

Q2) High Level of Ammonia in Yamuna river is a serious concern. Discuss the possible causes, impacts and suggest probable solutions to overcome the problem.

Answer:-

Ammonia is a colourless gas and is used as an industrial chemical in the production of fertilisers, plastics, synthetics, fibres, dyes and other products. It occurs naturally in environment from the breakdown of organic waste matter, and may also find its way to ground & surface water sources through industrial effluents or through contamination of sewage.

Due to discharge from industries in Delhi, Haryana like effluents from dye units, distilleries and other factories in Panipat and Sonapat districts of Haryana, sewage from some unsewered colonies, Yamuna river has been contaminated.

Impacts:-

- ① If the concentration of ammonia in water is above 1ppm it is toxic to fishes.
- ② In humans, long term ingestion of water having ammonia levels of 1ppm or above may cause damage to internal organs.

③ The Shortage of water in Delhi occurs due to a pollution in the Yamuna river.

Hence there is need to take some measures to reduced the impact.

① In July 2018, Delhi government had announced that recycling would be done using the Singapore model to recharge the river at Palla. However, it has not been implemented yet. So ~~we~~ Delhi govt. needs to look into this issue.

② UPPER Yamuna River Board (UYRB) together with Haryana govt. have to take ~~from~~ measure with advanced technology to reduce the pollution in the river.

③ The Delhi Jal Board at present does not have any specific technology to treat ammonia. The only solution it adapts is to reduce the production at three water treatment plants — Wazirabad, Chandrawal and Okhla — which are largely affected by the pollutants.

④ Needs to fix more filters in the regions surrounding to the river, to treat ammonia level. Needs to reduce use of fertilizers.

⑤ Stringent implementation of guidelines against dumping harmful waste

into the river, and making sure untreated sewage does not enter the water are two things Pollution Control bodies are expected to do.

Adopting more organic method recommended by many environmentalists and experts, helps to maintain a sustainable minimum flow, called the "ecological flow" and to sustain underwater and estuarine ecosystems & human livelihoods.