

Environment and Ecology: Ganga Navigation and River ecology destruction.

GS Paper 3: Biodiversity – Conservation, environmental pollution and degradation, environmental impact assessment.

In news: Narendra Modi inaugurated India's first multi-modal terminal on the Ganga river in Varanasi on November 12, the spotlight is back on how navigation of arguably India's greatest river would impact it.



The Multi- Modal Terminal

Varanasi Multi-Modal Terminal or Varanasi Port is an Inland river port situated in the city of Varanasi, Uttar Pradesh. The port is located on the Ganges river. This port is being built under the government's Jal Marg Vikas project. When the construction of the port is completed, there will be a direct link with the Port of Kolkata and Haldia Port. The cargo handling capacity of the port or terminal is estimated to be 1.2 million metric tons per year

(MTPA). The Port was completed in 2018. The port has the ability to anchor two ships at a time simultaneously. The port also has other facilities which include deposit area, commodity transit shade, parking area etc. It also has floating jetty with terminal for passenger transport.

Jal Marg Vikas Project (JMVP)

Jal Marg Vikas Project (JMVP) is a capacity augmentation project of navigation on National Waterway -1 (Allahabad-Haldia stretch of the Ganga-Bhagirathi-Hooghly River system). NW-1 is an inland waterway passing through the States of UP, Bihar, Jharkhand and West Bengal covering major cities like Kolkata, Patna, Howrah, Allahabad, Varanasi, etc. It is an ambitious project on river Ganga, the sole responsibility of development and regulation of which, has been given to the Inland Waterways Authority of India (IWAI).

Jal Marg Vikas Project (JMVP)

Key Objectives

- 1390 KM navigable : **2.2m to 3m LAD & 45m bottom width**
- Critical part of development of **Eastern Transport Corridor** along with DFCC & NHAI.
- Alternate cheaper **modal choice** for cargo & passengers.
- **Socio Economic benefits** – business opportunity & employment generation (**Direct 45,000 & Indirect 90,000**) in the states of Bihar, Jharkhand, UP, & WB.
- **Environmental benefits** – reduced congestion on road & rail including urban municipal traffic
- Reduced emission & fuel consumption

Construction of Multi-Modal Terminals at Varanasi, Sahibganj and Haldia, a new Navigational Lock at Farakka Barrage, development of Kolkata and Patna Terminals under PPP mode, construction of Ferry Terminals and development of River Information Services (RIS) are some of the major projects envisaged under JMVP.

Impact of navigation on river ecology

- ✚ Erosion and dredging will effectively destroy the river's aquatic life and the fisher communities that depend on them. Dredging increases water turbidity and this affects fish. It also affects benthic organisms. Benthic organisms are creatures that live in and on the bottom of the river floor.



AFTERMATH OF OIL SPILL

- ✚ Most ships moving on the Ganga will be carrying freight of mostly coal and crude oil. Spillage of these substances could cause more damage.

ACHIEVERS IAS ACADEMY

- ✚ The passage of huge ships on the river would also cause a lot of noise pollution. This, in turn will affect fish and other wildlife, most notably the Ganges dolphin, one of the Ganga's most famous residents. Dolphins find their way through echolocation. Noise generated by passing vessels would disturb their delicate SONAR and in turn, affect them in ways that we cannot fathom.
- ✚ The JMVP also envisions the construction of barrages and locks on the Ganga. That could reduce water flow in various stretches of the river and make life difficult for wildlife.
- ✚ The government has declared the Gandak to be National Waterway Number 37. Big vessels could disturb gharials, dredging would destroy mid-channel islands or sand bars, vital to the animal for basking and regulating its body temperature. If ships begin to ply the Gandak, it will be catastrophic for the gharial.

Is the Inland navigation plan faulty?

- ✚ Inland water transport is not so cheap. Not when we have options like the railways. It is true that roadways can be costly. But roads also provide last mile connectivity. In case of inland waterways, the expense incurred to transport goods to the moored vessel will ensure that the end amount will be almost equal to transporting goods by road all the way.
- ✚ Inland navigation has not been properly studied in India. For the JMVP, the Environmental Impact Assessment was not scrutinised by independent, international quarters. The government gave the go-ahead to its own project. No environmental clearance was given. Even if the clearance is given, there are a number of binding conditions which must be abided by.
- ✚ In India though, most rivers are monsoon-fed and are at their full only during the rains. One can do inland navigation in India, but it should be homogenised to the depth and flow of the river in question.

Questions

1. Enumerate the prospects and challenges of riverine navigation.
2. River's flow, depth and wildlife are negatively impacted by Inland water navigation. Examine the possible impacts that the riverine navigation would have on the river's ecology.



ACHIEVERS IAS ACADEMY

ACHIEVERS IAS ACADEMY