and pesticides used by the farmers. As a result there are no local fishermen left out of the 10 000 that used to live around the sea. Another problem is that there is not enough water left for the people as so much is being used for the crops. In some places water is only supplied for 25 minutes a day. As a result everyone is leaving.

In Aralsk the docks are now 50km from the shore and the water is contaminated by salt and chemicals. The number of people with typhoid disease has gone up by 29 times and water has to be shipped in from 150km away which is more expensive. 1500 people have left since the sea has been retreating; the poor water is leading to poor crops, which leads to poor food and diet then poor health. 83% of children are ill and babies are born immaturely, dead or with physical problems.

The salt left behind by the Aral Sea is blown away by the wind (65 million tonnes) and is affecting other areas. Also the climate is heating up as the water from the Aral Sea used to evaporate and keep the air cool so even more water is needed to grow crops, and to drink. A hotter climate means that the water will evaporate even faster and with less water coming in from the rivers the sea will shrink quicker.

Possible solutions to combat the problem are to pipe water from Siberia, but that would cause problems in Siberia and the water might freeze in winter. They could stop growing the cotton but then they would lose  $\frac{3}{4}$  of their cotton trade. The best solutions would be to charge the farmers for the water and make a limit as to how much they can use so that use it more sparingly and carefully rather than wasting it. And use a better method of irrigation like drip irrigation.

The land could be used for something different which uses up less water like rearing cattle or they could use different crop strains which don't require as much water.

The consequences of the government tampering with nature were very severe, increase of serious diseases, birth defects and high infant mortality, collapse of the fishing industry, increase of salt and dust storms among others and it will be hard to correct what they have done. It might be that the Aral Sea never does fully recover.