

## 'NOBODY'S RIVER', EVERYONE'S HEADACHE

By Sergey Naumov

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Brand new 'dachas' or summer cottages line the Koxsu River near the Tien Shan mountains, from where the river heads north for about 57 kilometres before it joins the Chirchuk, a tributary of the Syr Darya.

In the mountains, villagers in the surrounding settlements drink directly from the Koxsu and use its waters for irrigating their fields.

More dachas have sprouted on the Tien Shan foothills over the past decade and almost every new cottage is invariably located closer to the waterfront—where most of the household waste is eventually dumped.

The Chirchik River rushes through deep gorges and a cascade of reservoirs and hydropower stations before joining the Syr Darya, near Chinaz town, where it is barely comparable with its state in the mountains.

The discharge outside Tashkent is composed largely of untreated waste water generated by the 3.5 million residents, run-off from cotton farms and cattle-breeding centres along the river and industrial effluents dumped into the river along its 161 km journey from the mountains.

"We do not have strong anti-pollution laws and the enforcement remains inadequate," says Ivan Kulbitsky, deputy chairman of the Tashkent Regional Environment Protection Office. "We don't have laws to make polluters pay for the clean-up as they do in the West."

Tashkent produces about 0.7 million cubic metres of wastewater and because most of its 20 treatment plants are not operational or under-used, most of the discharge ends up in the river.

A study in 2000 had found that 19 large polluting industries were directly discharging effluents into the Chirchik. Many of the large industries along the river have wastewater treatment plants but most of them are either non-functional, of low capacity or unused.

As many as four government and municipal bodies—the Ministry of Agriculture and Irrigation, the Ministry of Energy (power), Tashkent City and the Municipal Water Supply and Sewage Disposal Enterprise— are responsible for controlling the river pollution.

But officials at these agencies told Asia Water Wire that they themselves did not know what their exact responsibilities and jurisdictions were, and therefore little has been done to effectively clean up the Chirchik.

"There are fewer aquatic life forms in the river compared to 30 years ago," says Mr Alexander Grigoryants, who heads the State Biological Inspection Office of Uzbekistan. "This is a clear sign that all is not well with the river."

Outside Tashkent, water from Chirchik is recycled and used for drinking and for irrigating vegetable plots.

Environmentalists say reusing its water is a high-risk activity because the river also carries toxic pollutants from heavy industries, including fertilizer factories on its banks.

Experts say much of the solid, and toxic wastes, dumped into the river have settled on its bed and blocked its aquifers causing a decline in water levels. The nitrate level in its waters is said to be almost twice the maximum permissible limits.

The highest nitrate concentrations were found in the vicinity of the factories of the Elektrohimprom producing a range of chemicals including ammonium sulphate, ammonium nitrate, carbamide, etc.

Government records had classified the waters downstream of the Elektrohimprom plants as "moderately contaminated" until 2000. Scientists contacted by AWW did not want to comment on the present water quality but many said the high pollution on decreasing water levels.

According to Florina Hanalieva, an Elektrohimprom employee, the group had initially tried biological purification of the wastewater but the practice has been discontinued because it lacked the machinery to remove old plants from the riverbed.

Elektrohimprom's wastewater plant's capacity is far short of that needed for fully treating the water before it is released into the river.

Environmentalists are also worried about the water quality upstream, where they have discovered at least one reservoir built adjacent to a site where chemicals and pesticides containing arsenic and bismuth have been buried.

"We have carried out soil sample tests from the bed of the Charvak reservoir," says Dilbar Zaynutdinova, the head of Armon or the Centre of Lawyers for Environment Protection.

"The concentration of arsenic and bismuth was eight times higher than the maximum permissible limit. Concentration of zinc, chromium and copper is also increasing," she adds.

Her group of lawyers are among the strongest advocates of stricter standards and enforcement of environment protection laws.

The poor state of Chirchik was also a subject for a documentary —'Nobody's River'—by TV journalist Andrey Hamintov. "There are three sites where industrial wastes are buried near the river. Two hold bismuth by-products and another dump holds almost eight tons of arsenic," says Hamintov.

Besides pollution, there are also issues related to water- regulation and low flow that have also hampered the river's health.

Marina Ischenko of the Regional Environment Protection Office has developed a personal interest in the Chirchik and has trekked more than 150 kms along its banks.

"We can prevent further pollution by ensuring compliance by industries with water treatment standards," says Ischenko. "We have relocated 21 industries from the river basin so far, but the larger water regulation issues still need to be addressed."

But water regulation and distribution are complex issues, because there are transboundary implications which have remained a major problem facing the countries in Central Asia.