Summary Record of proceedings of Workshop organized by IWAI at Mumbai on 18th January 2010 on "Prospects of Cargo Movement for Power Plants on National Waterways 1 & 2"

1. BACKGROUND

1.1 Nearly 40 percent of India's population lives in the States of West Bengal, Bihar, Jharkhand and Uttar Pradesh. These are also the States with high 'growth potential' and are largely perceived to be the potential 'drivers of growth' in the unfolding 'Indian Growth Story' in the 21st century.

1.2 Shortage of Power is widely recognized as a major growth restraint and although this part of the country is richly endowed with mineral resources including coal reserves, transport bottlenecks are now emerging as a major hurdle before the growth potential can be realized. Several thermal power plants, belonging to Central Power Utilities like the NTPC, State Electricity Boards / Power Corporations and the Private Sector, run at very low plant load factors on account of non-availability of coal due to inadequate coal linkages and/or difficulty in transportation of coal from pit heads to coal stack yards by rail and road. Existing rail capacity utilization is as high as 120 percent and railways are unable to carry more coal, whether imported or domestic, to power plants.

1.3 Presently, India imports about 28.5 million tonnes of thermal coal; NTPC alone has been authorized to import 12.5 m.t. for its power plants which includes 1.2 m.t. for Farakka and 1.6 million tonnes for Kahalgaon Super Thermal Power Stations. Upcoming Barh Super Thermal Power Station in Bihar will also require about 3 m.t. of imported coal when fully operational by 2017. At present more than ten power plants are located on the banks or in the vicinity of the Ganges. Several more power plants, including in the Private and Joint Sector, are coming up at Pirpainti in Bihar, Bara and Karchhana in Uttar Pradesh. Prospects of movement of coal through inland water transport for these are bright.

1.4 In addition, there are good prospects for movement of domestic coal from Paradip/Dhamra ports (sourced from Mahanadi Coal Fields (MCL) to power plants located in West Bengal and Bihar as also Bongaigaon Thermal Power Station in Assam, through a mix of coastal and inland water transport system.

1.5 In short, an opportunity to move about 3-4 million tonnes of imported coal through inland water transport on National Waterway 1 (Hooghly – Bhagirathi - Ganga) to NTPC power plants at Farakka, Kahalgaon (and possibly Barh) as early as in 2012 exists and the volume of coal movement is only expected to go up in future. Likewise, there is possibility of moving another 2-3 million tonnes of coal sourced from MCL to Kahalgaon and at least 1 million tonne to Bongaigaon through Indo-Bangladesh Protocol route and National Waterway 2 (Brahmaputra).

1.6 Arunachal Pradesh in North Eastern India has estimated hydro-power potential of over 50,000 MW. Government of Arunachal Pradesh has already signed Memorandum of Agreement (MoA) with six Power Companies for setting

up thirteen Hydro Power Projects with installed capacity of 10087 MW by the end of 12th Plan (2017). In addition, 19 more hydro power projects with installed capacity of 16735 MW are to be completed by 2022 and another 4500 MW by end of 14th Plan (2027).

2. OPPORTUNITY BEFORE INDUSTRY

It is evident that projected movement of coal and project cargo on NW 1 and NW 2 presents a huge potential and opportunity for development of nascent inland water transport system in the country. These involve integration of coastal shipping, transshipment technology, lighterage operations and inland water transportation with rail and road operations. It is up to the industry to accept this challenge and utilize the developments that have been undertaken on NW 1 and NW 2 by the Inland Waterways Authority of India (IWAI) in respect of maintenance of fairway, assurance of depth, provision of night navigation facilities etc. to deliver to the Power Utilities like the NTPC, NHPC, Reliance Energy, Jindal Power Limited etc. and Coal India Limited (CIL) a 'cost effective and reliable' logistics solution for their transportation needs.

3. THE WORKSHOP

3.1 In this background, a daylong workshop on "Prospects of cargo movement for power plants on NW-1 & 2" was organized by IWAI at World Trade Centre, Mumbai on 18.01.2010. The forenoon session was devoted to the 'Movement of Coal for Thermal Power Plants devoted in Eastern and North-eastern India' and the afternoon session was devoted to the topic 'Movement of Project Cargo for upcoming Hydro-electric Projects in Arunachal Pradesh using IWT'. Shri B.K. Chaturvedi, Hon'ble Member, Planning Commission was the Chief Guest in the workshop.

3.2 A copy of the programme of the Workshop is at *Annexure-1.*

4. THE INAUGURAL SESSION

4.1 **Shri S.P. Gaur**, Chairman, IWAI in his welcome address explained in detail the infrastructure developed and maintained by IWAI on NW-1 & 2 as well as various initiatives taken by the Authority for promotion of cargo movement on these waterways. He presented the details of new dredgers being acquired by IWAI and the LAD being maintained in various stretches of these two waterways. He informed that navigational aids being erected and maintained by IWAI including the night navigational aids for round the clock safe navigation. He also outlined the need of human resource development for IWT sector and the efforts being made by IWAI in this regard by National Inland Navigation Institute at Patna. He was emphatic that the advantages of IWT mode in terms of carrying capacity, fuel efficiency, negligible need of land acquisition and climate friendliness stand demonstrated by facts and figures. In the context of the theme of the workshop, he stated that the time is now ripe for logistic companies to make IWT an integral part of end to end solutions proposed by them to the power companies located along the NW-1 & 2 as well as in the North-east. He concluded that there is ample space for development of all three major modes of

transport i.e. road, rail and IWT but what is required is to harness the complimentarity between these three modes.

4.2 Shri D.T Joseph, former Secretary (Shipping) emphasized on the need to involve private sector in a big way for promotion of IWT and suggested for privatization of river banks. He congratulated Chairman IWAI for being dynamic and showing interest in organizing these workshops and hoped that IWT in future, particularly in north east, will flourish.

4.3 Shri APVN Sarma , former Secretary (Shipping) recalled the decision taken earlier in the Planning Commission that power plants like Farakka, which have very low power load factor compared to other plants, need to be supplemented with coal by the IWT route. He suggested for making mandatory provision for carrying a particular percentage of requirement of coal for those plants, which are adjacent to waterways, must be met by IWT mode leveraging its benefits in terms of being economical and environment friendly. He also suggested for a viable bankable period of contract, say about 7 to 10 years, for private sector participation.

4.4 Ms Lakshmi Venkatachalam, D. G. (Shipping) in her address informed that the Directorate had been looking at river-sea navigation and seamless integration of the two, as one of the key inputs to drive the coastal/inland shipping to its full potential. She stated that the hinterland activity, which is essential for growth in our economy, can be augmented substantially by river-sea transportation. Therefore, the infrastructure for coastal shipping and inland waterways is very important and suitable vessels need to be made available at competitive prices to promote growth. DG (Shipping) has set up contact groups which continuously look into technical and legal aspects of river-sea navigation so that the rules and regulations are find tuned from time to time. With regard to the theme of the workshop i.e. transportation of Thermal coal to NTPC Power Plants, she was emphatic that all the stake holders need to sit together and develop a product, which is economically viable and if there are any barriers to achieve the goal, Government should consider specific policy interventions.

4.5 In his Keynote address, **Shri B.K. Chaturvedi**, Member, Planning Commission at the outset gave an overview of the growth of Indian economy and stated that for the sustenance of the expected growth rate at 9-10 % requires growth in other supporting infrastructure. In the context of power and transport sectors, he informed that in the 11th plan, about 78,000 MW capacity has been planned. The potential for hydro power being limited, many of the new power plants will have to be coal based. Given the requirement for coal for these plants, there is going to be a huge transportation requirement. This would necessitate modal shift from rail and road to IWT to the extent possible. He avowed that there is a great business opportunity in transportation of coal through IWT. Further, Hydro based power plants coming up in the North-east region also provide a great opportunity for use of IWT in transportation of equipments, construction material, etc.

Shri Chaturvedi argued that promotion of IWT cannot be based on Government's diktat unless it is backed by a sound economic logic as any business which is not based on profit lines is bound to fail. While Planning Commission may support the cause, IWT will have to be competitive and this competitive edge will have to be demonstrated by players whether private operators or IWAI. If any policy support is required in order to make IWT economical and competitive, same must be provided to promote the sector.

Shri Chaturvedi endorsed the need for public private partnership in inland waterways, be it dredging or handling operation or water front privatization; as it will have the vibrancy of the private sector supported by the public sector infrastructure. He also suggested to take State Governments also on board. He emphasized on the need for high class infrastructure of proven quality which increases the comfort level of private sector. He assured of the support of Planning Commission in the endeavor of IWAI in promotion of IWT. He exhorted upon the participants to discuss the issues threadbare and come out with practical recommendations.

5. SESSION- I (Movement of Coal for Thermal Power Plants in Eastern and North-eastern India)

Panelist:

1. Shri A.P.V.N. Sharma, Former Secretary (Shipping), GoI
2. Shri A K Jyotishi, Director, Ministry of Coal, GoI
3. Shri A Majumdar, Chairman (I/c), Kolkata Port Trust
4. Shri Biplav Kumar, Dy. Chairman, Paradip Port Trust
5. Shri T K Chatterjee, Executive Director, NTPC
6. Shri Amitabha Ray, Chief General Manager, Coal India Ltd.

5.1 Presentations

5.1.1 The first presentation was made by **Shri Sunil Kumar**, Vice-Chairman, IWAI on "National Waterways". The presentation *inter alia* covered infrastructure and facilities available on National Waterways 1, 2 & 3, as well as advantages of inland water transport especially transportation of coal by IWT mode. *(Attached as Presentation-1)*

5.1.2 The second presentation was made by **Shri Sridhar** of Sea Bulk Systems Inc. of Canada on "Dry Bulk Transshipment". He indicated the feasibility of transshipment of Bulk cargo on National Waterways 1 &2. *(Attached as Presentation-2)*

5.1.3 Shri Dhruv Kotak of J.M. Baxi & Co. gave a presentation on "Bulk Cargo handling Technology". The presentation discussed various advantages of transportation of coal for Farakka and Kahalgaon plants. The presentation also included advantages of 'Schottel Rudder Propeller System". *(Attached as Presentation-3)*

5.1.4 Ms R. Sushila of Vivada Inland Waterways Ltd gave a presentation on "Inland Waterways – a viable option". The presentation endorsed the proposed transportation of coal for NTPC power plants on NW-1 and project cargo for hydro

power plants through NW-2 as 'take off projects" to make IWT vibrant yet again in eastern and north-eastern India. *(Attached as Presentation-4)*

5.1.5 Shri Vatsal Desai of Union Bank of India gave presentation on "Financing for IWT vessels". Presentation *inter alia* covered global scenario of waterway in Asian region and Europe, funding issues etc. *(Attached as Presentation-5)*

5.1.6 In the next presentation, **Shri B. Velan**, Managing Director, Scorpio Engineering Pvt. Ltd gave details about limitations of transportation of bulk material by road and potential and advantages of inland waterways. *(Attached as Presentation-6)*

5.2 <u>Panel discussion</u>

The Chairman of the Session, **Sri APVN Sarma**, requested the panelists to give their comments/suggestions

5.2.1 Shri T K Chatterjee, Executive Director, NTPC stated that NTPC is in touch with IWAI for transportation of coal to some of their power stations and there has been a series of discussions. NTPC are importing around 3 million tones of coal for Farakka and Kahalgaon Power Plants due to non availability of domestic coal. However, the situation is dynamic and may change depending on availability of domestic coal. The coal is being imported by NTPC through agencies like MMTC. NTPC is in the business of power generation and would like to restrict to its core activities. Transportation of coal through IWT mode definitely is a positive proposition, provided it is competitive compared to railways. As far as long term commitment by NTPC is concerned, it may probably be difficult at this point of time because year to year coal to be imported is mandated by the Ministry of Power as well as availability of domestic coal. NTPC may import coal in future on delivered at site basis and for this purpose, NTPC will be shortly floating expression of interest. He concluded that as far as NTPC is concerned, if the IWT freight becomes competitive compared with the Railways, then it could be a viable option.

5.2.2 Shri Amitabha Roy, Chief General Manager, Coal India Ltd (CIL) stated that whenever CIL plans logistics of coal evacuation, only conventional transport system i.e. Rail, Road, Conveyor Belts and Ropeways are considered. However, Inland Waterways could be an exciting alternative in the years to come. Out of the developing collieries i.e. Karanpura, Raigad and Talcher, only Talcher is having some nearness to the National Waterways through Brahmani river. Regarding overall scenario of Coal availability, Government is projecting a deficit of about 50-70 million tonnes per annum upto five years span i.e. 2016-17, which is a huge quantity and has to be made up by way of import. The current coal demand will be exceeding availability by more than 200 million tonnes by the end of current plan period itself. Often, CIL carries huge stock but is not able to evacuate due to shortage of Railway rakes. CIL has evacuation problem in respect of Mahanadi Coal Fields and if waterways can be used for it through Brahmani river and Dhamra or Paradip port, there can be a great possibility. As regards Farakka and Kahalgaon plants of NTPC, barges can definitely be used for transportation of imported coal. NTPC can also look to waterway movement for

Bongaigaon power plant, which is facing shortage of coal. He also mentioned that during peak demand season, there is always a shortage of railway wagons, IWT can be a promising alternative.

5.2.3 Shri A. K. Jyotishi, Director, Ministry of coal stated that officers from NTPC and CIL have already given the perspective from buyers and suppliers point of view. The third perspective of transporter is missing that is where the IWT being cost effective, environmental friendly and an additional mode of transportation can play an important role. Ministry of Coal have recognized and supports the idea that IWT mode should be extensively used for the transportation of coal. There has been a paradigm shift in the coal distribution policy. The new policy provides some sort of assurance/ certainty in terms of sources, fuel components and mode of transportation. In new Policy there is the system of giving Letter of Assurance to project developer to enable him to undertake/obtain project design, financial closure, environmental clearance etc. At this stage, project developers should start negotiating with the evacuators - whether Railways or IWT operator. At the culmination of this process, on one hand the power producer will enter into a fuel supply agreement (FSA) with the Coal supplier and on the other hand, they should enter into fuel transport agreement (FTA). CIL is also now into the business of importing coal and with this additional role, they would now be required to transport coal inland. Coal India is mandated to provide a normative quantity to a power developer which as of now is 85% PLF, but most of them are operating at PLF much higherer than 85%. The policy provides that any coal, which is required over and above this normative quantity, it will have to sourced from some other sources – be it captive mines or import. From now onwards, import of coal is very much part of the fuel mix of every thermal power plant and thus, IWT can play a much greater role leveraging seasonal demand. There could be a possibility that Coal India can offer some kind of e-auction of coal from some of the designated points along the NW-1 (say Kanpur,Varanasi), so that consumers need not go all the way to MCL to pick up the coal and rather take up coal come to dumps located on NW. Shri Jyotishi hoped that transportation of coal by IWT will improve in coming days and move in the right direction.

5.2.4 Shri A Majumdar, Dy Chairman, Kolkata Port Trust (KoPT) stated that KoPT is committed for transshipment of bulk cargo in the port limits. He said that IL&FS had shown KoPT the details of their proposed project for transportation of coal for Farakka and Kahalgaon plants including the concept of Transhhiper. The location of the transhhiper is the most critical decision to be taken and KoPT having knowledge of hydrology of the area, shall be providing all assistance/ guidance to IWAI, IL&FS or the selected promoter in this regard. He informed that considering limitation of draft in Haldia channel and the difficulties being faced in dredging therein, KoPT has already invited expression of interest for a installing a transhhiper in high seas and received very encouraging response from experienced agencies including the consortium of Seabulk System Inc and Shipping Corporation of India He also added that KoPT was looking into the suggestion of providing night navigation facilities in Haldia- Tribeni

stretch of NW-1. KoPT is also setting up two riverine jetties at Haldia. These jetties and the one being planned by IWAI also at Haldia shall complement each other as far as project of coal transportation for Farakka and Kahalgaon plants is concerned. He concluded by reiterating the commitment of KoPT for project of coal transportation to Farakka and Kahalgaon power plants through IWT.

5.2.5 Shri Biplav Kumar, Dy Chairman, Paradip Port Trust (PPT) stated that in today's scenario, IWT is not an option but a compulsion, a necessity. Railways and Roads can simply not provide efficient mode of transport for bulk cargo like coal. Even dedicated freight corridor is not going to be of much help since it shall give priority to other cargo like food grains. Land acquisition is another big issue in enhancing the capacities of rail and road modes. Therefore, it is necessary that wherever possible, IWT corridors should be adequately developed and the Government should also make sizable investment in this direction. He said that for the cargo owners like NTPC, it will be pessimistic to say that IWT should be cheaper and then only they would opt for it. They in fact should see IWT as on opportunity and go for it since Rail and Road modes simply cannot provide adequate capacities

5.3 Questions & Answers Session

The presentation may during this session generated animated discussion in the Q&A session. The questions raised/comments made and their answers/clarifications from the Panelists are given below:

Q.1 - Developers of Power plants are not aware about navigability of Waterways nearest to the possible location of a greenfield power plant and the viability of coal transportation through waterways. Thus, there should be dissemination of information through single window system.

A.1 - Every new Power Project is looked into by a Ministerial Group which is provided inputs on all the factors of the Project. Nevertheless, it is a good suggestion and this workshop is an attempt in this direction i.e. to disseminate information to all the stakeholders as to which waterway can be used for transportation of coal and other goods.

Q.2 - The Workshop is targeted at movement of imported coal by IWT, but what will happen when production of domestic coal is increased, thereby reducing the requirement of imported coal?

A.2 – Under the new coal distribution policy, FSA and FTA would be finalized for 20 years and Promoter will be given time of 3–4 years at the beginning of a project to firm up these agreements, which would reduced uncertainties. However, the requirement of imported coal for Thermal Power Plants and Steel Industry is going to stay for a long period.

Q.3 - Very few people know about the IWT due to which many big Projects are not considering IWT as of the transportation option.

A.3. – Dissemination of information on IWT as a viable transport option is one of the objective of today's workshop and IWAI will organize more such Workshops / Seminars.

Q.4 - Our waterways are not developed with adequate draft, jetties and night navigational aids, whereas waterways of many other countries are developed with assured depth and other facilities.

A.4 - Our waterways are not comparable to waterways of USA, China, Europe etc., which have been trained for centuries with large investment. However, IWAI has made a lot of efforts in last decade or so to improve National Waterways.

At the conclusion of the first session, **Shri Sunil Kumar**, Vice-Chairman, IWAI stated that the Indian economy has grown @ 8 – 9% in the last decade and all indications suggest that this rate of growth shall continue in the next decade as well. Since the country is facing shortage of power, many industries are compelled to run on diesel, which is not desirable. This implies that demand for energy shall go up at the same rate or even higher and the country has to step up production of energy substantially. Since gestation period of Nuclear and Hydro-electric power plants is very high whereas thermal power Plants have relatively lesser gestation period of 3 – 4 years. Therefore, in the next decade and more, coal based thermal power plants shall continue to be the mainstay of power generation, thereby necessitating more efficient and effective transportation infrastructure for movement of coal. NTPC also has to improve its performance and productivity. Many power plants are operating at low PLF mainly due to shortage of coal due to inadequacy of rail mode. He emphasized that IWT is not competing with rail and road modes but is just an additional mode of transport, which also happens to be fuel efficient, environment friendly and cost effective for bulk cargo. IWAI is confident that by using IWT mode, power plants shall be actually reducing overall cost which will benefit the end user/consumer.

6. SESSION- II (Movement of Project Cargo for upcoming Hydro-electric projects in Arunachal Pradesh using IWT)

Panelist:

1. Shri D.T. Joseph, Former Secretary (Shipping), GoI
2. Dr Hari Krishna Paliwal, Principal Secretary (Power),Government of Arunachal Pradesh
3. Shri Atul Jadhav, President, Goa Barge Owners Association

6.1 Presentations

6.1.1 The post-lunch session commenced with a presentation by **Shri R.P. Khare**, Director, IWAI focusing on prospects of transportation of project cargo by IWT mode for upcoming Hydro-electric projects in Arunachal Pradesh. Presentation covered details of National Waterway No.2, Indo-Bangladesh Protocol on IWT Transit and Trade as well as IWT infrastructure (fairway, terminals, navigational aids, surveys vessels, dredgers etc.) on NW-2 as existing today and their development as targeted by 2011-12. *(Attached as Presentation-7)*

6.1.2 Capt. Solanki of Applied Research Institute (ARI), New Delhi gave a detailed presentation on National Inland Navigation Institute(NINI), which was set up by IWAI at Patna for training of IWT personnel. NINI is operational from Feb. 2004 and its management has been outsourced by IWAI to ARI since early 2009.

Presentation covered details about management of NINI, infrastructure available and proposed up-gradation thereof, courses being run, new courses in pipeline, faculty available, teaching methodology and affiliation and certificate issues. *(Attached as Presentation-8)*

6.1.3 Shri A.K. Mishra, General Manager, Debang Project, National Hydro Power Corporation Ltd (NHPC) gave his presentation on movement of project cargo for Debang project (3000 MW) in Arunachal Pradesh. The presentation included details of Debang valley, location of the site, its hydrology, proposed dimensions of the dam, reservoir, diversion tunnel, construction sluice, spillway, targeted power generation and other components of the project. He gave details of estimated requirement of cement and steel as well as that of ODC and E&M equipment required to be transported to the site. He also highlighted limitations of road network and advantages of inland waterway network for transporting project cargo for this project of NHPC. *(Attached as Presentation-9)*

6.1.4 Shri H. Ganguly of Jindal Power Ltd in his presentation gave details of three Hydro-power projects namely Etalin, Attunli and Subansiri allotted to them with a total capacity of 6100 MW. Another project of Chainpur Setti of 220 MW capacity has also been allotted to them for survey. Presentation highlighted the transportation constraints and lack of road connectivity to the project sites. He also gave details of requirement of cement, steel and equipment & machinery required for these power plants, their transportation schedule etc. He requested IWAI to maintain 1.5 m or more depth up to Sadiya along with night navigation facilities and berthing Jetty at Sadiya and Dhola and also to survey Debang river upstream of Sadiya to the maximum possible extent and get the NW-2 extended up to such point. *(Attached as Presentation-10)*

6.1.5 The next presentation was made by **Shri Gagan Agarwal** of Athena Energy Ventures Pvt Ltd., who have been awarded with 4 Hydro-power projects in Arunachal Pradesh, namely Demwe Lower (1750 mw), Demwe Upper (1800 mw), Emra-I (275 mw) and Emra-II 390 mw). He gave locational details of all these projects along with details of the quantities of cement and steel to be transported to the site for all the 4 projects. *(Attached as Presentation-11)*

6.1.6 The last presentation of Session was made by **Shri Ashish Agarwal** of ABC India Ltd. The presentation included details of their achievements in transportation of ODC including Reactors of dimension 31 m x 6.3 m x 5.4 m (weighing 517 and 460 tonnes) from Kolkata to Bongaigaon using inland waterways, movement of ODC equipments from Kolkata to Tejpur for lower Subansiri power Project, transportation of 160 tonne D.G. set and 110 tonne Mill/shell for cement plant for Meghalaya and Assam etc. Shri Agarwal was emphatic that waterways can be used effectively for transportation of ODC and for better transport monitoring, draft availability in waterway should be known to the operator beforehand with high degree of certainty. *(Attached as Presentation-12)*

6.2 Panel discussion

6.2.1 Initiating the panel discussion, **Shri D.T. Joseph**, former Secretary (Shipping) complimented IWAI for a thorough job of preparing for this Workshop by contacting the right people and giving them the right idea. He requested fellow penalists to offer their comments on the subject and on the presentations.

6.2.2 Dr Hari Krishna Paliwal, Principal Secretary in charge of Power and Coordination in Government of Arunachal thanked IWAI for the timely initiative taken for transportation of project cargo through NW-2, when the country on the one hand is facing power shortage and on the other hand, the biggest power potential of the cleanest possible energy is stored in Arunachal Pradesh (AP) waiting for exploitation. AP has power potential of 58,600 MW and 155 potential sites that have already been identified. Out of this, allotment has already been done for about 35000 MW by the state government. Out of those 35000MW, there are 34 sites where the potential is more than 100 MW and 79 sites are where the potential is below 100 MW. Sites which have been allotted are in the different processes of preparations, some of them are at the survey stage, some at the stage of DPR preparations and some are even trying to go for their financial closures. So now, the worry for the State Government and all of us should be to complete these projects in time. Basically there are 8 river basins in AP and if we start from western side of AP, the first basin is Tawang basin, the second one is Kameng, third one Dikarom, fourth Subansiri, fifth one is Seyang, sixth Debang, seventh Lohit and the last one Terak in the eastern most part. Potential wise, the biggest potential is in Seyang basin at 17000 odd MW, the next biggest is Subansiri basin at 12000 odd MW, the next one is Debang basin and then Lohit and then Kameng. These are the 5 basins, in which most of the projects are located. In Seyang, 5,865 MW have been allotted and 11,600 is yet to be allotted. In Subansiri, 3830 MW has been allotted and 8523 MW is yet to be allotted, due to pending court case which has now been sorted out. Debang valley has potential of 11000 MW and the biggest allotment has been in this basin that is 9772 MW. In Lohit basin, against the potential of 8000 MW, 7282 MW has been allotted and only 662 MW is remaining. In Kameng also, around 4500 against 6000MW has been allotted. Projects aggregating 34000 MW are at different stages and as mentioned by NHPC, cement requirement alone for his project would be 4 crore bags which would transform into 4 lakh trucks @ 10 tonne per truck just for the one project of 3000 MW. Thus movement of enormous quantity of project cargo has to take place. It is high time that all of us start planning very seriously for movement of cargo. Therefore, wherever the cargo can go through inland waterways, it should go and where it cannot, Road transport should be used. Hon'ble Prime Minister had announced for the Trans AP highway, which will connect all the District Headquarters and will be having 2 lane connectivity. On Railways side, the work is already going on to connect the state Hq. Proposal for Itanagar Airport is also in the approval stage. Thus, infrastructure is falling in place. Meanwhile, inland water transport operators should start gearing up themselves and prepare for an opportunity that has been brought to their doors by IWAI. There will be a very big business opportunity for at least next 20 years.

Thus, a situation has been thrown up with lot of opportunity increasing year by year.

6.2.3 Shri Atul Jadhav, President, Goa Barge Owners Association thanked IWAI for bringing both consumers as well as the service provider together. Goa has been basically into bulk carrying business by IWT mode and it has developed expertise in this area. On national waterways 1 and 2, there were about 1000 barges 50 years ago but now there are barely 50 barges in Eastern-India. It is a sad thing because cargo from the jute mills stopped and slowly-slowly, the whole cargo business stopped. As people stopped carrying cargoes by road, the rivers got silted up. In Goa, IWT business was established by operators from Eastern India and even Goa Barge Association was founded in 1973 by 5 major West Bengal operators. At that time, handling in Goa was in the range of 1 -2 million tones every year and last year, Goa has exported about 46 million tones of iron ore. This is a big achievement. Regarding possibility of their involvement in the transportation of coal, Goa Barge Owners have expertise in handling bulk cargo on the one hand and they have been successful in moving out of Goa on the other. Goa Barges are also operating from near Pakistan (that is Jakhau) port for salt projects to Singhipuram in the far west and now they have also come down to Haldia and have been operating barges there for more than two years. Initially, they had barges with 1 to 1.2 m draft and today they are having barges with 3.3 m draft. Considering expertise of IWAI in developing National Waterways, they are confident that it would definitely provides a very good opportunities. With so many projects coming up of NTPC, they don't see any reason as to why NTPC should not go into long term arrangements committing their requirements for transportation of coal by IWT mode. We in Goa have 100 barges which are 750 tonnes to 1000 tonnes. However, for successful operation in National Waterway 1, the draft in the river is to be made comfortable as the barges have to go with higher cargo. Further, financing of barges may also have to be facilitated either in terms of vessel subsidy or long term funds. If the government is not able to provide subsidy, the Planning Commission may be requested to keep some funds aside for the development of inland water transport sector.

6.3 Questions & Answers

The questions raised in session-II and their answers from the Panelists are given below:

Q.1- Whether a delegation of prospective IWT operators can be taken to Arunachal Pradesh to familiarize them with the site conditions of various proposed hydro-electric Projects.

A.1- Such Visits can be organized by the Govt. of Arunachal Pradesh, however, there are several project sites which are not easily accessible and they are so remote that one has to keep aside at least for 2 – 3 weeks time for the visit. The visit dates will have to be inform in advance to enable Govt. of Arunachal Pradesh to inform the site people and make other arrangements.

Q.2 - If there is such a potential for hydro-electric projects in Arunachal Pradesh, why was it not taken up in last 60 years of Independence as being taken up now.

A.2- It is not relevant to go into the past, instead we should make concerted efforts to implement these Projects now in a time bound manner.

At the conclusion of second session, **Shri D.T. Joseph**, former Secretary (Shipping) once again complemented IWAI for organizing the workshop on a focused theme. He exhorted upon the IWT Operators and entrepreneurs to pick up the challenge and make use of opportunities thrown up in the area of coal transportation and for project cargo movement.

7. VOTE OF THANKS

Shri Sunil Kumar, Vice Chairman, IWAI, thanked the Chief Guest of the Workshop, Shri B.K. Chaturvedi, Shri D.T. Joseph, Shri APVN Sarma, Chairman IWAI, Shri Hari Krishna Paliwal and all other panelists and presenters, who took pains to come and make presentations at such a short notice. He also thanked all the guests who have taken time off their busy schedules and been present here right through the day. He stated that the development of IWT sector in the country is not something that can be done by anyone alone whether it is the IWAI developing the national waterways or the State Governments developing the State waterways or the IWT operators or the logistic operators or the Ministry of Shipping. We all have to come together and to recognize each other's roles. Quality of service of IWAI and other Government departments will improve if the users begin to make demands from us.

He further stated that the problems of the sector and their solutions are well known and all the stakeholders would have to come together and find a way ahead jointly. We have to look ahead and move forward. This workshop is an attempt to bring all the stakeholders face to face with various opportunities which are there in movement of coal through NW-1 and transportation of project cargo through NW-2. Lot of users as well as potential consumers have a limited knowledge of IWT sector and thus, their confidence in IWT is also limited compared to other modes of transportation. Therefore, there is a need to bridge this confidence gap and the credibility of IWT in the country needs to be enhanced jointly by all the stakeholders. He expressed the confidence that from this point, IWT will only be moving forward and all the problems afflicting this sector can be jointly addressed by the various stakeholders.

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ANNEXURE - 1

TENTATIVE PROGRAMME FOR WORKSHOP

Venue: CENTRUM HALL, WORLD TRADE CENTRE, MUMBAI

Date: 18th January, 2010

Time	
9.00 - 9.45 hrs.	Registration
Inaugural Session	
9.45 hrs.	Arrival of Chief Guest
9.47 hrs.	Presentation of Bouquet to Chief Guest & other dignitaries on dais
9.50 - 10.05 hrs.	Welcome Address by Shri S.P.Gaur, Chairman, IWAI
10.05 - 10.10 hrs.	Address by Shri D.T.Joseph, Ex-Secretary, GoI
10.10 - 10.15 hrs.	Address by Shri A.P.V.N.Sarma, Ex-Secretary, GoI
10.15 - 10.25 hrs.	Address by Ms. Lakshmi Venkatachalam, DG (Shipping), GoI
10.25 - 10.45 hrs.	Keynote Address by the Chief Guest - Shri B.K.Chaturvedi, Member, Planning Commission
10.45 - 11.00 hrs.	**Tea Break**
Session 1: Movement of Coal for Thermal Power Plants in Eastern & North Eastern India- (Issue- utilization of waterways for supplementing the coal supply) **Panelists :** 1. Shri A.P.V.N.Sarma, Ex-Secretary, GoI to Chair the Session 2. Shri A. K. Jyotishi, Director ,Ministry of Coal 3. Shri A.Majumdar, Chairman (I/c), Kolkata Port Trust 4. Shri Biplav Kumar, Dy. Chairman, Paradip Port Trust 5. Shri T.K. Chatterjee, Executive Director (Fuel Mgt), NTPC 6. Shri Amitabha Ray, Chief General Manager(Sales & Marketing), Coal India Limited	
11.00 - 11.15 hrs.	Presentation by IWAI
11.15 - 11.25 hrs.	Presentation on State of the art Transshipment operations by Seabulk Systems Inc.
11.25 - 11.35 hrs.	Presentation on Appropriate Bulk Cargo handling technology by J.M. Baxi & Co.
11.35 - 11.45 hrs	Presentation on "IWT – A viable option" by Vivada Inland Waterways
11.45 - 11.55 hrs.	Presentation on financing of IWT vessels by Union Bank of India
11.55 - 13.15 hrs.	Panel Discussion & Q&A session
13.15 - 13.30 hrs.	Summing up by Shri A.P.V.N. Sarma
13.30 - 14.30 hrs.	**Lunch Break**
Session 2: Movement of Project Cargo for upcoming Hydro-electric projects in Arunachal Pradesh using IWT (Issue – Development of viable and exclusive transport mode) **Panelists :** 1. Shri D.T.Joseph, Ex-Secretary, GoI to Chair the Session 2. Dr. Hari Krishna Paliwal, Principal Secretary, Govt. of Arunachal Pradesh 3. Shri Ashwini Kumar, CEO, Maharashtra Maritime Board, Govt. of Maharashtra 4. Shri Atul Jadhav, President, Goa Barge Owner's Association	
14.30 - 14.40 hrs.	Presentation by IWAI
14.40 - 14.50 hrs.	Presentation on National Inland Navigation Institute by IWAI/ARI
14.50 - 15.00 hrs.	Presentation by National Hydro Power Corporation Ltd.
15.00 - 15.10 hrs.	Presentation by Jindal Power Limited
15.10 - 15.20 hrs.	Presentation by Athena Energy Venture Pvt. Ltd.
15.20 - 15.30 hrs.	Presentation by ABC India Ltd.
15.30 - 16.20 hrs.	Panel Discussion & Q&A session
16.20 - 16.30 hrs.	Summing up by Shri D.T. Joseph
16.30 - 16.40 hrs	Vote of thanks by Shri Sunil Kumar, Vice Chairman, IWAI
Tea and Dispersal	

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