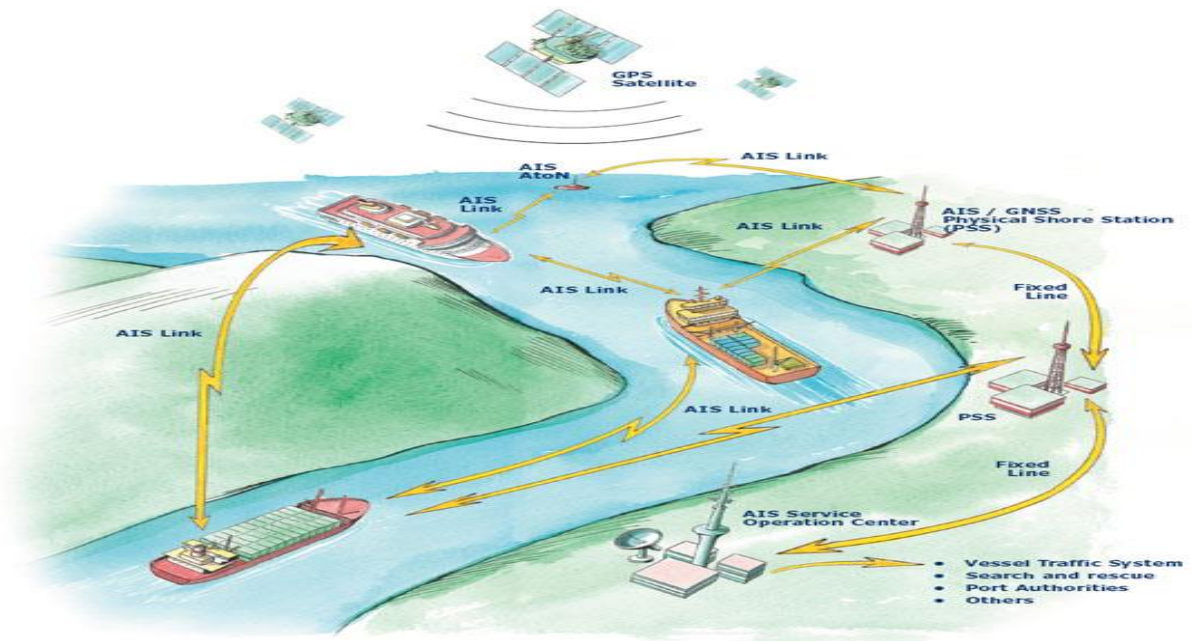




**Expression of Interest (EOI) for providing Microwave Communication for River Information System Connectivity across Phase-I , Phase-II and Phase-III.**

**EoI No: IWAI/HY/RIS Connectivity/2021**



**INLAND WATERWAYS AUTHORITY OF INDIA**  
(Ministry of Ports, Shipping & Waterways, Govt of India)  
A-13 Sector-1 Noida 201301

July 2021

## DISCLAIMER

1. This EoI is neither an agreement nor an offer by the Inland Waterways Authority of India (IWAI) to the prospective Applicants or any other person. The purpose of this EoI is to provide information to the interested parties that may be useful to them in the formulation of their Bid pursuant to this EoI.
2. IWAI does not make any representation or warranty as to the accuracy, reliability or completeness of the information in this EoI and it is not possible for IWAI to consider particular needs of each party who reads or uses this EoI/tender document. This EoI/tender document includes statements which reflect various assumptions and assessments arrived at by IWAI in relation to the consultancy/work. Such assumptions, assessments and statements do not purport to contain all the information that each Applicant may require. Each prospective Applicant should conduct its own investigations and analyses and check the accuracy, reliability and completeness of the information provided in this EoI/ tender document and obtain independent advice from appropriate sources.
3. IWAI will not have any liability to any prospective Consultancy Company/ Firm/Consortium or any other person under any laws (including without limitation the law of contract, tort), the principles of equity, restitution or unjust enrichment or otherwise for any loss, expense or damage which may arise from or be incurred or suffered in connection with anything contained in this EoI/tender document, any matter deemed to form part of this EoI/ tender document, the award of the Assignment, the information and any other information supplied by or on behalf of IWAI or their employees, any Bidders or otherwise arising in any way from the selection process for the Assignment. IWAI will also not be liable in any manner whether resulting from negligence or otherwise however caused arising from reliance of any Applicant upon any statements contained in this tender document.
4. IWAI will not be responsible for any delay in receiving the Bids. The issue of this EoI/ Tender document does not imply that IWAI is bound to select an Applicant or to appoint the Successful Applicant, as the case may be, for the work/ consultancy and IWAI reserves the right to accept / reject any or all of Bids submitted in response to this EoI/ Tender document at any stage without

assigning any reasons whatsoever. IWAI also reserves the right to withhold or withdraw the process at any stage with intimation to all who submitted the Application.

5. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. IWAI accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.
6. IWAI reserves the right to change / modify / amend any or all provisions of this EoI/ Tender document. Such revisions to the EoI/ Tender document/ amended EoI/ Tender document will be made available on the website of IWAI.

## 1. Background

- i) **Inland Waterways Authority of India (IWAI) is a statutory body under the Ministry of Shipping, Government of India. IWAI was set up in 1986 with a mandate to develop and regulate the inland waterways of the country primarily declared as National Waterways. In March, 2016, the Government of India has declared 106 new National Waterways in addition to the existing five National Waterways by the National Waterway Act, 2016**
- ii) **Inland Water Transport (IWT) has the potential to form the most economic, reliable, safe and environment friendly mode of transport. When developed for use by modern inland waterway vessels, it can reduce investment needs in rail and road infrastructure, promote greater complementarities in the riparian states, enhance intra-regional trade and, through increased economies of scale, significantly reduce transport costs for the benefit of the entire economy and India's global trade competitiveness.**
- iii) **IWAI established River Information System akin to system under operation in countries like the Netherlands, Belgium, Germany, China & USA. The Phase-I of the RIS, which is first of its kind in India, was implemented and launched by IWAI on the Sagar- Farakka stretch of National Waterway-1 on River Ganges to facilitate safe and accurate navigation in line with the recommendations of PIANC vide In Com WG 125 (Part 3): Guidelines and Recommendations for River Information Services (2012).**

iv) After the successful implementation of RIS Phase-I, IWAI undertook setting up of another 2 phases of RIS viz RIS Phase-II (Farakka-Patna stretch) and RIS Phase-III (Patna-Varanasi stretch).

## **2. OBJECTIVES OF SETTING UP RIS**

*The objective of setting up of RIS is as follows: -*

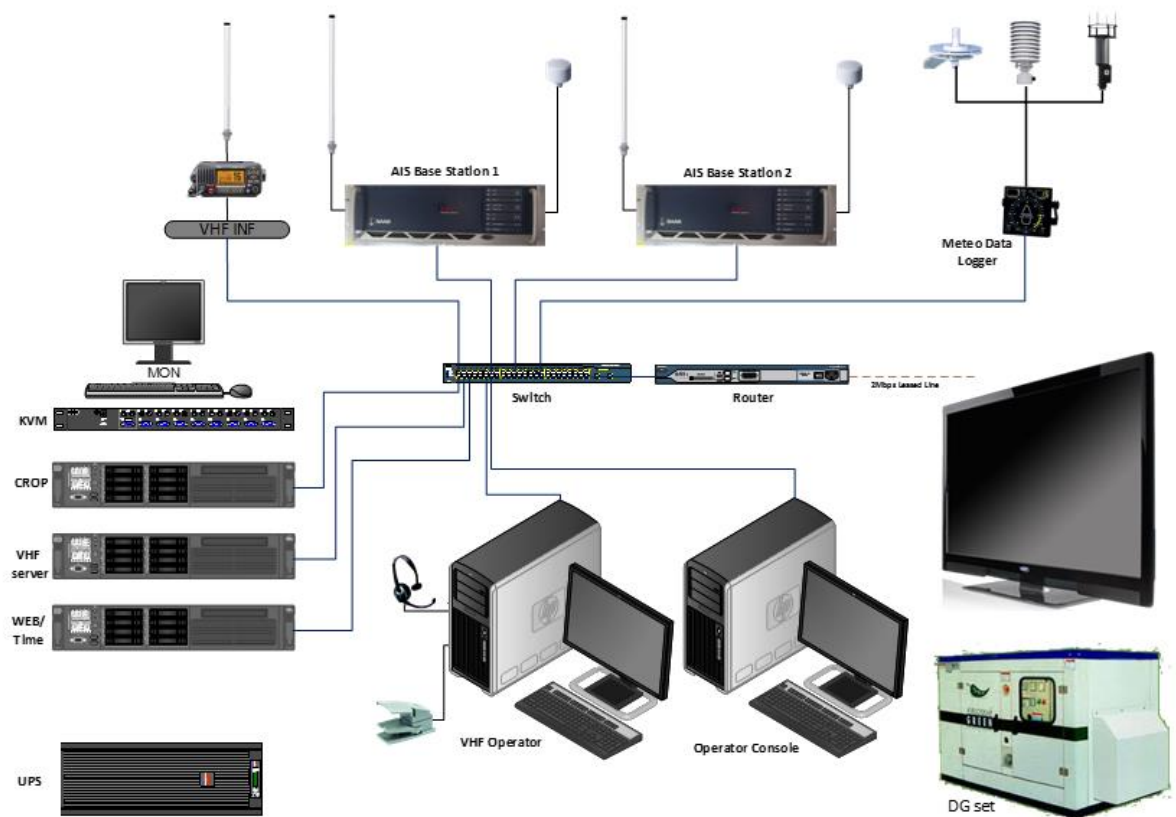
- a) River Information Services (RIS) is a combination of modern tracking equipment related hardware and software designed to optimize traffic and transport processes in inland navigation.
- b) The system enhances swift electronic data transfer between mobile vessels and shore (Base stations) through advance and real-time exchange of information.
- c) RIS aims to streamline the exchange of information between waterway operators and users.
- d) Enhance inland navigation safety in ports and rivers
- e) Better use of the inland waterways
- f) Environmental protection
- g) Enable achievement of safe and efficient inland water transport
- h) Avoid risks like Ship- to - Ship collisions, ship to bridge collisions and groundings
- i) RIS is interlinked through a ILL backbone and the data collected from Base Stations is transmitted to Control station through ILL connectivity

## **3. DIAGRAMMATICAL REPRESENTATION OF RIS**

The RIS has control stations and base stations. Base stations are initial data collectors and can connect to the ongoing traffic through VHF. The Control Stations transmits the data through AIS and VHF and also monitors the vessel movement in their designated stretch. As on date all the 3 phases of RIS are interconnected. A basic description of Control and Base Stations is as follows

**A. CONTROL STATION: The equipment setup at Control Stations is as follows**

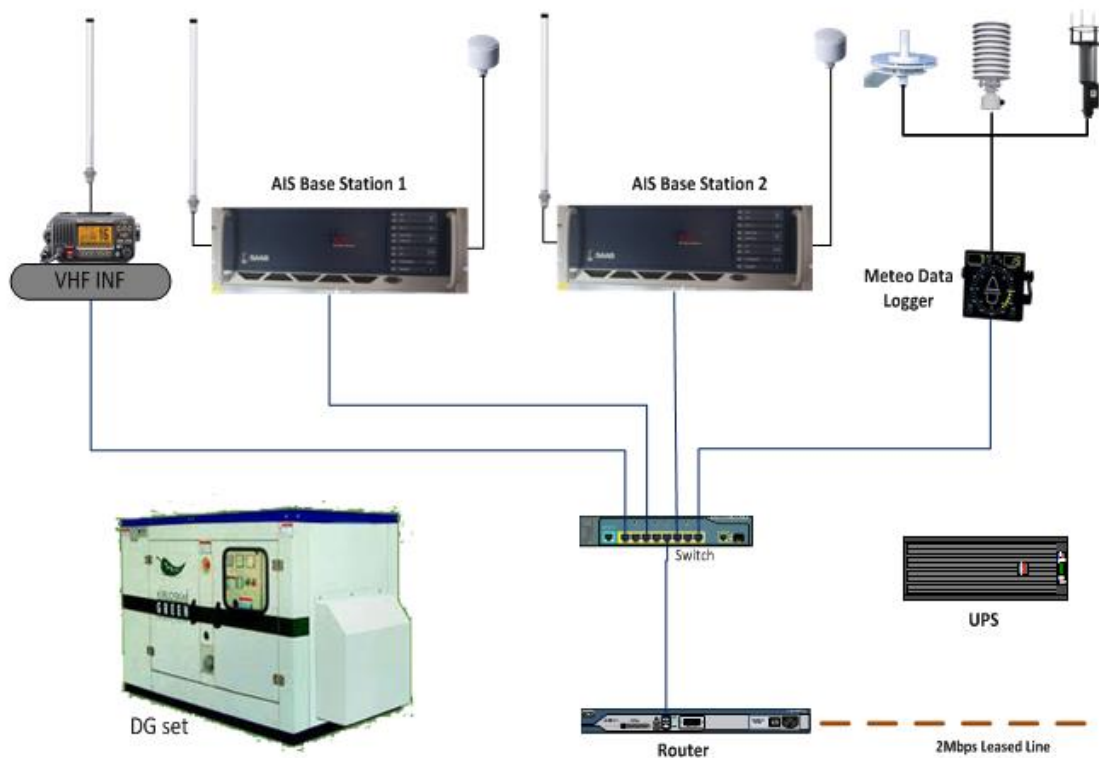
- 2 X AIS Base station
- 1 X VHF
- 1 X MET sensors
- 3 X Servers
- 1 X Operator Console
- 1 X 55" TV
- Other ancillary supporting items



**SYSTEM ARCHITECTURE OF CONTROL STATION**

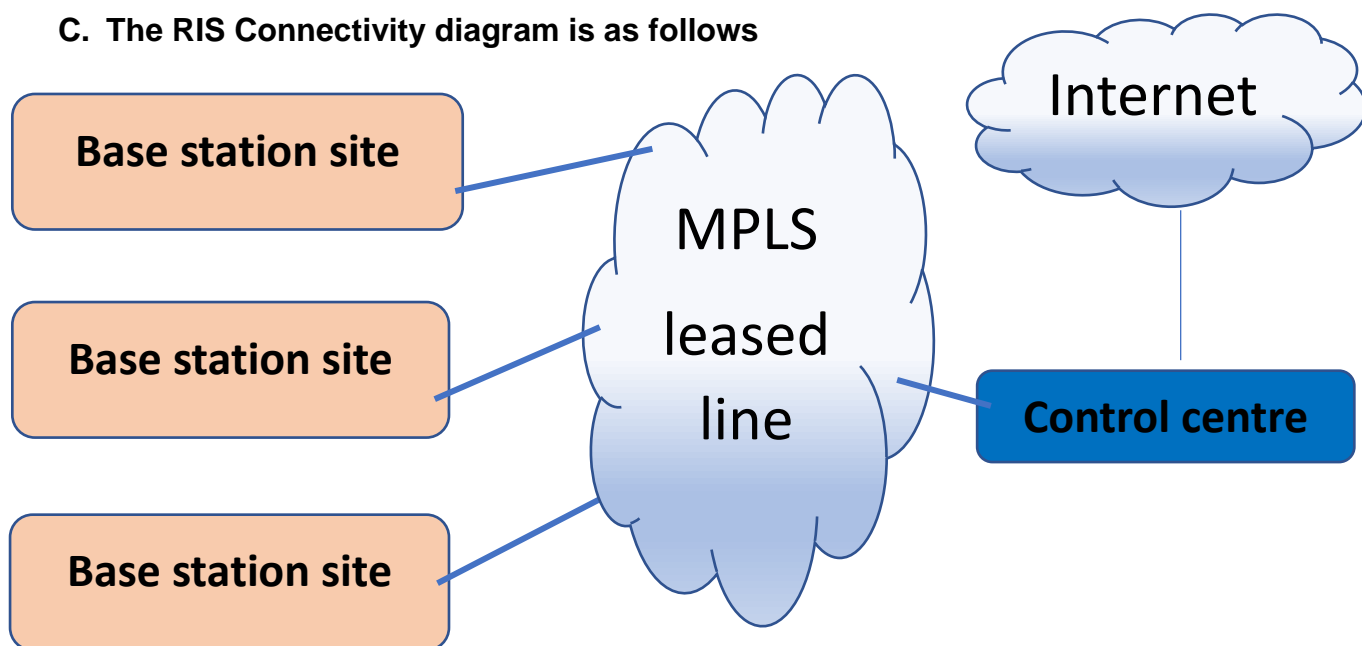
**B. BASE STATIONS:- The equipment setup at Base Station is as follows**

- 2 X AIS Base station
- 1 X VHF
- 1 X MET sensors
- Other ancillary supporting items



**SYSTEM ARCHITECTURE OF BASE STATION**

C. The RIS Connectivity diagram is as follows



4. PURPOSE OF EoI

5. IWAI utilizes the BSNL backbone for ILL connectivity across its River Information System networks across its 3 phases. The performance of BSNL is not upto the desired standard and it is propose to provide alternative mode of

connectivity via the **Microwave link to connect RIS Phase-I, Phase-II and Phase-III** . The details of RIS Stations is appended at Annex-1.

Sr. No.	Description	Documents required
1	The Bidder shall be registered at least for 10 years as on 31.03.2021 as company in India under Companies Act 1956.	
4	Bidder Should have experience of executing minimum 2 MPLS/leased line/microwave link orders from Central Govt./State Govt./PSU/cooperative segment. Each order should be of minimum 3 locations in each Work Order.	order copies / Satisfactory Performance Certificate
5	Positive Net worth from past 3 consecutive Yrs.	audited Balance sheet
7	Bidder should have valid ISO 9001 certification	Certificates
8	Bidder should not have been blacklisted from any Central/State Govt. and PSU.	Undertaking on Rs 10 non judicial stamp paper
9	The bidder should be registered for Sales Tax / VAT / Service Tax / Excise/ GST as applicable.	Notarised True Copy of all Certificates should be Submitted
<b>Technical Qualification Criteria:</b>		
1	Bidder must provide end to end managed services. Implying that providing, installation & configuration of all hardware like routers, patch cords, cables and software required for implementation of services shall be sole responsibility of the bidder, up to the Ethernet point provided to the Department. Likewise, the operation and maintenance of the service shall also be on end-to-end basis.	

#### EOI-TOR

- a. Inland Waterways Authority of India (IWAI) intends to float Expression of Interest (EOI) for providing **Microwave link to RIS Phase-I, Phase-II and Phase-III** and shortlist them for providing aforementioned Services. The outline of the EOI is given below:
  - b. The shortlisting criteria shall be as under.
    - i. The solution providers/ firms interested in the EOI must be registered in India.
    - ii. Balance Sheets/Annual Reports along with CA certificate must be submitted of last three years.
    - iii. Bidder Should submit the proof of having experience of executing minimum 2 MPLS/leased line/microwave link orders from Central Govt./State Govt./PSU/ Co- operative segment. Each of these orders should be of minimum 3 locations in each Work.
    - iv. Copy of Certificate of Incorporation.
    - v. Detailed methodology for undertaking the solution.



- vi. Compliance of the solution with the International/National Practices/ Standards.
  - vii. Company profile and Past experience
  - viii. Suggestions/Queries, requirements and expectations and any other facilitation.
- c. **Performance Measurement:**
- i. **Uptime:-** Minimum network uptime has to be 95% for each location. This time will be calculated monthly before releasing the payment.
  - ii. **Latency:** The maximum latency has to be 100 ms for each link.
  - iii. **Throughput:** The minimum throughput has to be 90% of the speed prescribed for each link.
- d. **PERORMANCE PENALTIES:**

i. **Uptime Penalties**

In case the uptime falls below the guaranteed level, IWAI will impose the following penalties.

Uptime per location (monthly)	Penalty in % on the monthly payment.
95%	0 %
90% but < 95%	10%
90% but < 85%	25%

ii. **Latency Penalty:**

In case latency falls below the guaranteed level, IWAI will impose a penalty of 5% of the total amount for each link.

iii. **Throughput:**

In case the throughput falls below the guaranteed level, IWAI will impose a penalty of 5% of the total amount for each link.

- e. Interested parties may submit their “Expression of Interest” in E-procurement website and in sealed hard copies by 1530 hrs (IST) till XX.XX.2021 addressing to Hydrographic Chief, at the following address:

Hydrographic Chief

Inland Waterways Authority of India A-13, Sector – 1,

Noida-201301, India

Tel: (0120) 2522969:

Email- hc.iwai@nic.in Website: www.iwai.nic.in

The following salient dates may kindly be noted

1.	Downloading of tender document commissioned	29.07.2021 @ 1800 hrs
2.	Pre-bid meeting	06.08.2021 @ 1500 hrs
3.	Submission of online & hard copy of tender	18.08.2021 @ 1530 hrs
4.	Opening of online & hard copy of tender	19.08..2021 @ 1530 hrs

- f. The pre bid meeting is to held on 06.08.2021. All the queries should be mailed to [hc.iwai@nic.in](mailto:hc.iwai@nic.in), [ppraj.iwai@nic.in](mailto:ppraj.iwai@nic.in) latest by 1800 hrs on 05.08.2021. The link for online pre-bid meeting will be shared with all the bidders who have submitted their queries by the stipulated date.
- g. The cover containing EOI should be sealed and superscripted “**for providing Microwave Communication for River Information System Connectivity across Phase-I , Phase-II and Phase-III.**”
- h. The interested bidder may seek any clarification on above from “Hydrographic Chief” at the above-mentioned address within 7 days of publication of this Eoi.
- i. IWAI reserves the right to accept or reject any offer or the whole process without assigning any reason to the bidders whatsoever.
- j. This notice is issued only to elicit an Expression of Interest (EOI) for enlisting firms interested in providing Internet Services for RIS Phase-II and Phase-III. IWAI is also not obliged to share clarification related questions with other bidders than the one which seeks clarification.
- k. The tenders will be issued to shortlisted firms and a suitable firm shall be selected as per extant provisions of GFR.

#### 6. **Selection Criteria:**

- a) An evaluation committee of IWAI will examine the proposals submitted by the bidders.
- b) The following shall be considered for evaluation of the firm / short listing the eligible firm for issue of tender / RFP document:

#### **Marking system for short listing of bidders:**

SL. No.	Description	Max Marks
1.	Company profile and past experience	10
a	Providing Microwave Communication for less than equal to 2 years( suitable work order will only be considered for evaluating the same)	5
b	Greater than 2 years but less than or equal to 5 years	7

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c	Greater than 5 years	10
2	Submission of documents as per EOI	10
3	Compliance of the solution with the International/National Practices/ Standards	10
4	Background of the organization with respect to similar <b>work</b> experience	10
5	Details of work executed	Max. 45 (10 marks for each similarly executed works Para 4 Clause 4 of table subject to a maximum of 30 nos and 5 marks beyond for each subsequent successful work)
6	Detailed methodology for providing such internet services	15

c) **Minimum 70 marks is the eligibility criteria for short listing.**

d) The tenders will be issued to shortlisted firms and a suitable firm shall be selected through competitive bids as per extant provisions of GFR

**Hydrographic Chief, IWAI**

## **Disclaimer**

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2. IWAI will not be responsible for any delay in receiving the EoI. The issue of this EOI does not imply that IWAI is bound to select an Applicant or to appoint the Applicant, as the case may be, for providing Internet Services at various RIS Stations.
3. IWAI reserves the right to accept / reject any or all EoI submitted.
4. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. IWAI accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.
5. IWAI reserves the right to change / modify / amend any or all provisions of this EOI document. Such revisions to the EOI / amended EOI will be made available on the website of IWAI [www.iwai.nic.in](http://www.iwai.nic.in) and e-procurement website.
6. If at any time during the evaluation of EOI, IWAI requires any clarification on the documents submitted by the prospective firms, it reserves the right to request a clarification so as to complete the evaluation.
7. At the end of this process of evaluation, IWAI will short-list the parties who comply with the EOI conditions for appropriate action.

**Hydrographic Chief**

## Annex

## LOCATIONS OF RIS STATIONS ACROSS 3 PHASES

S. No.	Location		Lattitude	Longitude
<b>RIS Phase-1 ( Entirely in West Bengal)</b>				
1	Farakka	IWAI Terminal Village FARAKKA, po farakka baRRAGE , 742212 Dist MURHSIDABAD	24° 49.1233'N	087° 54.3434 'E
2	GR Jetty	River Information Services ( IWAI), IWAI terminal, BISO / GR -1, Kolkata - 700043	22° 32.762'N	088° 18.418'E
3	Haldia	IWAI Terminal near HDC oil jetty-2, P.O+P.S- Chiranjibpur DIST- Purba Medinipur PIN-721604 West Bengal	22° 02.322'N	088° 02.474'E
4	Tribeni	Bans Beria dalanpara Ghat road P.O-Bansberia, P.S-mogra DIST-Hooghly PIN-712502	22° 57.471'N	088° 24.337'E
5	Swaroopganj	KoPT Hydraulic study office, PIN 742189	23° 24.842'N	088° 23.261'E
6	Kumarpur	Kumarpur ferry ghat, PO Beldanga, Murhsidabad - 742189	23° 57.102'N	088° 12.160'E
7	Balia	WAI RIS Station Ballia Vill & PO- Ballia PS- Sagardighi Dist- Murshidabad Pin- 742237 Westbengal	24° 21.513'N	088° 09.887'E
<b>RIS Phase-2</b>				
1	IWT Terminal, Gaighat	Inland Waterways Authority of India at IWT Terminal Gaighat, sadikpur, P.O- Gulzarbagh, Patna, Bihar Pin-800007.	25°36'41.95"N	85°12'20.49"E
2	Barh	River Information Sytem Barh, Nawada, PO-Mahmadpur, PS- Barh, Dist-Patna, Bihar,Pin- 803213.	25° 29' 45.76" N	85° 43' 48.86" E

3	Hatidah	River Information Sytem Hathidah PO-Maranchi, Near Maranchi Middle School, Dist-Patna, Bihar, Pin-803301.	25° 21 12.05'N	86° 00 03.89'E
4	Munger	River Information System Munger, Ganga Nagar, Near law collage old police line Munger, P.O- Munger, Dist-Munger, Pin- 811201	25° 23 09.45 'N	86° 27 43.46'E
5	Bhagalpur	IWAI Bhagalpur,River information System Bhagalpur, Nadim Ganguly road, Near Durga Mandir, Bari Khanjarpur, Dist-Bhagalpur,Bihar,Pin- 812001.	25° 15 48.43'N	86° 59 55.08'E
6	Manihari	River Information system Manihari, Manihari, Near Gurukul School, PO-Manihari, Dist-Katihar, Bihar, Pin-854113.	25° 20 18.32'N	87° 36 56.96'E
<b>RIS Phase-3</b>				
1	IWT Terminal, Ramnagar Varanasi	IWT Terminal, Ralhupur, Ramnagar, Varanasi- 221008	25° 15.043' N	083° 01.877' E
2	IWT Terminal, Dharammarpur	Village & Post Dharammarpur PS Karanda Tehsil Ghazipur	25° 25.272' N	083° 31.784' E
3	IWT Terminal, Gobindpur	Vill Gobindpur Khas Post Bharauli PS Narhi Dist Balia Pin 277501	25° 36.453'N	083° 59.397'E
4	IWT Terminal, Maujampur	Village Maujampur PO Mahuli Ghat PS Badhara Distt Bhojpur Pin 802316	25° 41.147 'N	084° 35.379'E