HEALTH REVIEW – RIVER NARMADA

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Abstract: The aims to check and review the condition of river Narmada at upper basin, middle basin and lower basin. Also study the effects of dams on the river and define the challenges as of now.with defining key issues related to river Narmade this paper try to give short term and long term solution also for that and impact and loss if solution not adopted.

With consideration of Original condition of river we trying to understand the changes in the health of the river. Intense of this research paper is to make available actual facts about Health of Narmada River and aware public, social groups, NGO's, Government officials, state and centre government Leadership about sensitive issues about.

This is the first step towards checking the health of river Narmada. For this activity, from starting point to end point of River Narmada on every 100Km of distance, three times in a year water and soil samples taken and laboratory testing on that samples done.

Following are the objectives of the paper.

a) To study Narmada River Health Index for checking the health status of the river.
b) Review and study importance of river Narmada in historical and spiritual context.
c) To define current key issues related to river Narmada
d) To provide short term and long term strategy for overcoming from the situation and through that, maintain the environment, aqua life , flaura and fauna in their actual condition.

I. INTRODUCTION

Narmada River is a river flowing from east to west. It is the biggest flowing river to the west. The Narmada River is the only river in India, which runs in a rift valley running west amid the Vindhya and Satpura Mountain Ranges despite the fact that the Mahi and Tapti River run through rift valleys but amid other mountain ranges. It runs through the states ofMadhya Pradesh (1,077 km (669.2 mi)), Maharashtra, (74 km (46.0 mi))- (35 km (21.7 mi)) boundary of Madhya Pradesh and Maharashtra and (39 km (24.2 mi) boundary of Madhya Pradesh and Gujarat and in Gujarat (161 km (100.0 mi)).

During the British rule, the river was known as the Narbada or Nerbudda. According to the Periplus Maris Erythraei (circa 80 CE), the river is named as the Nammadus. In Sanskrit Language, Narmada stands for "the Giver of Pleasure".

TINERARY OF NARMADA RIVER

The origin of the river is a tiny reservoir named as Narmada Kund, which is situated on the Amarkantak Hill in Anuppur District of East Madhya Pradesh at an elevation of 1,057 m (3,467.8 ft). The river moves down from the Amarkantak range at the Kapildhara waterfalls on top of a steep rocky formation and rambles in the mountains, running in a winding itinerary through the islands and boulders. The river moves on till the destroyed fortress of Ramnagar arrives. In the middle of Mandla and Ramnagar, (25 km or 15.5 miles) more southeast, the itinerary is relatively direct with unfathomable water free of stony impediments. The Banger meets it from the left. The Narmada River subsequently flows to the northeast in a thin circle in the direction of Jabalpur. Near this city,

following a drop of about 9 meters or 29.5 feet, known as the Dhuandhara (the fall of mist), the river runs for 3 km or 1.9 miles in a thin deep watercourse over the basalt stones and magnesium limestone, known as the Marble Rocks. From a breadth of around 90 meters (295.3 feet) over, the river is constricted in this watercourse of only 18 meters or 59.1 feet. Further than this area till the confluence with the Arabian Sea, the river penetrates three slender basins amid the Vindhyan escarpments to the north and the Satpura Mountain Range to the south. The southern stretch of the basin is broader at majority of the places. The three segments of the basin are segregated by the narrowly advancing row of the escarpments and the Satpura ranges.

Coming out from the Marble Rocks, the Narmada River penetrates its initial productive valley, which stretches for around 320 km (198.8 miles), with a mean breadth of 21.7 miles or 35 km to the south. To the north, the basin is restricted to the Barna-Bareli terrain, finishing at Barkhara hills in front of Hoshangabad. Nevertheless, the hills once more retreat in the Kannod terrains. The riverbanks are around 12 meters or 39.4 feet tall. A number of the major tributaries of Narmada meet it in the first basin, coming from the south. They carry the waters of the northern sides of the Satpura Mountains. Some of the important tributaries of the Narmada River are as follows:

Tributaries in the south
The Shakkar
The Sher
The Tawa (longest tributary)
The Dudhi
The Ganjal
Tributaries in the north

The Barna
The Hiran
The Karam
The Choral
The Lohar

Beneath Nemawar and Handia till Hiran waterfall (also known as the deer's leap), the river is bordered by hills from either sides, and in this span, the nature of the river is diversified. The holy island of Omkareshwar, famous for the Lord Shiva Temple, is the most significant river island in the state of Madhya Pradesh. Initially, the drop is swift and the torrent, speeding up in rapidity, runs over an obstacle of stones. The Cauvery and the Sikta meet it beneath the Khandwa terrain. At two places, at Dadrai, 40 km (24.9 miles), more downward close to Punasa, and Mandhar, around 40 km (24.9 miles), beneath Nemawar, the river plunges over an elevation of approximately 12 meters (39.4 feet).

One or two kilometers additionally downward in the vicinity of Bareli and the passage ghat of the Agra to Mumbai Road, NH-3, the river moves into the Mandleshwar terrain, the second drainage area with a length of around 180 km (111.8 miles) and width of 65 km (40.4 miles) to the south. The northern stretch of the valley is just 25 km or 15.5 miles. The second segment of the valley is split only by the Saheshwar Dhara waterfall. The initial itinerary of around 125 km or 77.7 miles till the Markari falls is joined by a series of torrents and waterfalls from the high plateau of Malwa to the low altitudes of Gujarat plateau. To the west of this valley, the mountains are quite near but shortly they decline.

Beneath Makrai, the river runs between the Narmada district and Vadodara district and subsequently rambles across the resourceful

terrain of Bharuch district in Gujarat. The riverbanks are elevated amid the levels of previous alluvial deposits, solidified earth, sand and fragments of nodular sedimentary rocks. The breadth of the river varies from around 1.5 km or 0.9 miles at Makrai to 3 km or 1.9 miles close to Bharuch and to an estuary of 13 miles or 21 km at the Gulf of Cambey. A previous watercourse of the river, which is 1 km to 2 km (0.6 miles to 1.2 miles) south from the current one, is quite prominent beneath Bharuch. The Orsing and the Karanjan are the major tributaries in the original itinerary. The Orsing meets the river at Vyas and the Karanjan meets at Rundh in Vadodara district of Gujarat, facing each other and creating a Triveni (meeting point of three rivers) on the Narmada. The Bhukhi and Amaravati are the other important tributaries of the river. Just facing the mouth of the Bhukhi is a big coast, known as Kadaria Bet or AliaBet.

The tidal wave is measured up to 19.9 miles or 32 km over Bharuch, where the neap tide surges to around one meter and spring tide surges to 3.5 meters (11.5 feet). The river is passable for ships of the load of 95 tonnes (that is equivalent to 380 Bombay Candies) till Bharuch and for ships till 35 tonnes (140 Bombay Candies) till Ghangdia or Shamlapitha. The tiny ships (10 tonnes) trip till Tilakawada in Gujarat. You will find stretches of shallow water and sand banks at the mouth of the river and Bharuch. The adjoining island of Kabirvad in the river has an enormous Banyan Tree, which encompasses 10,000 sq m or 2.5 acres.

II. KEY ISSUES REGARDING HEALTH OF RIVER NARMADA, REASONS, IMPACT, SOLUTION

A. Water Pollution

Reasons :

1. No sewage tratement plant available on most of the cities and big villages on the bank of the river Narmada.
2. Industrial Pollutant also merge directly in river at lower and middle basin.

Impact :

1. Most of the ghats in the cities and big villages are not suitable for holy bath as earlier on the bank of the river narmada.
2. Aqua Life and flaura-fauna got disturbed and some of the species in endangered.
3. Health of People, aminals and birds got effected

Solution :

Short Term

1. Sattelite and real time monitoring need tobe done and identify this immediately.
2. Fillter need to be installed at different places wherever waste water flows directly in to the river.
3. Sevage Treatment Plant need to be established on warfoot bases at identified locations.

Long Term

1. Policy need to be review and change for abouve issues.
2. Technological Research on the subjects need to promoted for sustainable future of river.

B. Soil Pollution

Reasons :

I. Use of Chemical and pestisides in farming nead the river catchement areas
II. Use of plastic and pop near the catchement area
III. Chemical Industrial waste and cities garbage dumping in the catchment areas.
IV. Health of People, animals and birds got effected.

Impact :

I. Soil got polluted and major ecological issues already created.
II. Aqua Life and flaura-fauna got disturbed and some of the species in endangered.

Solution :

Short Term

I. Immediately stop the farmers near the catchment area from using chemicals and pesticides for farming.
II. Baned the plastic and pop near catchment area.
III. Immediately stop the third reason with Awareness of local government body and district level administrative action.

Long Term

I. Policy need to be review and change for abouve issues.
II. Cooperative movement of organic farming
III. Technological Research on the subjects need to promoted for sustainable future in coordination with state govenmnet departments and district level administration.

C. Lower Basin Issues

Issues :

a) Threaten to Fishery Industry
b) Salt level in Soil gradually increase in lower basin catchment area and agriculture land near catchment area
c) Aqua Life near to finish their existence
d) Flaura and Fauna near to finish their existence
e) people avoide to maintain cultural heritage
f) Local Administration not support for taking prompt action at local level for public interest
g) Severe health issues observed in people near bank of river , animals and birds forced to die or change their recidence.

Resons :

a) Fish Like HILSA come in sweet water of river in monsoon time for increase species but due to almost zero water flow from SSD environment for fisheries industries effected badly and thousands of fisherman family and their economy got effected.
b) Almost Zero water flow at Lower Basin area and Back water from sea got stored in lower basin area.
c) Increase in sault level in water and polluted water in river its hard to maintain life of aqua.
d) Increase in sault level in water and polluted water in river its hard to maintain life of flaura and fauna.
e) Due to polluted and salted areas and water in lower basin
f) Administration may want to avoid conflicts or having no sensetionalisation for critical issues of public interest.

Solution :

Short Term

a) Bhadbhoot Barage without corruption
b) More technological and Local expertise need to be involve in Bhadbhoot Barage Project
c) Water Trety need to be revised immediately as Case registered from one of the city Bharuch, Gujarat – Bharuch citizen council Team, and proper water flow need to be maintain from middle basin to lower basin.
d) Local Administration and Local Government bodies need to take some promt decision as suggested by the people working on the issues day to day bases and without any hesitation need to support the true activities in favour to save aqua life , flaura-fauna and river lower basin as in condition of river not a sevage.

Long Term

3. Policy need to be review and change for abouve issues.
4. Technological Research on the subjects need to promoted for sustainable future of river.

III. CONCLUSION

Everything gose wrong due to building of Dams on river is a myth and people and media need to understand the sensational issues related rather than this.River Health Index and physical condition of ghats , make us for thing to focus on the issues like , to stop sevage water flowing in to river immediately, to stop industial pollutant flowing in the river immediately, to stop railway staff from throwing garbage and food wastes from bridge areas from running train, bane plastic and pop use at ghat areas immediately.

Short term and long term solutions need to be implemented as policy.Many issues of lower basis would be solve after completion of Bhadbhoot Barage Project.

Key issues and their impact assessment shows that from the long time loacal level bodies of government not focus on the sevage water plant so mostly ghats polluted most due to that.

Lower basin soil and water pollution issues can be avoided after bhadbhoot barrage project but its need to be fast not the way all projects of the government, special focus and non corrupted activities need to be done by government for achive actual results suggested for key issues in paper.

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