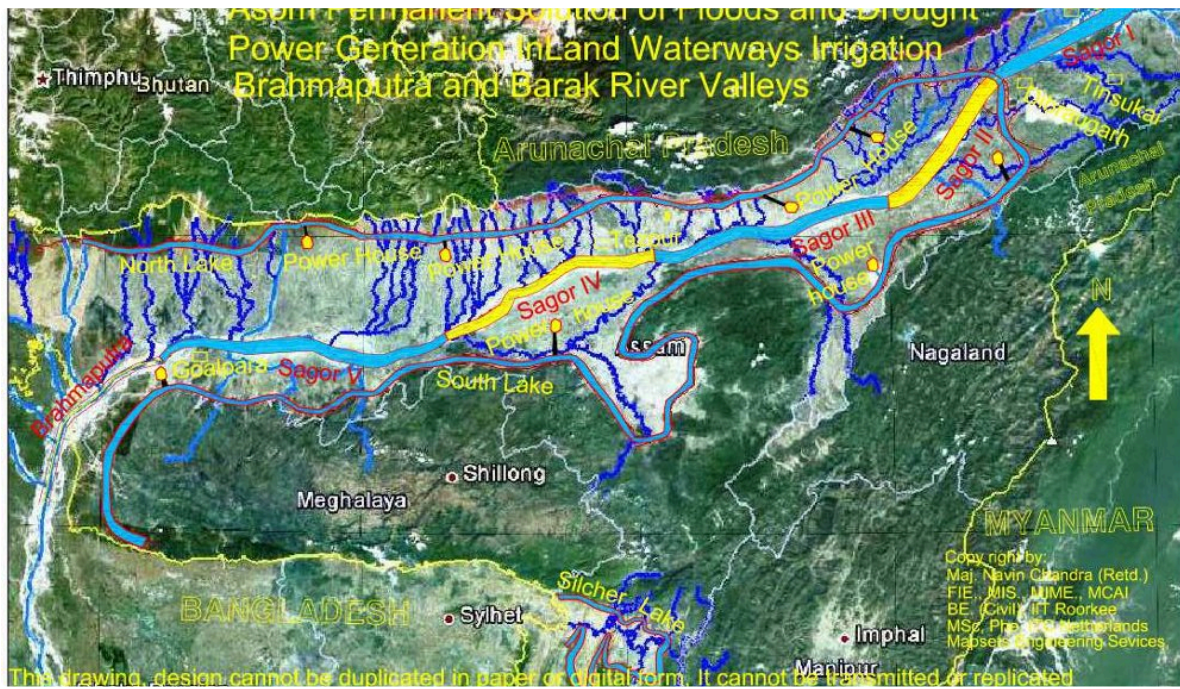


A concept for permanent flood solution



Comments 2



Navin Chandra 6 October 2012 Updated 27 Aug 19040 views

The basic approach is to convert Bhramaputra itself into a series of reservoirs. In General the width of Bhramaputra varies between 12 Km to 20 Kms and bed slope is very less, therefore it is possible to convert different reaches of Bhramaputra into big reservoirs by constructing rock filled earthen embankment dams of about 20 m height. We find that five reservoirs can be constructed from Jonai to Goalpara. Flood discharge of Bhramaputra, which is about 100,000 cubic mtrs/s near [Bangladesh](#) border can be brought down to [normal](#) average i.e. 19300 cubic meters/Sec and excess flood water gets stored in "Asom Sagar" and North Lake and South Lake which are lakes running north and south sides of Assam and are joined with "Asom Sagor I" in upper reach.

Lake [as](#) proposed in BARAK River Valley will [stop](#) floods in BARAK valley. We have named it [as](#) Silchar Lake.

"ASOM SAGOR" - benefits:

1. **SELF SUSTAINABLE FINANCIALLY LUCRATIVE SOLUTION** for stopping flood and drought, power generation, employment and revenue generation Assam.

2.STOPPING FLOOD - Asom Sagor completely stops floods in Asom and along with it the massive destruction caused by it in terms of property and lives every year will also [stop](#). There will be no damage to existing infrastructure system like [roads](#), railway line, power distribution etc. which in turn will be great saving. The huge amount spent on flood management schemes and rehabilitation of the people will also be saved.

3.ELIMINATING DROUGHT -Water from North Lake and South Lake will irrigate drought prone areas and will eliminate drought condition in entire Asom thus increasing [agriculture](#) production and economic condition of people of Asom.

4.EMPLOYMENT GENERATION: The project will create huge employment opportunity, about 150 lakhs people are going to get direct or indirect employment for all the time during the completion of the project and after completion.

5.POWER GENERATION: Northern and Southern Asom lakes has got vast potential of power generation by utilizing the flood water. Micro [Hydel](#) Projects can be set up on North side and South side of Bhramaputra. Future needs of power of Asom can also be met by Asom lakes.

6.AGRICULTURE: Lakhs of acres of additional areas will get irrigation. A planned [crop](#) pattern will result in increased yield and efficient water management.

7.DRINKING WATER: Entire Asom villages will be able to get drinking water. Availability of power will make it possible for remote areas also. Most of the places it will be possible to provide drinking water through gravity flow.

8.INDUSTRIAL GROWTH: Availability of power will give boost to small and medium scale industries and [agriculture](#) based industries.

9.EXPRESSWAY: Expressway will be constructed on the banks of North lake and South lake. This expressway will connect East-West through the Chicken neck. High speed two lane on each embankment. Expressways cut down the time of travel drastically and expected to collect huge amount of revenue through Toll.

10. FISHERIES: Fresh Water fishes will be produced. It will give boost to the fisheries because Asom Sagor is a big reservoir.

11. TOURISM: It will give boost to the tourism in [state](#). It is expected that international tourism will increase and lot of foreign exchange will come to the [state](#). Attractive tourist spots will be developed along the Asom Sagor. Water sports like water skiing, [swimming](#), SCUBA Diving can be provided in the Sagor.

12. NO INVOLVEMENT OF any other [state](#).

13. **INLAND WATER NAVIGATION:** Asom Sagor and North & South Lakes will be used for in land water navigation. High speed motor boats can be run in Sagor from East to West and North to South.
14. **TEA PRODUCTION:** More tea garden's in [Barak](#) Valley can [start](#) production once the flood is controlled by constructing Silchar Lake.

PERMANENT SOLUTION FOR FLOODS AND DROUGHT, POWER GENDERATION, INLAND WATER WAYS, IRRIGATION

1. **BHRAMAPUTRA RIVER VALLEY** The present scheme has been created to cater for heavy floods of Bhramaputra river which is about 100,000 cubic metre/s near Bangla Border. Basic concept of the scheme is to convert Bhramaputra river itself in to big reservoirs by constructing rock filled earthen [Embankment](#) Dams across the river. We propose creating 5 reservoirs in the Bhramaputra between Jonai and Gopalpara. First Earthen [embankment](#) dam proposed to be constructed is down stream of Dibrugarh. Approximate location of Earthen [embankment](#) dams and reservoirs is marked on satellite imagery.

The average discharge of Bhramaputra river is about 19,300 cubic meters/ sec and floods can reach [over](#) 100,000 cubic metres per second.

2. Depths and Water levels of Bhramaputra.

Under ordinary flow conditions maximum depths of main channel with respect to adjacent islands or flood plains areas are typically in the range of [10](#) to 20 meters, tending to increase in down stream direction. Rise in water [level](#) from low water to high flood stages are around [8](#) metres.

3. **Suitable sites for [Embankment](#) Dams** The proposed embankment dams are to be constructed where depth is minimum and width is maximum so that we get maximum storage area and minimum embankment dam height. The height of embankment dams proposed by us is about 20 meters. Taking average width of Bhramaputra about 15 Kms, the capacity of SAGOR-I to store water, presuming an average depth of water available for storing flood [waters as](#) 5 meters, and length which is about 61 km is upto 4575×10^6 cubic meter.

There are 28 major tributaries on north right bank and 16 on South or [Left](#) Bank of Bhramaputra river.

The maximum discharge of the river at Pandu (in Guwahati) on 23.08.62 was 72,794 m³/S and the mean annual flood discharge and dry season discharge of the river at Pandu is 51156 m³/S.

4. SILT SOLUTION

Spillway dams will be constructed across all the tributaries and Bhramaputra to work [as](#) “SILT TRAP” with a aim to [stop](#) silt from reaching reservoirs. Dredging of silt will be required to be done from silt traps or suitable silt excluders are to be provided to remove silt from silt traps.

5. MAJULI ISLAND

MAJULI ISLAND, which is Asom’s cultural capital and one of the largest river island in the world will be protected from flood water of Bhramaputra and also from any kind of flood water of lower Subhansari river.

6. KAZI RANGA

Kazi Ranga [National](#) Park will be saved from the flood [waters](#) of Bhramaputra River and the animals of the park will be protected.

7. RESERVOIRS, NORTH & SOUTH LAKES

The North Lake and South Lake are all along north and south of Asom in which all the tributaries will fall. North and South lake form part of First Reservoir above Dibrugarh and their bed [level](#) is about 105 m. We have named the reservoirs on Bhramaputra [as](#) Sagor. First Reservoir is named [as](#) SAGOR-I. In first phase SAGOR-I, the upper most reservoir should be constructed and simultaneously north lake and south lake construction should be done. The project is to be completed in phases.



8. STORAGE CAPACITY OF SAGOR (RESERVOIRS) Taking average width [as](#) 15 Km and average available depth [as](#) 5 meters for storing excess flood water [as](#) a sample for estimation we take Sagor-I:



9. Taking Bhramaputra's flood discharge upstream of Dibrugarh [as](#) 80,000 cum/s and allowing 30,000 cumec/s through spillways in regular channel.



Thus one days excess flood discharge can be accommodated in storage reservoir-I i.e. SAGOR-I. Similarly calculations can be done for all reservoirs and lakes.

Taking width of North Lake and South Lake, [as](#) 500m and the height of embankment dams [as](#) 15m, we calculate the storage capacity of lakes.

Keeping 4m [as](#) dead storage [level](#), 9m [as](#) live storage and 2m free board and the length of North Lake = Appx. 525 Kms.

Width at dead [level](#) = $500 + 24 = 524\text{m}$

Width at highest [level](#) = $500 + 78 = 578\text{m}$

Average width = $(524 + 578)/2 = 1102/2 = 551\text{m}$

Flood water storing capacity of the lake = $525 \times 1000 \times 551 \times 9 \text{ m}^3 = 2603.5 \times 10^6 \text{ m}^3$

Similarly we can calculate for south lake and Silchar lake.

PROPOSED [X](#)-SECTION OF NORTH LAKE, SOUTH LAKE AND SILCHAR LAKE WITH EMBANKMENT. Asom north lake and Asom South lake also form part of SAGOR-I

Following general precautions will need to be taken during construction.

1. All the lakes will be constructed in sections of appx. 50Kms in length each, such that every section can be isolated in case of emergency and for maintenance.
2. We will have sufficient number of sluice gates to control water [level](#) in each section. In case of emergency and during floods, water [level](#) can be brought down by opening these gates.
3. Cross drainage will be provided by making culverts and aqueducts.

9. BARAK RIVER VALLEY

Silchar and surrounding areas fall under [Barak](#) river valley. The quoted maximum discharge of approximately [6,700 m³/s](#) near the [east](#) end of the plains and 7800 cubic meters per second near the west end.

We propose constructing a lake all around periphery of the valley keeping bed [level](#) at about 30 M above MSL and by using embankment dam of about 15m high. An expressway/ Highway to be constructed for communication on top of embankment. Lake will be used for inland water communication also. [Excess](#) flood [waters](#) of [Barak](#) river and flood [waters](#) from [Meghalaya](#) rivers and [Tripura](#) rivers will be stored in this lake and subsequently used for hydropower generation.

The capacity of the lake will be sufficient to cater for all excess flood [waters](#) and will thus [stop](#) flooding of the area.

© by [Author](#). The [author](#) can be reached at:
navinchandra09@gmail.com.

Navin Chandra

ON THIS DAY

Tribute paid to senior journalist Bolen Bora

NE shinning in Puducherry

Janajati Suraksha Manch oppose ST moves to 6 communities

Zaraguri GBF defeat Dhupdhara Academy 6-5

International day of girl child observed

RELATED

Tribal Organisations Protest in Kokrajhar, Demand Protection of Land Rights in BTR

Dangerous Pothole on Haripara Road Puts Commuters at Risk

WWF report finds 73% decline in monitored wildlife populations over 52 years

Rongmei Community Holds 8th Cultural and Freshers' Meet in Guwahati

GPS Study Maps Elephant Movement Across Assam, Highlights Key Corridors
