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## Acta Medica Iranica

2009;47(4) : 99-106

### "DEVELOPING A WATER QUALITY MANAGEMENT MODEL FOR KARUN AND DEZ RIVERS "

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#### Abstract:

The Karun and Dez rivers basin are the largest rivers basin in Iran which are situated in the south west of the country. Karun River originates from Zagros mountain ranges and passing through Khuzestan plain, reaches the Persian Gulf. Several cities lie along its path of them the most important is Ahvaz, the center of Khuzestan province. To achieve water quality goals in Karun and Dez rivers, a water quality management model has been developed through the GIS approach and a mathematical water quality model. In Karun and Dez rivers, water quality has decreased due to heavy pollution loads from Khuzestan province cities and surrounding areas. In this survey, pollution sources, land use, geographic features and measured water quality data of the river basin were incorporated into the Arc-view geographic information system database. With the database, the model calculated management type and cost for each management project in the river basin. Until now, river management policy for polluted rivers in Iran has been first of all to get penalties from pollution sources and secondarily, to construct treatment plants for the pollution sources whose wastewater is released untreated and for which the wastewater quality goal of the Iranian Department of the Environment is not met. Different management projects with a time program were proposed and they were compared with the results of the river quality without any management approach. It became clear that the results based on the management approach were much better than those for the unmanaged condition from the viewpoint of the achievement of water quality goals and cost optimization.

#### Keywords:

Karun . management model

TUMS ID: 3748

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