Minutes of the Third Meeting of the "Group on Financial Aspects under Task Force for Interlinking of Rivers" on 08.12.2017 at 11:00 AM in the Committee Room, NWDA, 3rd floor, Palika Bhawan, New Delhi.

The third meeting of the "Group on Financial Aspects under Task Force for Interlinking of Rivers" was held under the Chairmanship of Dr. Prodipto Ghosh, Former Secretary to Govt. of India and Chairman of the Group on 08.12.2017 (Friday) at 11:00 AM in the Committee Room of NWDA, 3rd floor, Palika Bhawan, New Delhi. List of Members and other participants is enclosed as Annex-1.0.

At the outset, the Chairwelcomed all the Members, Invitees and other participants. He introduced Dr Deepak Dasgupta, former Principal Economic Advisor to Government of India and welcomed him. He gave brief account of Dr Dasgupta's serving as India's representative on the Governing Council of the Green Climate Fund, and his earlier association with World Bank and mentioned that his association with this group will be very beneficial. He informed that three presentations, one each from NITI Ayog, Yes Bank and NWDA were proposed for today. However due to some other engagements, representative of NITI Ayog had not been able to participated in the meeting today. So we would be having two presentations today and presentation of NITI Ayog could be arranged in next meeting. He then requested Shri K. P. Gupta, Member Secretary of the Group to take up the agenda items one by one for discussion.

Item 3.1 Confirmation of minutes of the second meeting of the Group on Financial Aspect held on 17.11.2017

The minutes of the second meeting of the group on financial aspects under Task Force for Interlinking of Rivers held on 17.11.2017 at New Delhi was circulated among the Members/Special Invitee vide NWDA's letter dated 28th November,2017. Shri Satish Rao, Member of the Group suggested some modifications vide his email dated 7.12.2017 (Annexure-3.1) in respect of Item No. 2.4 (The likely future trajectory of financial resources that may be available from Indian financial institutions for the ILR project. *-Presentation by Yes Bank)*. No comments were received from other Members. After discussion on the suggested modifications, it was decided to confirm minutes of the second meeting held on 17.11.2017 with the modifications suggested by Shri Satish Rao.

Item 3.2 Projection of possible flow of funds for the ILR programme from fiscal sources over the next 30 years by NITI Ayog.

This item was deferred for the next meeting as the representative of NITI Ayog could not come to attend the meeting due to some other pre-occupation.

Item 3.3 Projections of possible flow of funds for the ILR programme from Indian financial institutions, both private and public sector *by Yes Bank.*

Shri Pranay Ranjan, Associate Director, Corporate Finance, Yes Bank, New Delhi informed that he is still working on his presentation and he would require about a week to firm up the details. Chairman asked him to give brief outline of methodology being followed by him for the required purpose. He stated that he is working on two approaches - (i) Basic Credit Deployment model, and (ii) GDP based model. While explaining the first model, he stated that as per their tentative assessment, bank credit required for Infrastructure sector would be of the order of 13.2% of total institutional credit for next 15 years. Out of this, the requirement for ILR projects may be of the order of 2.5%. While explaining the second model, he mentioned that the requirement would be assessed on the projected GDP for various years. Chairman then invited views from other Members. Shri A.B.Pandya, former Chairman, CWC stated that large share of cost of headworks, allocated to power projects is leading to increased power tariff. This has been experienced in case of Pancheshwar Project between India and Nepal.

Shri Mittal, Director (Fin.), NHPC suggested that 25% of the cost of ILR should come from Government side (Central and State Govts). Flow of funds from other sources should be as under:

(i) LIC—20%
(ii) Public/Private Sector Banks—30% (Rs.25,000/- crore should be generated annually through Bonds)
(iii) World Bank/ International Agencies—25%

Chairman mentioned that the group would certainly attempt a break-up of the funding for the ILR programme from different sources, based on projections being undertaken as part of its work.

Shri Satish Rao mentioned that GDP exercise by YES Bank should be more correct. In his opinion, assumption of 6.5% GDP over next 20 years would be more realistic.

Dr Dasgupta also mentioned that GDP growth approach being followed by YES Bank is the right approach. However realistic assumptions about GDP would have to be made. Instead of 8% GDP growth, he favoured 7% as more realistic figure. Once total cost and share of domestic finance is worked out, the gap can be taken care by World Bank or other International Financial Institutions. However, he was of the view that total cost of the project would need to be modified based on experience of cost escalation in similar projects.He mentioned that we should try to understand the experience of the financing of three completed projects, such as, Narmada Project of India, Three Gorges Project of China, and South to North Water transfer Project of China (or any other completed mega project of India) from beginning to end, before giving recommendations in case of ILR Projects. He also mentioned that in our case more spending would be required in the beginning whereas benefits accruing/revenue generation would start at the end of the project.

Chairman agreed with the view of Dr Dasgupta and mentioned that GDP growth over a 30 year period is uncertain. He suggested that to start with, several alternative GDP growth rates may be assumed, e.g. 8%, 7% and 6%. The impact of GDP growth and declining rate of interest savings rates would be best addressed by the NITI Ayog. Dr Dasgupta also mentioned that GDP growth rates tend to fluctuate in 7-8 year cycles, and there may be benefit in attempting to take account of such cyclicity. He suggested to refer to some published study onGDP growth affects savings rates. He further suggested the representative of YES Bank to be in touch with Dr. Dasgupta while doing their study and take his valuable suggestions.

Shri Pandya suggested that financing of the project should take note of last mile development and last minute connectivity of the project. While citing example of Lower Subansiri Project and other hydel projects of Arunachal Pradesh, he mentioned that the work was started in full swing but later at the intervention of NGT and the MOEF, the work has stopped after making huge initial investment and the contractors are waiting for green signal from the Government to start the work. Nobody can make a forecast as to when the construction work will resume. Under such situation, last minute connectivity is very important.

Item 3.4 Cost analysis of Mahanadi-Godavari link and its impact on the cost of the entire ILR project (*Presentation by NWDA)*

Shri M.K. Sinha, Senior Consultant, NWDA made a Power Point Presentation on cost analysis of Mahanadi-Godavari (MG) link and extrapolated cost of ILR projects, based on the inputs of total five links, namely, Ken-Betwa (Phase-I), Par-Tapi-Narmada, Damanganga-Pinjal, Mahanadi-Godavari and Manas-Sankosh-Teesta-Ganga (MSTG) links. The total cost of ILR Projects worked out to Rs. 11.89 lakh crore. Copy of presentation is enclosed as Annexure-3.4. Shri Sinha mentioned that the capital cost of MG link at 2003-04 P.L. was Rs.17,540.54 crore which has been brought to the level of P.L. of 2015-16 by taking cost escalation of 8% per annum. The updated (2015-16) cost of the project is Rs.34379.46 crore. Further he mentioned that MG link envisages transfer of 12,165 MCM of water out of which en-route utilisation is only 5665 MCM and the remaining 6500 MCM of water will be delivered to Godavari river for onward transfer through three Godavari-Krishna links for further use. So, cost allocated to the MG link project has been worked out in the ratio of 5665/12165. Shri Pandya mentioned that cost of the land to be acquired should be escalated four times and the remaining total cost should be escalated as per inflation rate. Chairman suggested to utilise the values of WPI (Wholesale Price Index) to work out escalation factor for every year. These figures are likely to be available on the website of RBI and in the Economic Survey published annually by the Ministry of Finance.. Shri Pandya stated that in case of EPC contracts, particularly for hydel projects, these figures are being used and these may be available in CEA/ WAPCOS. When Shri Sinha mentioned that unit cost for irrigation development has been worked out by taking simple average of values of three links i.e., Ken-Betwa, Par-Tapi-Narmada and Mahanadi-Godavari links, the Chairman suggested to work out weighted mean of the cost. Further it was decided to work out the cost of the ILR projects by taking weighted average cost of irrigation development (roughly, Rs 3.5 lakh per ha) and Rs.6.2 crore per MW for cost of power development for projects generating more than 500 MW and Rs.8.0 crore per MW for projects generating less than 500 MW. It was also decided not to consider benefits of irrigation through ground water. The cost of water supply was also decided to be dropped as it is part of irrigation development in all projects except Damanganga-Pinjal link which is exclusively for water supply.

It was observed that cost of irrigation development is coming around Rs.2.8 lakh per hectare which is very close to the figure of Rs. 3.0 lakh per hectare as mentioned by Chief Engineer (IMO), CWC in first meeting held on 24.10.2017. The cost of Power Development worked out as Rs.8.0 lakh per MW was considered not very reasonable as power benefits envisaged from approved projects of Ken-Betwa link and Damanganga-Pinjal link is very low. It was felt that data/ information of some other Hydel projects approved as Central Electricity Authority (CEA)/ Ministry of Power may be collected and utilised for working out unit cost of power development. Further it was decided that for working out second order of refined estimate of extrapolated cost, two or three ILR projects for which Feasibility Reports have been prepared in the past should also be considered and detailed cost analysis in respect of dam, canal network, power, R & R, Compensatory afforestation, etc. be done.

Canal cost per cumec per km should also be worked out. Estimation should be done at the Price level of 2015-16. For cost of environmental components, the same should be taken from Ken-Betwa link Project whose costs are approved. Director (Tech), NWDA pointed out that doing such exercise in respect of two/three projects may not be feasible in short time. So it was further decided that to start with, detailed analysis should be done in respect of Mahanadi-Godavari link.

Item 3.5 Any other matter(s) with the permission of the Chair.

Chairman of the Group suggested to convene 4th meeting of the Group on Financial Aspects on 09th January, 2018 as most of the people will be on leave in last week of December, 2017. The agenda would include: (i) presentation by NITI Ayog on projections of fiscal resources that may be available for the ILR programme, (ii) presentation by YES bank on projection of bank/institutional resources that may be available for the ILR programme, and (iii) cost analysis of the Mahanadi-Godavari link. The Group would also take stock of the progress of its work, and attempt to draw up a work programme for completion of its tasks.

The meeting ended with vote of thanks to the Chair.

Annex-I

List of Members, Special Invitee and other participants to the Third meeting of the "Group on Financial Aspects under Task Force for Interlinking of Rivers" held on 8th December, 2017 at New Delhi

1.	Dr. Prodipto Ghosh, Former Secretary to Govt. of India & Member of Task Force for ILR, New Delhi	Chairman
2.	Shri A. B. Pandya, Former Chairman, CWC, New Delhi	Member
3.	Shri H. Satish Rao, Retd. Director, ADB, Bangalore	Member
4.	Shri Navin Kumar, Chief Engineer (IMO), CWC, New Delhi	Member
5.	Shri R.K. Jain, Chief Engineer (HQ), NWDA, New Delhi	Member
6.	Shri M. K. Mittal, Director (Finance), NHPC, Faridabad	Member
7.	Shri Pranay Ranjan, Sr. Vice President, Yes Bank Ltd., New Delhi	Representing Shri Rana Kapoor, Managing Director and CEO, Yes Bank Ltd., Mumbai
8.	Shri R.K. Pachauri, Chief Engineer (PPO), CWC, New Delhi	Special Invitee
9.	Dr. Dipak Dasgupta, Former Principal Economic Advisor, MoF, New Delhi	Special Invitee
10.	Shri K.P. Gupta Director (Technical), NWDA, New Delhi	Member-Secretary
	Other Officers	
1.	Shri Anil Kumar Jain, Deputy Director, NWDA, New Delhi	
2.	Shri M.K. Sinha Senior Consultant, NWDA, New Delhi	

Annexure-3.1

Please replace the following comments under Item 2.4:

Chairman desired to know from Shri Satish Rao about funding mechanism of similar projects in China. Shri Rao informed that China had recently constructed two Mega Projects- (i) Three Gorges Project, and (ii) Interlinking of Rivers Project. Three Gorges Project envisaged diversion of about 14 BCM water at an estimated cost of 30 billion US $. The funding was done mainly by Central and State Governments. State Governments of China are capable of generating funds though state owned Commercial Development Banks (CDB). Their recovery mechanism is quite good. Regarding South to North Water Transfer Project of China, he mentioned that this project envisages transfer of 28 BCM of water at an estimated cost of 80 billion US$. 50% of the funds were provided by the Centre and remaining funds were provided by the State Governments including Banks. Shri Rao further informed that China has developed navigational facilities and commercial parks along the canals through which they get additional revenue.

The revised version is as below:

Chairman desired to know from Shri Satish Rao about funding mechanism of similar projects in China. Shri Rao informed that China had recently constructed two Mega Projects- (i) Three Gorges Project, and (ii) Interlinking of Rivers Project.

The Three Gorges project was approved in 1992 at an estimated cost of $8.4billion. Construction started in 1994 and the 185 metre (607 ft) high dam project on Yangtze River was completed in 2006 at an estimated total cost of $37 billion, including about $10 billion for resettling 1.3 million displaced people. The project scope includes power generation (22.5 GW), flood control and ship-locks/ship-lifts to navigate past the dam.

Regarding South to North Water Transfer Project of China, he mentioned that this project envisages transfer of water from the South (Yangtze River) to the North (beyond Yellow River) through three routes: Eastern, Middle and Western. Two of the routes (Eastern and Middle) have been constructed over a period of 12 years ending in 2014; the third route (Western) has been postponed due to difficult mountainous terrain in the west. The completed two routes will transfer 28 BCM of water (roughly equally split over the two routes) over a distance of around 1200 kms, . The cost of completing the two routes is estimated around $ 80 billion. The funding was mainly provided by the Centre, the provinces (often with funds raised by selling land development rights to real estate developers) and State-owned banks. Revenue is generated through water prices set in accordance with the principle of cost recovery outlined in the 2002 Water Law. Shri Rao further informed that China has developed navigational facilities and commercial parks along the canals through which they get additional revenue.

Thanks
satish

On Wed, Nov 29, 2017 at 11:39 AM, SCILR <scilr2014@gmail.com> wrote: