

**STANDING COMMITTEE ON WATER RESOURCES**  
**(2008-2009)**

**FOURTEENTH LOK SABHA**

**MINISTRY OF WATER RESOURCES**

**INTER LINKING OF RIVERS**

**ELEVENTH REPORT**



**LOK SABHA SECRETARIAT**

**NEW DELHI**

OCTOBER, 2008/ASVINA, 1930 (Saka)

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**STANDING COMMITTEE ON WATER RESOURCES**  
**(2008-2009)**  
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Presented to Lok Sabha on 22.10.2008

Laid in Rajya Sabha on 22.10.2008



**LOK SABHA SECRETARIAT**  
**NEW DELHI**

OCTOBER, 2008/ASVINA, 1930 (Saka)

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**COMPOSITION OF THE STANDING COMMITTEE  
ON WATER RESOURCES (2008-2009)**

**Shri Rayapati Sambasiva Rao                      -                      Chairman**

**MEMBERS**

**Lok Sabha**

2.        **Shri Bhanwar Singh Dangawas**
3.        **Shri Bikram Keshari Deo**
4.        **Shri Rajen Gohain**
5.        **Shri Prakash B. Jadhav**
6.        **Smt. Preneet Kaur**
7.        **Shri Raghuveer Singh Kaushal**
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9.        **Shri Abu Ayes Mondal**
10.       **Shri Lonappan Nambadan**
11.       **Shri Harilal Madhavji Bhai Patel**
12.       **Shri Vishnu Deo Sai**
13.       **Dr. Arun Kumar Sarma**
14.       **Smt. Minati Sen**
15.       **Shri Harihar Swain**
- \*16.      **Shri Anurag Singh Thakur**
17.       **Vacant**
18.       **Vacant**
19.       **Vacant**
20.       **Vacant**
- \*\*21.     **Vacant**

**Rajya Sabha**

22.       **Chowdhary Mohammad Aslam**
23.       **Shri Ajay Singh Chautala**
24.       **Shri Kumar Deepak Das**
25.       **Shri K.E. Ismail**
26.       **Prof. P.J. Kurien**
27.       **Shri Bharatsinh Prabhatsinh Parmar**
28.       **Dr. Gyan Prakash Pilonia**
29.       **Shrimati Vasanthi Stanley**
30.       **Shri Sharad Yadav**
31.       **Vacant**

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\* Nominated w.e.f. 26.08.2008

\*\* Smt. Manorama Madhavraj, MP, Lok Sabha resigned w.e.f. 20.10.2008

## SECRETARIAT

1. Shri N.K. Sapa - Additional Secretary
2. Shri P.K. Grover - Joint Secretary
3. Shri C.S.Joon - Director
4. Shri P.V.L.N. Murthy - Deputy Secretary
5. Shri A.K. Yadav - Committee Officer

## **ABBREVIATIONS**

AIBP	-	Accelerated Irrigation Benefit Programme
CWC	-	Central Water Commission
DPR	-	Detailed Project Report
EIA	-	Environment Impact Assessment
FR	-	Feasibility Report
IIM	-	Indian Institute of Management
ILR	-	Inter Linking of Rivers
IWRFC	-	Irrigation and Water Resource Finance Corporation
MoEF	-	Ministry of Environment & Forests
NAILR	-	National Authority for Inter-Linking of Rivers
NBWL	-	National Board for Wild Life
NCAER	-	National Council of Applied Economic Research
NCMP	-	National Common Minimum Programme
NPP	-	National Perspective Plan
NRWDC	-	National River Water Development Council
NWDA	-	National water Development Agency
PFR	-	Pre Feasibility Report
TAC	-	Technical Advisory Committee
TF	-	Task Force
ToR	-	Terms of Reference



## INTRODUCTION

I, the Chairman, Standing Committee on Water Resources (2008-2009) having been authorized by the Committee to submit the Report on their behalf, present this Eleventh Report on “Inter-Linking of Rivers.”

2. The Committee (2004-2005) took up the subject “Inter-Linking of Rivers” for a detailed and indepth study. The Committee was briefed by the representatives of the Ministry of Water Resources on various aspects of the subject at their sitting held on 25 January 2005. The Committee came across, before and after the selection of the subject, divergent views being expressed in different fora by eminent persons and groups on varied considerations both in the print and other media as well as during the informal interactions the Committee had with the representatives of State Governments of Maharashtra, Kerala, Tamil Nadu and Andhra Pradesh. The Committee while keeping in view the above, decided to invite comments/Memoranda from individuals/associations/NGOs/experts interested in the subject by issue of a Press Communiqué and by giving wide publicity on All India Radio/Doordarshan in June, 2005.

3. In response to these efforts, 969 Memoranda/letters containing views/suggestions etc. were received. Of these 81 Memoranda (52 in favour and 29 against) were found to be worth consideration by the Committee. The Committee short listed 32 individuals/NGOs/experts to appear as non-official witnesses before the Committee. The Committee took evidence of these Individuals/Experts and the representatives of NGOs etc. in 12 sittings spread over from January 2006 to September 2007. The list of individuals / experts who appeared before the Committee and offered their views/suggestions on the subject is given at Appendix-VI of this Report.

The Committee took oral evidence of the representatives of the Ministry of Water Resources, Central Water Commission and National Water Development Agency at their sitting held on 12 April 2008.

4. The Committee at their sitting held on 20 October 2008 considered and adopted the Report.

5. The Committee were also benefited from the views/suggestions of individuals/NGOs etc. and express their thanks to all of them who furnished Memoranda and tendered evidence before the Committee as referred to in para 3.

6. The Committee wish to express their thanks to the officers of the Ministry of Water Resources, Central Water Commission and National Water Development Agency who appeared before the Committee and placed their considered views. They also wish to thank the Ministry for furnishing the requisite material on the points raised by the Committee in connection with the examination of the subject.

7. The Committee would like to place on record their sense of deep appreciation for the invaluable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

**NEW DELHI**  
**20 October, 2008**  
**28 Asvina, 1930(Saka)**

**R. SAMBASIVA RAO,**  
***Chairman,***  
***Standing Committee on Water Resources***

**PART-I**  
**REPORT**  
**CHAPTER-I**  
**INTRODUCTORY**

Water is the basic human need and a prime natural resource. While the endowment of Water Resources in the country may apparently appear abundant, there are wide variations in the availability of fresh water over space and time. While nearly 60% of the potential is available in the Ganga-Brahmaputra-Meghna system in the North and about 11% in the high rainfall region of the Western Ghats, hardly about 29% of the potential is available in all the other rivers, including Mahanadi, Godavari, Krishna & Cauvery of the Peninsular region. Due to this, some parts of the country suffer from floods and at the same time other areas face severe drought. The Project of Inter Linking of Rivers was thought of as an idea in equitable distribution and optimum utilisation of water from surplus river basin areas to deficit river basin areas in the country. Also, the country's food grain requirement is likely to be doubled by the year 2050 to meet the food requirement of our teeming population. The abundance of water during flood season at some places and severe water scarcity in the form of recurring droughts at some other places necessitated the consideration of a long distance inter-basin water transfer project by linking the rivers which is one of the attractive and meaningful option to ease out national imbalances in availability of water in water scarcity areas as also increase irrigated area thereby mitigating the ill effects of floods and droughts.

1.2 The long distance inter basin transfer of water, however, is not a new concept and has been in practice in India for over five centuries. The Periyar Project, the Parambikulam Aliyar Project, Kurnool - Cudappah Canal & The Telugu Ganga Project

are some of the good examples of inter basin water transfers executed in south India in the 19<sup>th</sup> & 20<sup>th</sup> centuries. Similarly, in the North India, inter sub-basin transfers in the Indus basin and Indira Gandhi Nahar Priyोजना are some of the projects successfully executed. Another important inter basin water transfer scheme in the country under execution is the Sardar Sarovar Project. A note on the National Water Grid was earlier prepared by the then Central Water & Power Commission (around 1972) and three possible alignments for the Ganga-Cauvery link along with other links were brought out.

1.3 The concept of Inter Basin Water Transfer (IBWT) was earlier mooted by Dr. K.L. Rao in 1972 as 'National Water Grid' and by Captain Dastur in 1977 as 'Garland Canal' which attracted considerable attention. Dr. K.L. Rao advocated one of the alignments for the Ganga-Cauvery link along with a few other links including the Brahmaputra and Ganga Link. The 2,640 km. long Ganga-Cauvery link essentially envisaged the withdrawal of 1,680 cumec (60,000 cusecs) of the flood flows of the Ganga near Patna for about 150 days in a year and pumping about 1,400 cumec (50,000 cusec) of this water over a head of 549 metres (1,800 feet) for transfer to the Peninsular region and utilizing the remaining 280 cumec (10,000 cusec) in the Ganga basin itself. The proposal envisaged utilization of 2.59 million hectare metres of Ganga water to bring under irrigation an additional area of 4 m. Ha. Dr. Rao had also proposed a few additional links like (a) Brahmaputra-Ganga link to transfer 1,800 to 3,000 cumec with a lift of 12 to 15 m.; (b) Link transferring 300 cumec of Mahanadi water southwards; (c) Canal from Narmada to Gujarat and Western Rajasthan with a lift of 275 m; and (d) links from rivers of the western ghats towards east. This proposal had components similar to the proposals later made under the National Perspective Plan.

1.4 Apart from Dr. K.L. Rao, Captain Dastur, earlier put forward his proposal for Garland Canal which mainly consisted of two canals, viz. (i) A 4,200 km. long, 300 m. wide Himalayan Canal at a constant bed level between 335 m. and 457 m. about mean sea level aligned along the southern slopes of the Himalayas running from the Ravi in the west to the Brahmaputra in the east and beyond. This was to be fed by the Himalayan river waters stored in 50 integrated lakes to be created by cutting the hill slopes of the Himalayas to the same level as the bed of the canal and another 40 lakes beyond Brahmaputra. The proposal envisaged (i) a storage capacity of 24.7 M.Ha.m to control and distribute 61.7 M.Ha.m of water and (ii) a 9,300 km. long 300 metre wide Central Southern Garland Canal at a constant elevation of between 244 metre and 305 metre about the mean sea level. This Garland Canal was proposed to have about 200 integrated lakes having a storage capacity of 49.7 M.Ha.m to control and distribute 86.4 M.Ha.m of water. The Himalayan and the Garland Canal were proposed to be inter-connected at 2 points (Delhi and Patna) by 5 number of 3.7 m. dia pipelines for transfer of water. Captain Dastur estimated that all the surplus water in the country will be utilized to irrigate 219 M.Ha. About 16.8 million volunteers were expected to complete the work in 3 to 4 years. The cost estimated by Captain Dastur (around 1977) was Rs. 24,095 crores.

1.5 While Dr. K.L. Rao's proposal envisaged the transfer of Ganga's flood water to Cauvery through Ganga-Cauvery link partially by lift and partially by gravity, Captain Dastur's concept was to store waters at all the tributaries / rivulets in canal at a constant elevation and utilize through Himalayan and Central / Southern Garland canals which were proposed to be inter-connected at two points (Delhi and Patna). In other words, Captain Dastur's proposal is to store water and transfer in both the directions.

1.6 Both these schemes were examined by a group of experts comprising experts from Central Water Commission, State Governments and Professors from IIT and University of Roorkee and were found to be technically unsound and economically prohibitive. The Central Water Commission in 1979 indicated that the cost of the Dastur proposal was about Rs.12 million crore. Therefore, the Scheme was given up. However, the continued interest shown by many people gave impetus to again study the inter basin water transfer proposals.

1.7 Thereafter, the Ministry of Water Resources (then Ministry of Irrigation) in August 1980 had formulated the 'National Perspective Plan for Water Resources Development' in the country which envisaged transfer of water from surplus basins to deficit basins. The National Perspective Plan (NPP) comprises two components, viz. (i) Peninsular Rivers Development, and (ii) Himalayan River Development. The NPP envisages additional benefits of 25 m.ha. of irrigation from surface water, 10 m.ha by increased use of ground water, raising the ultimate irrigation potential from the existing level of 140 m. ha. to 175 m.ha. and generation of 34,000 MW of power apart from the benefits of flood control, navigation, water supply, fisheries, salinity and pollution control etc. The National Water Development Agency (NWDA) was entrusted the task of further carrying out pre-feasibility/feasibility studies in respect of the above components of National Perspective Plan.

1.8 The Committee's examination of the subject 'Inter-Linking of Rivers' which *inter alia* included the review of work done and role of NWDA, the efforts made by the Task Force on Inter-Linking of Rivers, the cost and funding aspects of the Inter-Linking of Rivers projects, the constitutional set up, the environmental and other related aspects including the views of the experts/NGOs/eminent individuals along with the views of

State Governments obtained during the Committee's various field visits and interactions with the State Government officials has been dealt with in the succeeding Chapters of this Report.

## CHAPTER-II

### ROLE OF NATIONAL WATER DEVELOPMENT AGENCY

The National Water Development Agency was set up on 17 July 1982 by the Government of India Resolution under the Ministry of Water Resources as an Autonomous Society to study the feasibility of the Peninsular Component of National Perspective Plan. The NWDA is fully funded by Government of India. Subsequently, in 1990-91, NWDA Society resolved to take up the studies of Himalayan Component also. Further, on 28 June 2006, the NWDA Society approved modifications in the functions of NWDA to include preparation of Detailed Project Reports (DPRs) of link projects and pre-feasibility/ feasibility reports of intra-basin links as proposed by States. Accordingly, MOWR vide Resolution dated 30 November 2006 has modified the functions of NWDA Society.

2.2 The functions of the Agency at present are as follows:

- (a) To carry out detailed surveys and investigations of possible reservoir sites and inter-connecting links in order to establish feasibility of the proposal of Peninsular Rivers Development and Himalayan Rivers Development components forming part of the National Perspective Plan for Water Resources Development prepared by the then Ministry of Irrigation (now Ministry of Water Resources) and Central Water Commission.
- (b) To carry out detailed studies about the quantum of water in various Peninsular River systems and Himalayan River systems which can be transferred to other basins/States after meeting the reasonable needs of the basin/States in the foreseeable future.
- (c) To prepare feasibility report of the various components of the scheme relating to Peninsular Rivers development and Himalayan Rivers development.
- (d) To prepare detailed project report of river link proposals under National Perspective Plan for Water Resources Development after concurrence of the concerned States.
- (e) To prepare pre – feasibility / feasibility reports of the intra-state links as may be proposed by the States.



- (f) To do all such other things the Society may consider necessary, incidental, supplementary or conducive to the attainment of above objectives.

2.3 The National Water Development Agency Society is the apex body of the National Water Development Agency and meets at least once in a year to review the progress and performance of the Agency towards the attainment of its objectives and to give such policy directions as it deems fit. The Hon'ble Union Minister of Water Resources is the President of the Society. The Governing Body of the NWDA Society had constituted a Technical Advisory Committee (TAC) of NWDA under the Chairmanship of the Chairman, Central Water Commission, for examination and scrutiny of the various technical proposals framed by the Agency.

2.4 A Group (Consensus Group) has been constituted by the Ministry of Water Resources in June 2002 under the Chairman, Central Water Commission with Director General, NWDA as Member-Secretary in order to discuss and expedite the process of arriving at consensus amongst the States regarding sharing of surplus water in river basins/sub-basins and quantum of surplus water to be transferred from surplus basins to deficit basins/areas as per the proposals of interbasin water transfer of NWDA and to assist the States in arriving at an agreement regarding sharing of costs and benefits by the beneficiary States and other related issues for taking up implementation of the link schemes and also to discuss the issue of preparation of Detailed Project Reports (DPRs) of various links for which Feasibility Reports have already been completed by NWDA.

#### **Work done by NWDA**

2.5 The NWDA after various studies identified 30 links under National Perspective Plan for preparation of Feasibility Reports (FRs) – 16 links under the Peninsular Component of the plan and 14 links under the Himalayan Component. The list of these

identified links is given at **Appendix-I and II**. So far, NWDA has completed the feasibility reports in respect of 14 links under the Peninsular Component and 2 links (Indian Portion) under the Himalayan Component (Indian Portion). Surveys and investigations for the remaining links (Indian Portion) under both the Peninsular and Himalayan Component are under various stages of progress.

2.6 NWDA has completed water balance studies of basins/sub-basins and at diversion points, toposheet studies of reservoirs and link alignments, storage capacity studies of reservoirs, pre-feasibility studies and feasibility studies towards the implementation of inter-linking of rivers in the country as follows:

<b>S. No.</b>	<b>Item</b>	<b>Quantity</b>
1	Water balance studies of basins/sub-basins	137
2	Water balance studies at diversion points	71
3	Toposheet and storage capacity studies of reservoirs	74
4	Toposheet studies of link alignments	37
5	Prefeasibility reports of links	32
6	Feasibility Reports	16

NWDA has completed feasibility reports of 14 links under Peninsular Component and 2 links under Himalayan component (Indian portion).

2.7 The balance of FR of two peninsular links, the FR of one link namely Bedti-Varda is in progress. However, local people were having certain apprehensions about this link for which a seminar in association with the Govt. of Karnataka was organized on 09 December 2007 at Sirsi, Uttar Kannada District, Karnataka to inform the local people about its benefits and create a conducive atmosphere for carrying out field surveys and investigation activities related with preparation of Feasibility Report of the link while in respect of other peninsular link i.e. Netravati – Hemavati link, Govt. of Karnataka is yet to give their concurrence. Their main apprehension is about environmental issues involved in this link. The survey and investigation of this link would be taken up after

their concurrence. Field survey and investigation of balance 12 links in Himalayan component are in progress in Indian portion for preparing their FRs.

### **Efforts for consensus on the Link Proposals**

2.8 In order to arrive at a consensus on the link proposals between various State Governments, all the reports prepared by NWDA are circulated to concerned State Govts. The State Govt. officers are invariably invited in all the important meetings e.g. Annual General Meeting of NWDA Society, Governing Body, Technical Advisory Committee etc. Efforts are being made from time to time by the officers of MOWR / NWDA / CWC to convince the officials of State Govts. about the feasibility of the proposals. A Group headed by Chairman, Central Water Commission (CWC) and consisting of other officers of CWC and Secretaries of Irrigation / Water Resources Department from concerned States has been constituted in June, 2002 to discuss with the States the issues for arriving at a consensus regarding sharing of surplus waters and the preparation of detailed project reports by NWDA. Five links namely Ken-Betwa, Parbati-Kalisindh-Chambal, Par-Tapi-Narmada, Damanganga-Pinjal and Godavari (Polavaram)-Krishna (Vijayawada) have been identified as priority links for bringing consensus amongst the concerned States to take up the work of preparation of their DPRs. The Consensus Group has held nine meetings so far, three for Ken – Betwa link, three for Parbati – Kalisindh – Chambal link, one for Godavari (Polavaram) – Krishna (Vijayawada) link and two for Par – Tapi – Narmada & Damanganga – Pinjal links. The last meeting of ‘Consensus Group’ was held on 28 June 2007 for Parbati – Kalisindh – Chambal link.

2.9 The National Common Minimum Programme (NCMP) of the Government envisages that the UPA Government will make a comprehensive assessment of the feasibility of linking the rivers of the country starting with the southern rivers in a fully

consultative manner. It will also explore the feasibility of linking sub-basins of rivers in States like Bihar.

2.10 An assessment of interlinking of Rivers (ILR) Programme has been carried out at the level of Secretary (WR) through detailed discussions and interaction with various Stakeholders, Officers of Ministry of Water Resources and other Central Depts., and State Governments. A Conference of the Chief Secretaries and Principal Secretaries of Water Resources of the States / UTs was held on 2 and 3 August 2004 during which this issue was discussed at a dedicated session.

2.11 Most of the States are supportive of the concept of the interlinking of rivers project; provided the project can somehow ensure a “win – win” situation for all States. States were largely of the view that funding may have to be provided by Govt. of India. In general, there is in-principle agreement with the ILR proposal as the scheme is to derive optimal benefits with regards to specific requirements of the concerned States.

2.12 Out of 30 links identified by NWDA, all over the country, DPR of one link, viz. Ken-Betwa link is likely to be completed by 2008. When asked as to how long it will take to prepare DPRs for other links, the Ministry in a post evidence reply submitted as under :

“The Inter-Linking of Rivers (ILR) programme involves various steps such as (i) preparation of feasibility reports of links, (ii) negotiations and consensus among the concerned States, (iii) Agreement with neighbouring countries if link involves area lying in other countries, and then (iv) preparation of Detailed Project Reports of links. The preparation of DPRs is dependent on the consensus reached among the concerned States and signing of agreements with neighbouring countries for the links located there. Preparation of DPR is likely to take three years after consensus is arrived and MoU is signed by the concerned States.”

2.13 Asked further about the hurdles which slows down the preparatory work on DPRs, the Ministry in a note stated :

“In order to take up the work of Preparation of DPR, the reservations of the concerned State Govts. are first required to be addressed. These reservations may be on account of surpluses worked out by NWDA, disturbing the existing water allocations as per Tribunal awards and perception of adverse effects on existing irrigation and power facilities. For carrying out surveys & investigations in forest and wildlife sanctuaries, necessary clearances from Ministry of Environment & Forest also takes time. In Himalayan Component, the initial reaches of seven water transfer links and storages proposed in these links i.e. Kosi-Mechi, Kosi-Ghagra, Gandak-Ganga, Ghagra-Yamuna, Sarda-Yamuna, Manas-Sankosh-Tista-Ganga & Jogighopa-Tista-Farakka are falling in neighbouring countries. For carrying out surveys & investigations for these links in the neighbouring countries, their permission is essential.”

2.14 As regards the problem of sharing of water in Parbati-Kalisindh-Chambal link the Secretary, Ministry of Water Resources during evidence informed that the representative of the Government of Madhya Pradesh had stated that both States will settle this issue bilaterally and as soon as it is settled, they would come back to the Ministry of Water Resources, Government of India. It is being discussed between Madhya Pradesh and Rajasthan.

2.15 When asked about the status of the Par-Tapi-Narmada and Damanganga-Pinjal links, the Secretary during evidence stated as follows :

“These two links were taken up together. One benefits Maharashtra and the other benefits Gujarat. Informally both the States agreed for the two. But the formal concurrence of the two States on the MoU is awaited. We have been pursuing with them. Last time I had gone to Maharashtra it was informally said that the Government perhaps has agreed, but we have not received anything from them.”

2.16 On the question of the problem concerning the Godavari-Krishna Link, the representative of NWDA during evidence stated that the right canal of Polavaram Project is called as the Godavari-Krishna Link. The DPR has been appraised by the CWC. The clearance of the Ministry of Environment & Forest was yet to come. The investment clearance is also to come from Planning Commission. Depending upon the clearances from all the three agencies, appropriate action would be taken.

2.17 When asked as to what are the broad reasons for the States not agreeing to the proposals, at the time of signing of MoU for preparation of DPRs the representative of the NWDA stated that States have been raising their apprehensions from time to time. As far as all the State Governments were concerned, right from 1978, in principle, all the State Governments were agreeable in any forum as far as this programme was concerned because it was for the benefit of the people. But when it came to the specifics, the problem starts cropping up like water sharing, etc. Every State does not want to give the water flowing through their State and would like to extract maximum benefit out of it.

2.18 When asked as to what concrete and improved results have been brought by way of steps taken by NWDA and others, the representative of the NWDA stated:

“Due to the efforts that we have taken, that is, due to the efforts taken by the people in the Ministry, one DPR is now under implementation. Again, I am hopeful that two more DPRs are likely to be taken up during this year depending upon the response of the State Governments. In the case of Parbati-Kalisindh-Chambal, I have met the Chief Secretary of Rajasthan. We have been meeting the officials. We will expedite these efforts. We have taken note of the concerns of the Hon. Committee. We will expedite our efforts. To that extent, nothing would be amiss from our side. But we are depending on the State Governments. They have to say ‘yes’ for us to proceed.”

2.19 The Ministry of Water Resources vide their communication dated 01 August 2008 informed that as a result of efforts made by them both the States of Gujarat and Maharashtra have given their concurrence in writing for Par-Tapi-Narmada and Damanganga-Pinjil links and further action in this regard is being taken by them.

### **Intra State Links**

2.20 As a follow up action of the decision taken during presentation before the Hon’ble Prime Minister on 11 October 2004, Ministry of Water Resources in June 2005 conveyed the approval to identify intra-State links in the States like Bihar and to prepare pre-feasibility/ feasibility reports of these links by NWDA. This work has now been added to

the functions of NWDA after the approval in the Special General Meeting of NWDA Society held on 28 June 2006.

2.21 On the status of efforts made by Ministry of Water Resources for taking up Intra State Links and the response of various States thereto, the Ministry in a note stated :

“NWDA has requested all the States / UTs to inform the details of Intra-State links for further studies by NWDA. Response from the States of Bihar, Maharashtra, Gujarat, Orissa, Jharkhand, Meghalaya, Nagaland, Kerala, Delhi and Union Territories of Puducherry, Andaman & Nicobar Islands and Daman & Diu has been received. Govts. of Nagaland, Meghalaya, Kerala, Delhi and Union Territories of Puducherry, Andaman & Nicobar Islands and Daman & Diu indicated that there is no Intra-State link proposal concerning to their States / UTs. Govt. of Puducherry has sent a proposal for one Inter-State link namely Pennaiyar – Sankarabarani link, instead of Intra-State link proposal, which is under examination in NWDA. The proposals received from others States have been examined / discussed by NWDA officers with the States in various meetings.

The Engineer-in-Chief, Govt. of Bihar vide his letter dt. 14.02.2007 has informed that they have already commenced the work of preparation of DPR of the Intra-State links of the river basins of the State on priority and would seek assistance of NWDA as and when required in future. In the 23<sup>rd</sup> Annual General Meeting of NWDA Society held on 04.07.2007, the Representative of Govt. of Bihar informed that some of the intra-State link schemes have been changed and their detailed project reports are being prepared. The Principal Secretary (WR), Govt. of Maharashtra informed that their Govt. has already intimated NWDA regarding prioritization of one or two intra-State links.

Representative of Govt. of Tamil Nadu requested NWDA to study one or two intra-State link proposals in Tamil Nadu, for which a meeting was held with them on 23.1.08 in which they have indicated that three intra-State Link proposals are being firmed up in Tamil Nadu.

A meeting between the officials of NWDA and Govt. of Jharkhand was held on 27.07.2007 during which it was decided to prepare Pre-Feasibility reports of three intra-State link proposals. The data for these links have been sent by Water Resources Department, Govt. of Jharkhand in the first week of January 2008.

In the 51<sup>st</sup> Governing Body Meeting of NWDA the representative of Govt. of Gujarat requested to take up Damanganga – Sabarmati intra-State link. As Damanganga – Sabarmati link will draw water from Damanganga basin, it would be appropriate to prepare the PFR/FR of this link after preparing DPR of Damanganga – Pinjal link. Representative of Govt. of Gujarat informed that link is planned for balance water from Damanganga-Pinjal link and, therefore, NWDA

should at least prepare water balance studies for this intra-State link considering diversions proposed in FR, which was agreed.”

2.22 When asked about the budgetary resources for Intra-State Linking Projects, the Secretary, Ministry of Water Resources stated that these projects can be taken up under AIBP. The cost of the DPRs will be borne by the Central Government, if the States request NWDA to prepare the reports.

### **International Dimensions**

2.23 In Himalayan Component, the initial reaches of seven water transfer links and storages proposed in these links. i.e. Kosi-Mechi, Kosi-Ghagra, Gandak-Ganga, Ghagra-Yamuna, Sarda-Yamuna, Manas-Sankosh-Tista-Ganga & Jogighopa-Tista-Farakka are falling in neighbouring countries of Nepal and Bhutan. To carry out surveys & investigations in the neighbouring countries their permission is essential. The details of the links are given in **Appendix – III**.

2.24 The NWDA through Ministry of Water Resources, Govt. of India has approached Ministry of External Affairs for seeking permission from neighbouring countries for carrying out Survey & Investigation works in their territories. The response received from MEA is as follows :

“MEA vide their letter dated 13.09.2005 advised in regard to survey **in Nepal** that “In MEA’s assessment of current political situation in Nepal, this is not the appropriate time to carry out survey works for linking of rivers in Nepalese territories. Our focus at the moment could be on the linking of peninsular rivers”. With regard to survey work in **Bhutan** the MEA advised that “At this juncture, when the mega project is still in a conceptual stage, taking up survey/investigations work on a sub – component in the territory of Bhutan could lead to avoidable complications and adversely affect the close bilateral relations which rest on mutual trust and confidence unless the proposal is considered bilaterally.

MOWR vide their letter dated 17.01.2007 indicated to MEA that most of the survey & investigation work of Himalayan Component lying in India have been completed and, therefore, it is essential to have the requisite permission from the



Govts. of Nepal and Bhutan for carrying out balance work in Nepal and Bhutan. MEA was requested to apprise MoWR of the current situation so that formal proposals can be sent to MEA for taking up the matter with both the Govts. MOWR further reminded on 22.03.2007 & 10.07.2007 to MEA in this regard. However, their response is awaited.

In regard to concern raised by Bangladesh on ILR programme of India, in the thirty sixth meeting of the Indo Bangladesh Joint River Commission held at Dhaka from 19<sup>th</sup> to 21<sup>st</sup> September, 2005, it was emphasized that none of the links of Himalayan region would be attempted until the concerns of the neighbouring countries were examined and addressed in an open and transparent manner. It was assured that India would not take any unilateral action that would harm the interest of Bangladesh.”

2.25 In the Himalayan component, NWDA has completed feasibility studies of Sarda – Yamuna link and Ghagra – Yamuna link in Indian portion. The information pertaining to Nepal area is given based on toposheet studies in the absence of details of Dams / link alignment in Nepal. As such, these two FRs are not yet complete and have not been circulated. Besides above, survey & investigation works for preparing FRs of (i) Yamuna – Rajasthan link (ii) Chunar – Sone barrage link (iii) Subernarekha – Mahanadi link (iv)Ganga – Damodar – Subernarekha link and (v) Farakka – Sunderbans which lie in Indian portion have been completed by NWDA. Further, action is being taken to complete their FRs.

## CHAPTER – III

### TASK FORCE ON INTER LINKING OF RIVERS

While the feasibility studies of Inter Linking of Rivers were in progress, an IA No. 27 (Application for directions) in the Writ Petition (Civil) No. 724/1994 with the title “AND QUIET FLOWS THE MAILY YAMUNA” was filed on 10 September 2002 by Shri Ranjit Kumar, Sr. Advocate (AC). In the Writ, the petitioner, while quoting the speech of Hon’ble President of India of 14 August 2002 mentioning the need of river networking prayed to the Hon’ble Court to ‘issue appropriate directions, in the first instance, to form a High Powered Committee to look into the suggestion of networking of rivers, as has been mooted by H.E. the President of India, and, after the submission of its report, issue further directions in consonance with the objective to be achieved of networking of rivers.’

3.2 This IA came up for preliminary hearing before the Supreme Court on 16 September 2002 when the Court was pleased to pass the order that it will be more appropriate to treat it as independent Public Interest Litigation with the cause title – “In Re: NETWORKING OF RIVERS.” The Court directed the Centre and States to respond. The Supreme Court of India in the Writ Petition No. 512 of 2002 regarding networking of rivers on 30 September 2002 directed the Union of India to file an affidavit by 28 October 2002. The Union of India in its affidavit filed on 25 October 2002 before the Court has the following operative part :

“A presentation was made by the Ministry of Water Resources on Inter Linking of Rivers before the Hon’ble Prime Minister on October 05, 2002, where in the Dy. Prime Minister and other senior Ministers and officers were also present. It was suggested after presentation that a High Level Task Force can be formed which will go into the modalities for bringing consensus on Inter Linking of Rivers among the States. A similar presentation has also been made to His Excellency the President of India on October 16, 2002. In view of the above facts, it is

respectfully submitted that the prayer of the Petitioner to form a High Powered Committee may not be necessary at this stage.”

3.3 The Hon’ble Supreme Court on 31 October 2002 has observed in the said Petition “We do expect that the programme when drawn up would try and ensure that the link projects are completed within a reasonable time of not more than ten years. We say so because recently the National Highways Projects have been undertaken and the same is nearing completion and the Inter Linking of Rivers is complementary to the said Project and the water ways which are so constructed will be of immense benefit to the country as a whole.”

3.4 A Task Force under the Chairmanship of Sh. Suresh P. Prabhu, the then Member of Parliament, Lok Sabha as Chairman, Shri C.C. Patel, Vice Chairman and Dr. C.D. Thatte, Member-Secretary respectively was constituted on 13 December 2002. In addition to the above members of the Task Force, part-time members were also nominated in consultation with the Chairman of the Task Force and with the approval of the Prime Minister vide the Ministry of Water Resources Resolutions dated 18 February 2003, 24 February 2003, 24 March 2003 and 15 July 2003. The following ten members were inducted in the Task Force:

1.	Shri Deepak Das Gupta, (Retd.) Chairman, NHAI	(Full Time Member)
2.	Shri K.V. Kamath, MD & CEO, ICICI Bank, New Delhi	(Part Time Member)
3.	Shri R.K. Pachauri, Director General, TERI, New Delhi	(Part Time Member)
4.	Shri Piyush Goyal, Chartered Accountant, Mumbai	(Part Time Member)
5.	Shri K. Kasturirangan, Chairman, ISRO, New Delhi	(Part Time Member)
6.	Shri G.C. Sahu, Retd. Engineer-in-Chief, Government of Orissa	(Part Time Member)

7.	Dr. K. Hari Babu, MLA, Visakhapatnam, Andhra Pradesh	(Part Time Member)
8.	Dr. B.R. Chauhan, Legal Expert, New Delhi	(Part Time Member)
9.	Shri B.G. Verghese, Centre for Policy Research, New Delhi	(Part Time Member)
10.	Dr. A. Mohan Krishnan	(Part Time Member)

3.5 The terms of reference of the Task Force are as under :

- i) Provide guidance on norms of appraisal of individual projects in respect of economic viability, socio-economic impacts, environmental impacts and preparation of resettlement plans;
- ii) Devise suitable mechanism for bringing about speedy consensus amongst the States;
- iii) Prioritize the different project components for preparation of Detailed Project Reports and implementation.
- iv) Propose suitable organizational structure for implementing the project;
- v) Consider various modalities for project funding; and
- vi) Consider international dimensions that maybe involved in some project components.

3.6 The milestone/time table for achieving the goal of Inter Linking of Rivers as indicated in the above resolution is as under :

- (i) Preparation of Action Plan-I, giving an outline of the time schedules for the completion of the feasibility studies, detailed project reports, estimated

cost, implementation schedule, concrete benefits and advantages of the project, etc. (30 April 2003).

- (ii) Preparation of Action Plan-II, giving alternative options for funding and execution of the project as also the suggested methods for cost recovery (31 July 2003).
- (iii) Meeting with the Chief Ministers to deliberate over the project and to elicit their cooperation (May/June 2003).
- (iv) Completion of Feasibility Studies (already in progress). (31 December 2005).
- (v) Completion of Detailed Project Reports. (Preparation of DPRs will start simultaneously since FSs in respect of eight river links have already been completed). (31 December 2006).
- (vi) Implementation of the Project (10 years) (31 December 2016).

3.7 The Task Force was to provide guidance on norms of appraisal of individual projects in respect of economic viability, socio-economic impacts, environmental impacts and preparation of resettlement plans, devise suitable mechanism for bringing about speedy consensus amongst the States, prioritize the different project components for preparation of Detailed Project Reports and its implementation, propose suitable organizational structure for implementing the project, consider various modalities for project funding and consider international aspects that may be involved in some project components etc. The Task Force has proposed and submitted the Action Plan – I on 30 April 2003.

3.8 Action Plan-I, giving an outline of the time schedules for the completion of the feasibility studies, detailed project reports, estimated costs, implementation schedule, concrete benefits and advantages of the project, etc. was submitted on 30 April 2003. Action Plan I of Task Force on ILR indicated a period of 2 years for preparation of DPR for Links of an average size. Action Plan-II, giving alternative options for funding and execution of the project as also the suggested methods for cost recovery was submitted on 16 April 2004. Task Force on Inter-Linking of Rivers, which has submitted Action Plans I & II and completed its role, has been wound up by Ministry of Water Resources with effect from 31 December 2004.

3.9 To facilitate the working of the Task Force to meet its functions and objectives given in the ToR, the following Working Groups were formed. The expertise of the members of the TF belonging to different disciplines have been utilized as members of the Working Groups. The Services of the Resource Institutes and of the experts in the respective subjects from the Resource Institutes and outside have also been utilized in the Working Groups.

1. Working Group on Technical Matters.
2. Working Group on Finance Matters.
3. Working Group on Environment, Ecology and related issues.
4. Working Group on Social issues.
5. Working Group on Legal (water law) Aspects.
6. Working Group on International Dimensions.
7. Working Group on Application of Remote Sensing Technologies.
8. Working Group on Communication & Coordination with NGO's.
9. Working Group on Executive & Implementation.
10. Working Group on Institutional Mechanism.

3.10 In addition, the following Study Groups have also been formed for various other studies related to speedy implementation of Inter Linking of Rivers and also to remove misinformation among public and society and to communicate the advantages of the Inter Linking of Rivers to them :

1. Critical Review Group
2. Communication Core Group
3. Independent Group of Experts
4. Committee of Experts for guiding preparation of Terms of Reference (ToR) for Detailed Project Report (DPR)
5. Review Committee for DPR
6. Study Group for possible mechanization of Construction
7. Study Group on Agriculture and Aquaculture.

The Composition of these Working Groups / Study Groups are given in

**Annexure–IV.**

3.11 The Highlights of the findings of Task Force are:

- (i) Task Force got prepared Terms of Reference (TOR) for preparation of Detailed Project Reports (DPR) through M/s Engineers India Ltd. (EIL) for providing guidance on norms of appraisal of individual projects.
- (ii) On the issue of suitable mechanism for bringing about speedy consensus amongst the States, Task Force has suggested meeting at the highest level to agree after the technical-level discussions with emphasis that outstanding issues should be such that they can be addressed in Detailed Project Report stage.
- (iii) The Task Force has stated that the peninsular links are the right component to begin with. Top priority links identified by Task Force on Interlinking of Rivers are as under:
  - a) Ken-Betwa link - UP & MP
  - b) Parbati-Kalisindh-Chambal link - MP & Rajasthan
- (iv) On the basis of report from IIM-Ahmedabad, a two tier institutional/organizational setup has been suggested for the implementation of the programme on Interlinking of Rivers (ILR) along with a Council – “National River Water Development Council

(NRWDC)” to act as the apex body of the proposed setup. The National Authority for Interlinking of Rivers (NAILR) has also been proposed as the first tier of the proposed two tier organizational structure and the regional or branch offices or subsidiaries would act as “Link Instrument” and are proposed as the second tier of the organizational setup.

- (v) Task Force on Interlinking of Rivers consulted ICICI for funding options. ICICI has proposed that funding should be partly through public, public-private and private inputs. The exact requirement on realistic basis will be available only after the preparation of Detailed Project Report (DPR) of all the links.

Based on NWDA studies National Council of Applied Economic Research (NCAER) has estimated that the cost of ILR project would be Rs. 4,44,331.20 crore which is 21-22% lower than the rough estimate of Rs. 5.60 lakh crore. NCAER is of the view that the programme would take nearly 35 – 40 years. However, with use of modern construction and Remote Sensing techniques, the programme at best could be completed in 25 years.

- (vi) A Working Group on International dimensions constituted by Task Force on ILR has also suggested that at the present juncture, it is too early, to pursue the matter further at high political levels with the Nepal government. Regarding Bangladesh, it has been suggested that Dhaka will continue to raise the ILR issue in Joint River Commission and possibly in other bilateral fora. India should respond by reiterating the line taken in the JRC i.e., ILR is a concept, not a single project.

3.12 The Task Force assigned the work of designing suitable organisational structure for implementing the Inter Linking of Rivers projects to IIM Ahmedabad. When asked if the final report of IIMA has been received and the action taken thereon, the Ministry of Water Resources in a written reply stated:

“The final report was received in January, 2007. On the basis of report from IIM-Ahmedabad, a two tier institutional/organizational setup has been suggested by the Task Force for the implementation of the programme on Interlinking of Rivers (ILR) along with a Council – ‘National River Water Development Council (NRWDC)’ to act as the apex body of the proposed setup. The National Authority for Interlinking of Rivers (NAILR) is proposed as the first tier of the proposed two tier organizational structure and the regional or branch offices or subsidiaries would act as “Link Instrument” and are proposed as the second tier of the organizational setup. None of the link project under NPP is under implementation



stage as of now. Action would be taken on the above suggestions at an appropriate time.”

3.13 The Ministry of Water Resources constituted a Special Cell on Inter Linking of Rivers headed by Joint Secretary, TF-ILR in December 2004, to look after the residual routine work of the TF-ILR and for taking follow up action on the ILR programme. The Special Cell shall work within the overall scheme of NWDA and Ministry of Water Resources shall provide funds to NWDA to defray additional expenses on account of the Special Cell. Later, in February, 2005 the Ministry of Water Resources has partially modified its earlier order and made Commissioner (PR) Ministry of Water Resources as head of this Special Cell. The Special Cell is carrying out the residual works of TF-ILR.

## CHAPTER – IV

### ECONOMICS OF INTER LINKING OF RIVERS

#### **Cost and Funding of Project**

The Task force has consulted ICICI for funding options and NCAER for studying the economic impacts on Inter Linking of Rivers Programme. ICICI has proposed that funding should be through Public, Public-Private and Private inputs. The NCAER, based on NWDA studies has stated that the cost of ILR Programme would be Rs.4,44,331 crore which is 21-22% lower than the rough estimate of Rs.5.60 lakh crore and it would take nearly 35 to 40 years. However, with use of modern construction and Remote Sensing Techniques the programme at best could be completed in 25 years.

4.2 The Ministry in reply to a query of the Committee stated that total cost of the ILR Programme will be firmed up after preparation of Detailed Project Reports (DPRs) of all the proposals. The cost of preparation of DPRs is to be borne by Government of India.

4.3 In his Budget Speech (2008-2009) the Finance Minister proposed to establish the Irrigation and Water Resource Finance Corporation (IWRFC) with an initial capital of Rs.100 crore contributed by the Central Government, the State Governments and other Financial Institutions would be invited to contribute to the equity. The Corporation is proposed to set up to mobilize very large resources required to fund Major & Medium Irrigation Projects.

4.4 As regards funding of the project, the Ministry has stated that at present, DPR of only one link namely Ken-Betwa links is in progress . It has been included in the list of National Projects for which 90% of the project cost would be funded by the Central Government.

4.5 Asked further if inclusion of DPR of Ken-Betwa as National Project would not affect the work of on-going projects for which Central assistance is being given to States, the Ministry in a reply submitted as under :

“Though the estimated cost of the ILR project is large, the requirements of funds will be spread over a long period of time as the links are not likely to be taken up simultaneously. DPR of one link is in progress and the same has been included in the list of National Projects. Consensus on other links has not reached yet. So, the funding modalities of other link projects would be considered at an appropriate time after completion of their DPRs.”

#### **Study by NCAER on ILR**

4.6 The National Council of Applied Economic Research was asked to study the economic impact of Inter Linking of Rivers Programme in March 2004. NCAER completed the study and submitted its report which is being examined by the Ministry of Water Resources through a Special Cell on ILR. When asked about the findings of the study of NCAER, the Ministry in a written reply stated as follows :

“The draft report of National Council of Applied Economic Research (NCAER) mentions:

- (a) ILR will result in growth of construction sector by 3.80 per cent and total employment in economy would increase nearly by 4 per cent.
- (b) ILR is capable of increasing food grain production growth by additional 2 percentage point over baseline scenario which will supplement overall economic growth by 0.37 percentage point.
- (c) NCAER has estimated that the cost of ILR project would be Rs. 4,44,331.20 crore which is 21-22% lower than the rough estimate of Rs. 5.60 lakh crore. NCAER is of the view that the programme would take nearly 35 – 40 years. However, with use of modern construction and Remote Sensing techniques, the programme at best could be completed in 25 years.”

4.7 On the action taken by Government on the report of NCAER, the Ministry informed that the draft report received from NCAER has been examined by the Ministry

of Water Resources. MoWR has offered the comments to them based upon the inputs from Planning Commission, Ministry of Finance, Ministry of Agriculture and Ministry of Power. NCAER has submitted the revised report recently (7 April 2008) which is being examined. A copy of the report will be submitted as soon as finalized.

4.8 The Ministry in a post-evidence reply to the query of the Committee regarding impact of ILR Project on overall development of rural sector, employment generation in rural areas etc. stated as follows:

“National Council for Applied Economic Research(NCAER) was approached to study the economic impacts of the ILR programme including Benefits of Interlinking Programme. The revised report of NCAER has been received on 7.4.2008.

As per NCAER assessment;

(a) The ILR programme involves huge construction activity, comparable in scale to the Golden Quadrilateral (GQ) project. The construction activities in the ILR would include dams, reservoirs and canals.

(b) ILR programme will have both short and long term impact on the economy. The short term impact of the link canal is in the form of increased employment opportunities and the growth of the services sector. Sectors supplying crucial inputs to the construction sector, such as cement, clay, iron and steel, will also grow. In the medium to long term, the major impact of link canals is through increased and assured irrigation. Although the major and direct gainers of the Interlinking of Rivers (ILR) programme will be agriculture and agriculture-dependent households, the entire economy will be benefited due to construction activities and increased agriculture production.

(c) The impact of the ILR programme on agriculture will be realized only when construction is completed, reservoirs filled and the water reaches the ultimate users for irrigation, drinking, industrial purposes and hydropower generation. Until construction is complete, the impact of the ILR programme will be through Government investment. This will have an impact on the industries supplying inputs for construction. There will also be an increase in employment and thus on demand for foods and services.

(d) According to NCAER studies on Economic impact of ILR programme, the programme will have a major impact on the rural area in general and the agriculture dependent households in particular. The rural household per capita income with ILR is expected to increase by 7.49 per cent as compared to the baseline growth without ILR scenario. Per capita household income of

agricultural dependent households in rural area is expected to go up by 13.2 percent. For Non-agriculture dependent households per capita household income is expected to go up by 4.8 per cent in rural area and 9.8 per cent in urban area as compared to the baseline scenario.”

#### **Rationalisation of Water Use/Water Use Charges**

4.9 The people have a tendency to treat things casually which are available free of cost or at a much lower cost. If water is made available at a cost without any exception, the use of water will be rationalized. It can be done only by better management of water and to make people aware of the water saving culture.

4.10 In this background, when asked if the Government was considering to put cess/charges on use of water for all purposes as also to fund projects under ILR, the Ministry submitted that since water is a State subject, cess/charges on use of water for irrigation and other purpose are being fixed by the State Government. At present there is no proposal in Ministry of Water Resources to levy charges on water uses to fund ILR.

4.11 When asked about the plans of the Government to control the indiscriminate exploitation of water in the country, the Ministry in a reply stated :

“The MoWR encourages conservation of water including measures such as traditional water conservation practices, rainwater harvesting, recharge to ground water and adoption of better management practices including use of modern technology.

The Central Ground Water Authority has issued guidelines for regulation of withdrawal of ground water in over-exploited, critical and semi-critical areas. States have been requested to take steps to implement these guidelines.”

## CHAPTER – V

### CONSTITUTIONAL SET-UP AND ILR

Water falls under State subject in the present day constitutional set-up. Some of the experts / individuals who deposed before the Committee have expressed the opinion that Entry 56 of the Union List in the Seventh Schedule of Constitution gives ample powers to the Central Government to make laws to regulate the implementation of projects under ILR. The Indian Constitution lays down the legislative and functional jurisdiction of the Union and the States through the lists in the Seventh schedule. The Entry 56 of the Union List in the Seventh Schedule under Article 246 states as under :

“Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.”

5.2 The Entry 17 of the State List in the Seventh Schedule under Article 246 of the Constitution states as under :

“Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power subject to the provisions of entry 56 of List I.”

5.3 The Article 254 (1) of the Constitution states as under :

“If any provision of a law made by the Legislature of a State is repugnant to any provision of a law made by Parliament which Parliament is competent to enact, or to any provision of an existing law with respect to one of the matters enumerated in Concurrent List, then, subject to the provisions of clause (2), the law made by Parliament, whether passed before or after the law made by the Legislature of such State, or, as the case may be, the existing law, shall prevail and the law made by the Legislature of the State shall, to the extent of the repugnancy, be void.”

5.4 On the issue of legislative and executive competence of the Union to regulate and develop the inter-State basin transfer of waters, Shri A.D. Mohile, former Chairman,

CWC and Secretary to Government of India in a Memorandum submitted to the Committee opined :

“As per the Indian Constitution, the regulation of the water of an interstate basin is an area within the legislative and executive competence of the Union, provided the Parliament through an enactment, indicates that such regulation is in National interest. If there is no such enactment, which empowers the Union, the competence, both legislative and executive, is vested with the States. The Parliament has enacted very few acts empowering the Union to take executive action about the regulation of interstate basins. Notable among the few acts are the Brahmaputra Board Act and the Betwa River Board Act. Another important act enacted under this provision is the River Boards Act, 1956. However, this Act has never been used in setting up any River Board.”

5.5 He further expressed his views as under :

“..... The present thinking that, in India water is a “State subject” is incorrect. The Constitution provides that the Union, in accordance with the law to be passed by the Parliament would have powers to regulate the waters of the interstate basins. The powers of the States are subject to the limitations created by the law of the Union. Considering this position, which is superior to the inclusion of water in the Concurrent List, it is preferable for the Union to enact laws than to propose Constitutional amendments. This would also be more pragmatic, since amending Constitution for sensitive water related issues would be difficult.”

5.6 While deposing before the Committee on this issue Shri Mohile stated :

“Unless the Union empowers itself with powers to force solutions, unless that exists, the States are unlikely to solve the problems among themselves in a sure way. When you create an environment that whether you settle, it otherwise, we will settle it for you, then the attitude will change. So, through this presentation, the main plea which I am making is that there are enough provisions in the Constitution to enact legislation under entry 56 and if the Union Legislature passes one or more Acts and empowers the Union in various things, which *inter-alia*, include decisions about studying the basins and in a quasi judicial way to decide these powers and that may help in putting water sector back in order and that order today is missing.”

5.7 On being asked whether the Government propose to consider declaring the implementation of ILR projects by a law passed by Parliament to be expedient in the public interest as most of the links under ILR could be construed to be projects falling

within the meaning of the term 'regulation and development of inter-State rivers and river valleys as contained in Entry 56 of List I of Seventh Schedule or to bring the subject 'water' under the Union List in view of the situation of the States engaging with each other in a prolonged manner over water sharing of different projects, not honouring the verdicts of different Inter State Water Dispute Tribunals etc.the Ministry in a written reply stated as follows :

“As per National Common Minimum Programme (NCMP) the work of ILR is to be pursued in fully consultative manner. Therefore, a consensus group has been constituted under the Chairmanship of Chairman, CWC to bring consensus among the concerned states in this regard.

Currently, there is no proposal for bringing the subject 'Water' under exclusive Central jurisdiction. Also, there is no proposal for declaring the implementation of ILR projects under the provisions of Entry 56 of the List I of the Constitution.

Recently the Central Government has constituted a commission on Center-State relations. In its term of reference it is mentioned that while making recommendations, it shall have particular regard to the role, responsibility and jurisdiction of Center vis-à-vis states in the planning and implementation of the major projects like inter-linking of rivers.

The terms of reference of the commission on Centre-State relations also include examination and review of the working of existing arrangements between the Union and States as per Constitution of India including inter-State river water and recommend such changes or other measures as may be appropriate.

Recommendations of the Commission are awaited.”

5.8 The Secretary, Ministry of Water Resources while deposing before the Committee responded to the issue of the legislative and executive competence of the Union as contained in Entry 56 of the Union List by stating as under :

“Recently the Central Government has constituted a Commission on Centre-State Relations. In its Terms of Reference, it is mentioned: “While making recommendations, it shall have particular regard to the role, responsibility and jurisdiction of the Centre vis-à-vis States in the planning and implementation of the major projects like inter-linking of rivers.”



5.9 The Secretary further elaborated on the question of taking an opinion of the Law

Ministry on this issue and stated as follows :

“One is the legality issue. As per the National Common Minimum Programme of the Government, the work of inter-linking of rivers is to be pursued in a fully consultative manner. That is our mandate and that is the current policy. So, even if it may be legally valid, still there is no proposal as such at the moment unless it comes as a recommendation from the Centre-State Relations Commission.”

The Centre-State Relations Commission was appointed two years back.

**CHAPTER –VI**  
**COMMITTEE OF ENVIRONMENTALISTS, SOCIAL SCIENTISTS AND**  
**OTHER EXPERTS ON ILR**

The Ministry of Water Resources constituted a Committee of environmentalists, social scientists and other experts on interlinking of rivers with a view to make it a consultative process under the chairmanship of Secretary (WR). The Committee comprises Secretaries of Ministries of Social Justice & Empowerment and Environment & Forests, eminent engineers, sociologists and environmentalists. The composition of this Committee and its terms of reference are at **Appendix – V**.

6.2 So far, four meetings of the Committee have been held on 18 January 2005, 28 October 2005, 04 September 2006 and 08 January 2008 respectively.

6.3 On the question of the major decisions taken by the Committee in their meetings held so far, the Ministry in their reply submitted :

“During the 1<sup>st</sup> meeting overall TOR of the Committee and status of ILR was discussed.

During the 2<sup>nd</sup> meeting held on 28.10.2005, experts gave various suggestions on TOR for preparation of DPR & modalities for preparation of DPR of Ken – Betwa link. The experts stressed the environmental issues that need to be addressed while preparing the Detailed Project Reports. It was decided to organise field visit to the specific areas of ILR project under consideration.

During 3<sup>rd</sup> meeting of Committee held on 4<sup>th</sup> Sept., 2006, the Committee was apprised of the updated status of the various statutory clearances required from MoEF for carrying out survey & investigation works for preparation of DPR of Ken-Betwa link. The Members of the Expert Committee gave their views on the ToR for comprehensive environmental impact assessment of Ken – Betwa link which have been considered while finalising ‘request for proposal document’ for carrying out comprehensive environment impact assessment.

The major decisions taken by the Committee in its 4<sup>th</sup> meeting held on 8.1.2008 are as follows:

- (i) A seminar/symposium may be organized at appropriate time to consider the views of various NGOs/institutions/individuals on ILR.

- (ii) The interim report of EIA studies being carried out by AFC Ltd., Hyderabad is to be circulated to the members of the committee for discussion in the next meeting.
- (iii) The NCAER report will be put on the website of NWDA after its finalization.
- (iv) The website of NWDA is to be modified to have an online forum for discussion of the members of the committee.
- (v) NWDA would take appropriate action for obtaining clearances from the Supreme Court regarding submergence area of Panna Tiger Reserve.”

6.4 The role of the Committee with regard to preparation of DPRs of the identified priority links is advisory in nature. It advises the Government on various environmental, socio-economic and other technical aspects while preparing DPRs of ILR projects as per its term of reference.

6.5 When asked as to what suggestions were given by the Group for speedy clearance of projects from environmental angle, the Committee was informed :

“The Members of the Committee stressed the environmental issues that need to be addressed while preparing the Detailed Project Reports. The Members of the Expert Committee also gave their views on the ToR for Ken – Betwa link which have been considered while finalising ‘request for proposal document’ for carrying out comprehensive environment impact assessment.”

6.6 Explaining the actions taken by the Ministry on the above mentioned decisions of the Committee of environmentalists and other Experts, the Ministry further submitted as under :

“The status in this regard is given under :

(a) The issue was also discussed in the Committee of Environmentalist and other Experts. The date for organising a Seminar/Symposium to consider the views of NGOs/institutions/individuals on ILR will be decided after the preparation of DPRs.

(b) The interim report of Environmental Impact Assessment (EIA) is expected from AFC Ltd., Hyderabad shortly. This report after examination will be circulated to the members of the Committee.

(c) The NCAER revised report has been recently received (7.4.2008). It will be put on the website of NWDA after its finalization.

(d) Ken-Betwa link project is a multipurpose project. At present, the preparation of its DPR has been taken up which involves only the survey & investigation and not the pre-construction activities. Accordingly, Standing Committee of National Board for Wild Life (NBWL) in its meeting held on 14.9.2006 recommended the survey & investigation work in the Panna Tiger Reserve, Madhya Pradesh.

After the DPR is completed and specific MoUs/Agreements are signed by the concerned State Govts, an appropriate institutional mechanism would approach the MoE&F for obtaining the clearance for pre-construction activities and clearance for the project from Supreme Court/National Board for Wild Life.”

## **CHAPTER –VII**

### **SUGGESTION/OPINIONS OF EXPERTS/INDIVIDUALS/ORGANIZATIONS**

The Standing Committee on Water Resources invited memoranda from Experts/Organisations/Individuals on the subject of ILR Programme/concept. More than 900 memoranda were received by the Committee. Out of these more than 30 Individuals/Experts/NGOs were invited to give their views in support or against the ILR Programme. A list of Individuals/Experts/NGOs invited to give their views before the Committee is given at **Appendix – VI**. Various views/suggestions were given by them. The opinion that had emerged from the discussions held by the Committee was by and large in support of the ILR Programme. Those who were against the proposal also agreed to the ILR Programme. However, they desired that before going for the ILR Programme other alternatives available should be explored fully. Thereafter, if needed, Government may decide to move on linking of rivers/basin/inter-transfer of waters. The foremost opinion was to make the public aware of the ILR Programme.

7.2 On the question of the efforts made by the Government / Ministry of Water Resources to generate people's awareness in respect of the ILR Programme, the Ministry in reply submitted as follows :

“As per National Common Minimum Programme (NCMP), Govt. has done a comprehensive assessment of linking of the rivers of the country starting from southern rivers in a fully consultative manner. A Committee of Environmentalists, Social Scientists and other experts on ILR has been constituted to advise Govt. on ILR. The information bulletins of ILR are distributed as a part of mass awareness programme at various seminars / conferences, exhibitions including India International Trade Fair & important public events. Chairman of erstwhile Task Force on ILR has written about 1.5 lakh letters elaborating the benefits of ILR to individuals. For Ken-Betwa link, pamphlet (technical & for general public) in Hindi & English, highlighting the salient features & benefits of the link canal, has been distributed in the Ken-Betwa project area. MoWR also organises National Water Convention (NWC) bi-annually to deliberate on key issues of water including ILR. Last NWC was organised at Puducherry during 1-3<sup>rd</sup> November, 2007. NWDA has placed details of various FRs and activities on ILR on the website [www.nwda.gov.in](http://www.nwda.gov.in) . The website is bilingual and contact

interactive. Seminars are also organised to propagate the likely benefits of the links among the local people. NWDA had also set up a stall in the last international trade fair at Delhi for generating people's awareness for the ILR programme.”

7.3 When asked about the response with regard to their efforts, the Ministry stated that the response of efforts made by Govt. is generally positive. However some people and groups have expressed apprehensions about the Rehabilitation, Resettlement & environmental issues which would be duly addressed at DPR stage.

7.4 It is further stated that the suggestions/modifications/alterations made by various people are examined by MoWR / CWC / NWDA and are duly considered in the preparation of DPR.

#### **Integrated authority for ILR/National Water Grid**

7.5 Some experts who deposed before the Committee were of the opinion that in view of the gigantic size of the ILR Programme and involvement of a number of State Governments, agencies, departments, a single authority/agency to deal with all the works under the ILR Programme needs to be constituted.

7.6 When asked whether the Government has any such proposal to form a single authority to deal with Inter Linking of Rivers Programme, the Ministry submitted as follows :

“The National Water Development Agency was set up in 1982 by Government of India under the Ministry of Water Resources as an Autonomous body to study the feasibility of the Peninsular Component of National Perspective Plan. In 1990-91, the studies of Himalayan Component were also assigned to NWDA. Further, in 2006 the works related with preparation of Detailed Project Reports of link proposals under National Perspective Plan for Water Resources Development for which concurrence of the concerned States has been arrived, was also assigned to NWDA. NWDA also mandated to prepare pre-feasibility / feasibility reports of intra-state links as may be proposed by states. The ILR programme is presently at FR / DPR stage, so works are being managed through NWDA.

After preparation of DPRs, appropriate decision regarding implementation mechanism will be taken in consultation with the concerned State Govts”.

7.7 It has been suggested by some experts who deposed before the Committee that the Government may consider formation of National Water Grid on the line of National Power Grid, which will be responsible for equitable distribution of water to Inter basin States. It may also frame policy / guidelines for allocation of water to Inter basin States.

7.8 When asked to give their comment on suggestion of formation of National Water Grid on the line of 'National Power Grid' which will be responsible for equitable distribution of water and also frame policy/guidelines for allocation of water for Inter basin States, the Ministry in a written reply stated :

“Most of the water transfer links proposed under ILR are based on the concept of transfer of surplus water to deficit areas as well as on philosophy of substitution / exchange. Further, unlike power, water flow by gravity is unidirectional i.e. from high elevation to low elevation. Therefore, the concept of National Water Grid can't be adopted for ILR project”.

### **Problem of deforestation, displacement and rehabilitation**

7.9 During examination of the subject, all the experts/individuals who favoured or had reservations on the ILR Project were of the views that instead of going for such a large and expensive projects, the Government should undertake smaller projects particularly which create rainfed area, recharge ground water through rainwater harvesting, check dams etc., the Ministry in reply to a query in this regard stated :

“Ministry of Water Resources duly recognizes the importance of measures such as rain water harvesting, recharge of ground water, check dam etc. Ministry of Water Resources encourages such measures. However, in view of high variability on the availability of water from one region to another, the ILR project are considered important and very useful in transferring surplus flood water to water deficit regions.”

7.10 When asked as to what extent ILR will help in recharge of ground water, the Ministry submitted that the pilot project commissioned by NWDA in Andhra Pradesh and

Rajasthan have indicated percentage of water available for recharge as 40% and 10% respectively. This percentage thus varies from region to region.

7.11 The critics of the ILR proposal have apprehensions regarding utilization of large chunk of forest land for the project resulting in destruction of forests. Further, adverse impact of diversion routes of the rivers on environment and on flora and fauna of the area. It is stated that the ground water level will go down in the donor basin.

7.12 Asked as to what extent these apprehensions could be acceptable to Government, the measure proposed to save the environment which is likely to be affected and if any study has been conducted by the Ministry to assess the adverse impact on environment on the implementation of the project on ILR, the Ministry in a detailed reply submitted as follows :

“The Ministry of Environment & Forest (MOEF) has laid down certain guidelines which are to be followed while planning water resources projects. According to these guidelines before taking up a water resources project, it is mandatory to obtain the Environmental clearance alongwith the approval of Terms of References(TORs) for Environmental Impact Assessment(EIA) studies. Based on the TORs approved by MOEF, EIA study of individual link schemes under ILR shall be carried out. In this study all positive and negative impacts of the project on the environment shall be studied in detail. Catchment Area Treatment plan, afforestation plan shall also be formulated as a part of EIA studies. The Environmental Management Plan (EMP) shall also be formulated to mitigate the negative impacts, if any. All these studies shall be undertaken at the DPR stage. At present NWDA is preparing DPR of Ken-Betwa link in which these studies are being carried out.”

### **Global Climate Change and Inter Linking of Rivers**

7.13 The Earth's Waterscape can change dramatically due to unexpected climate shifts over relatively shorter periods of time. Global Warming today is an issue about which the entire world is concerned. According to a Report of the United Nation's Inter-Governmental Panel on Climate Change (IPCC), the glaciers, especially the Himalayan and other glaciers all over the world, the Arctic and the Antarctic are melting down and



likely to melt at faster rate due to Global Warming and release of Green House gases in the atmosphere. There will be devastating floods in the rivers to begin with, and then they might dry up, causing enormous food shortages and other adverse effects. They may also cause rise in sea levels and displacement of people in the coastal regions which may also accentuate the demand for water and likely squabbles over water in the years to come.

7.14 On the question of adequacy of the data of surplus and deficient river basins presently available with the Government in the changed scenario of Global Warming and its effects and the steps that need to be taken to obviate adverse fallout of the project, the Ministry in their reply stated :

“The present assessment of the water availability is based upon data observed by various agencies including CWC, NWDA and State Govts. from adequate number of stations. The MoWR has already taken up study in respect of effect of climate change on water resources. Appropriate adaptation measures are to be taken up based on the study regarding effect of climate change on water resources.”

7.15 Asked further if in view of the likelihood of chain of devastating floods and droughts due to glacial meltdown as a result of the situation arising out of Global Warming, how does the Ministry view the sustainability of Inter-Linking of Rivers Projects getting affected, the Ministry stated :

“The effect of Global Warming on Water Resources of our country is not yet clearly established with reference to location and time. It is an accepted fact that even in the post climate change scenario, systems of Water Resources Management that are more controlled will fare better than systems that are less controlled. Controlled structure would enable the water managers to store and transfer water with greater certainty, thus reducing the impact of uncertainty”.

## **Flood Control**

7.16 According to Government, ILR Scheme will provide additional irrigated area and help in controlling the floods and provide water to water deficit areas. However, critics say that only 20% of the population will benefit from the scheme and only 2-3% flood can be controlled by the ILR Scheme. Asked as to what extent the ILR Scheme will help in controlling the floods when the Scheme is fully implemented, the Ministry in reply stated :

“The main objective of Interlinking of Rivers proposals are to increase irrigation, domestic & industrial water supply benefits and it involves creation/integration of a number of reservoirs. The benefit of flood control is incidental”.

7.17 When asked if any study has been conducted in this regard, it is stated that since it is an incidental benefit as such no assessment studies have been made at FR stage. However detailed assessment will be made at DPR stage.

7.18 In response to a query about percentage of population that will be benefited from this Scheme, the Ministry informed that the assessment of benefit is done in terms of added Irrigation, Hydropower generation, D&I water supply, navigation etc. However detailed assessment in this regard will be done at DPR stage. The implementation of the schemes of Interlinking of Rivers of the country depends on the consensus and cooperation of the concerned States and agreement with neighbouring countries as such time frame can not be given.

## **Maintenance Issues**

7.19 For implementation of the Schemes and creation of infrastructure, it has been suggested by some Experts that each project should be given on BOT basis to private or public-private agencies for 10-20 years. During the operation of project, agencies may

collect user charges from users to recover the cost of project and maintenance thereof. Thereafter, the project may be transferred to the State Governments.

7.20 When asked about the opinion of Government in this regard, the Ministry in reply stated that no ILR project is at implementation stage at present. This suggestion will be considered at the implementation stage in consultation with the concerned State Govts.

7.21 The Committee asked whether Government has decided any line of action for implementation of the ILR Scheme, the Ministry in reply stated as follows :

“A view on implementation mechanism is to be taken in consultation with the respective States. However, Ken-Betwa link has been included in the list of National Projects.”

#### **Alternate proposals from Individuals /NGOs**

7.22 The Committee received several alternate proposals to Inter Linking of Rivers from Experts/Individuals. When asked, the Ministry informed that no State Government has given any proposal alternate to ILR. However, some individuals/NGOs have given some proposal which have been examined by various organizations including CWC, NWDA and other experts in the erstwhile Task Force on ILR. Some of these proposals were only at conceptual stage and are not rooted in the basic tenets of the temporal and spatial hydrology of the river basin and as such were technically unsound, incomplete and hence cannot be considered alternatives to the ILR.

7.23 The gist of brief of some of the important proposals forwarded by individuals /NGOs on ILR alongwith observations of Ministry of Water Resources thereon are at

#### **Appendix - VII.**

7.24 When questioned as to why the other proposals were found technically unsound and incomplete whereas ILR was found sound proposal which is also at the conceptual stage, the Ministry in a post-evidence reply stated :

“The planning and implementation for water resources development takes into consideration the topographical, geological, geographical, agro-climatic, hydro-geological, meteorological and techno-economic factors.

The 30 links identified by NWDA for preparation of Feasibility Reports are based on several scientific & technical studies and Surveys & Investigations. Further, thorough scrutiny was carried out at various stages viz, water balance study, toposheet study, pre-feasibility studies and feasibility studies for establishing the techno-economic viability of the identified links. All these reports of NWDA are examined/scrutinized and accepted by Technical Advisory Committee (TAC) of NWDA which is chaired by Chairman, CWC and participated by States/Central Govt. Departments and technical experts before going for next stage. Hence, the concept of ILR based upon scientific & engineering studies/surveys is sound and likely to meet the required techno-economic criteria of Govt. of India”.

7.25 Asked if these proposals were also discussed with the person who had given the proposal, the Ministry in a note submitted as under :

“In 2003 Task Force on Inter Linking of Rivers constituted an Independent Group of Experts to assess the alternate proposals for linking of Rivers received from various individuals/groups. The alternative proposals suggested were discussed by the Independent Group of Experts constituted by the Task Force with the concerned persons who gave the proposals. These persons were also given opportunity to present their studies. This group assessed the proposals and concluded that all the proposals are without detailed analysis, technically unsound, incomplete and hence cannot be pursued within their present form.”

### **Views of State Government on Inter-Linking of Rivers**

7.26 The Parliamentary Standing Committee on Water Resources visited a number of States to have on-the-spot assessment of the progress made by the State Governments in implementation of various irrigation projects. While doing so, the Committee also held discussions with the officials of the State Governments and sought their views on the Scheme ‘Inter-Linking of Rivers’. By and large, the States were in favour of the Scheme. However, a majority of them were in favour of giving preference to small projects and Intra-State River Links, keeping in view the problems faced in coming to agreement by State Governments where sharing of water with other States is concerned.

7.27 The Government of Bihar stated that Inter-Linking of River Scheme of NWDA related to Bihar falls under the Himalayan component and has international ramifications, due to which their priorities have been lowered by the NWDA and MoWR. Therefore, Government of Bihar identified a number of Intra-State river links with the objective of irrigation, flood control and drainage. They have engaged the services of consultancy firms for preparation of DPRs for some of the links. For providing funds to these projects the State have plan to take assistance of Central Grants as well as World Bank and Asian Development Bank.

7.28 The Gujarat Government has offered the following suggestions/views :

- (i) Priority for Inter-Linking / connecting of ponds and construction of check-dam be given.
- (ii) The Inter-Linking of existing major, medium and minor irrigation scheme with the rivers, rivulets and drains coming in the command area should be given priority by providing escape and series of check dams e.g. Mahi Command in Central Gujarat.
- (iii) The priority for inter-linking should start from rivers, reservoirs of each basin, nearer basin and thereafter State basin without inter-state boundaries and last one should be inter linking of inter-State basins.
- (iv) Inter-state/inter-linking should only be considered on per capita water availability.
- (v) The reverse canal concept should be implemented and permission to lift from canal, dam should be allowed where surplus water is available.
- (vi) In inter-linking, per capita cost, people's participation, time for completion, efficiency, equity and sustainability should be criteria.

7.29 The Orissa Government is of view that no legal framework has been formed on inter-linking of rivers at Central level. Hence, after fulfilling the demands of the people of the State living in the deficit basin through intra-basin transfer, the inter-linking proposal will be thought off.

7.30 The Government of Maharashtra stated that out of 30 River Links, Maharashtra is going to be benefitted marginally from Damonganga-Pinjaj Link due to its typical topography. Therefore, the State is of opinion that :

- (i) Intra-State River Links proposed by Maharashtra be considered.
- (ii) Water from other valleys being diverted to Krishna valley under Peninsular River Link project should be compensated to Maharashtra as per clause No. XIV of KWDT.
- (iii) Mega recharge scheme in Tapi Valley from Maharashtra be considered by NWDA as considered in case of Rajasthan.
- (iv) Projects under Inter Linking of Rivers should be included under AIBP (75% of project cost). The maintenance of project under ILR will be managed through State resources also scheme like ERM will be of assistance.

7.31 The Andhra Pradesh Government is of the view that only peninsular river development by itself would not be attractive unless linked with Himalayan river development, where the rivers are perennial unlike the peninsular.

7.32 The Uttar Pradesh Government stated that ILR will help in solving the flood problems of eastern U.P. by Inter-Linking of rivers coming from Nepal. The project concerned with storage dams on these rivers will feed the drought prone area through ILR. The monsoon water can be stored by constructing different reservoirs in tarai area of Uttar Pradesh and Nepal. This water can be utilized for irrigation and drinking by drought affected area of Baghelkhand and Bundelkhand of U.P. by inter linking different rivers. The State would get additional irrigation potential of 18.76 lac hec. and power generation of 20874 MW which will contribute to State revenue. On that basis NABARD and other funding agencies can provide funds for the projects.

7.33 The Rajasthan Government have stated that looking to the water availability scenario in Rajasthan, the only solution to mitigate crisis is to divert water from water surplus basins in the country by Inter Linking of Rivers. Rajasthan is going to be benefited by following River links :

1. Parbati-Kalisindh-Chambal Link
2. Yamuna-Rajasthan Link
3. Rajasthan-Sabarmati Link

7.34 During the course of the Study Visits of the Committee, a suggestion was made by several State Governments to consider certain projects as 'National Projects' fully funded by Central Government. The Committee was also informed that a request was received from the Government of West Bengal and the concept of 'National Projects' was under consideration of the Ministry. The Committee in their 7<sup>th</sup> Report on Demands for Grants (2007-08) desire the Ministry to formulate a policy for declaring Major Irrigation Projects as 'National Projects'. The Ministry in their further reply on the Action Taken Report (8<sup>th</sup> Report) have stated that the concept of 'National Projects' was incorporated in the Cabinet Note dated 28 September 2007 which was considered by the Union Cabinet in its Meeting on 25 October 2007 and it was decided to refer the Cabinet Note to a Group of Ministers (GoM). The GoM in its first Meeting while discussing the proposal directed that a separate note for 'National Projects' should be formulated and brought up before the next Meeting of the GoM. The GoM also finalized criteria for selection of 'National Projects'. The GoM approved the revised note with some amendments. The decision of the GoM are now to be placed before the Union Cabinet for its approval. Further, the Finance Minister in his Budget Speech has stated that the Government has declared 14 projects as 'National Projects' of which 3 projects would

require Rs.7,000 crore during the 11<sup>th</sup> Plan. The criteria / concept for selection of a project as 'National Project' as approved by the Union Cabinet stipulates:

- (i) International Projects where usage of water in India is required by a treaty or where planning or earlier completion of the project is necessary in the country's interest;
- (ii) Inter-State Projects pending due to non-resolution of Inter-State issues relating to sharing of cost rehabilitation aspects of power production etc. including river Inter-Linking Projects;
- (iii) Intra-State Projects with additional potential of more than 2 lakh hectares having no dispute regarding sharing of water.

The 'National Projects' would be eligible for 90% grant of the project cost.

7.35 Asked if Government would consider the priority links identified in respect of whom the Feasibility Report prepared by NWDA are available and the links which are Intra-State or where the respective State Governments have entered into MoU for preparation of DPRs as 'National Projects' falling within the criteria (ii) and (iii) as above, the Ministry responded by stating that at present DPR of only one link i.e. Ken-Betwa link is in progress. This link has been included in the list of National Projects. Any new project proposed by one or more States which fulfils the criteria approved by the Govt. will be eligible to be considered for inclusion in the list of National Projects.



## **PART-II**

### **Observations and Recommendations**

1. The Committee while recognizing the fact that water is a basic human necessity have embarked upon an indepth examination of the concept / scheme of Inter-Linking of Rivers in the backdrop of the topical interest generated in the subject at various public platforms and other fora. This led to the resurrection of the project earlier mooted by some experts in the water resources sector. The Committee note that the long distance transfer of water by way of Inter-Linking of River basins was not a new idea and has been a topic debated actively in the country for quite sometime. They further note that a note on National Water Grid was earlier prepared by the then Central Water and Power Commission in 1972. Further, apart from the CWC this concept of inter-basin water transfer was also proposed by Dr. K.L. Rao in 1972 titled, 'National Water Grid' and later in 1977 as 'Garland Canal' by Captain Dastur which attracted considerable attention. While Dr. Rao's proposal envisaged transfer of Ganga water to Cauveri through Ganga-Cauveri Link partially by lift and partially by gravity, the proposal of Captain Dastur sought to store water of all tributaries / rivulets in canals at a constant elevation and their utilization through Himalayan and Central / Southern Garland Canals involving transfer of water in both the directions. According to the Ministry these schemes were examined by a Group of Experts and were not found feasible either technically or economically. The proposal of Dr. Rao, however, had components similar to the proposals later made under the National Perspective Plan (NPP). The National Perspective Plan was formulated in August 1980 which envisaged transfer of water from surplus areas to deficit areas. The NPP comprises

two components, viz. (i) Peninsular River Development; (ii) Himalayan River Development. The NPP envisaged additional benefit of 25 million hectare of irrigation from surface water, 10 million hectare by increased use of ground water which would raise the ultimate irrigation potential from the existing level of 140 million hectare to 175 million hectare and generate 34,000 MW of power apart from the benefits of flood control, navigation, water supply, fisheries, salinity, pollution control etc. While noting the possible benefits that might accrue as projected under the NPP on one hand and the slow pace of implementation of various projects and the availability of water in various reservoirs / rivers due to the effects of global warming, etc. on the other, the Committee desire the Ministry to undertake a study, which would assure the availability of water as indicated in NPP in about two to three decades from now.

2. The Committee observe that National Water Development Agency (NWDA) was set up in 1982 as an autonomous Society under the Ministry of Water Resources to study the feasibility of the Peninsular Component of NPP. Further, in 1990-1991 the NWDA resolved to take up the studies of Himalayan Component also and in June 2006, the NWDA approved modifications in the functions of NWDA to include Detailed Project Reports (DPRs) of link projects and pre-feasibility / feasibility report of intra-basin links as proposed by States. The Governing Body of the NWDA Society under the chairmanship of Secretary, Ministry of Water Resources controls the affairs and funds of the Society. The Governing Body had constituted a Technical Advisory Committee (TAC) of NWDA under the chairmanship of Chairman, Central Water Commission for examination and scrutiny of various technical proposals framed by the Agency. A Consensus Group was constituted in

**2002 under the Chairmanship of Chairman, Central Water Commission with Director General, NWDA as Member Secretary in order to discuss and expedite the process of arriving at a consensus among the States regarding sharing of water in surplus river basin / sub-basin with deficit basins and to assist the States in arriving at an agreement regarding sharing of waters, cost and benefit to the beneficiary States and other related issues. The Committee further note that NWDA after various studies identified 30 links under NPP of which Feasibility Reports in respect of 14 links under the Peninsular component and 2 links (Indian Portion) under Himalayan component have been completed. Surveys and investigations for the other links are under various stages. FR of two peninsular links, viz. Bedti-Varda and Netravati-Hemavati link are yet to be completed and are pending for want of concurrence of the Government of Karnataka.**

**3. The Committee further observe that all the reports prepared by NWDA are circulated to the concerned State Governments. The State Government officials are also invited to all the meetings of AGM of NWDA Society, Governing Body, Technical Advisory Committee etc. Efforts are also made through the Consensus Group to convince the State Governments about the feasibility of the proposals and for arriving at consensus regarding sharing of surplus water and preparation of DPRs. The NCMP of the UPA Government of 2004 envisaged a comprehensive assessment of feasibility of the links starting with the Southern rivers in a fully consultative manner. Thereupon, five links namely Ken-Betwa, Parbati-Kalisindh-Chambal, Par-Tapi-Narmada, Damanganga-Pinjil and Godavari (Polavoram)-Krishna (Vijayawada) were identified as priority links for bringing consensus amongst the concerned States to take up the work of preparation of DPRs.**

However, only one Memorandum of Understanding (MoU) for Ken-Betwa link was signed and DPR of this link is likely to be completed by the end of 2008. The Secretary, Ministry of Water Resources, stated during evidence that Gujarat and Maharashtra Governments have informally agreed to give concurrence for Par-Tapi-Narmada Link and Damanganga-Pinjal link for which MoU between the concerned States is likely to be signed soon. The concurrence of Madhya Pradesh and Rajasthan Government has not yet been received for the Parbati-Kalisindh-Chambal link. It is disheartening to further note that though all the States had agreed to the ILR Programme in principle at various fora, problems crop up when it comes to the specifics of the issue of water sharing and other related benefits. The Committee are unhappy with the current status/progress of such a huge Scheme which would benefit the nation and the people in many respects. They are of the considered view that if the pace of arriving at consensus, preparation of DPRs etc. is not accelerated the actual implementation of projects under ILR would take another 30-40 years or more for completion of all the identified 30 links. It is needless to highlight the cascading effect of all this on the project cost and other related issues. The Committee, therefore, desire the Ministry to take urgent and concerted measures to bring all the concerned States on one platform to arrive at the consensus in respect of all links at the earliest so that work of preparation of DPRs of various links could be initiated.

4. The Committee are given to understand that the Ministry, in June 2005, conveyed to all the States of approval to identify intra-State links for preparation of pre-feasibility /feasibility reports of those links by NWDA. They are happy to note that many States have come forward in this regard. The States of Bihar,

**Maharashtra, Jharkhand and Tamil Nadu have also submitted their proposals for study by NWDA. The Bihar Government has already undertaken the work of preparation of DPRs of some of the intra-State links through consultancy service providers. The Committee desire the Ministry to render full assistance and support in all respects to concerned State Governments in preparation of DPRs of Intra-State links as these links in their opinion could be implemented by the State Governments without any interference/objections from other States. Further, their completion would take lesser time comparatively and the benefits will also accrue to people at the earliest as the cost of preparation of DPRs is to be borne by the Central Government and the projects could be taken up for completion under AIBP.**

**5. From the perusal of various links under the ILR programme, it is observed that out of the 30 identified links, 14 links fall under Himalayan component. Of these, the Committee observe that initial reaches of seven water transfer links and their storages lie in the neighbouring countries of Nepal and Bhutan. Further, to carry out surveys and investigations in these countries their permission is essential. The Committee understand that MEA in September 2005 indicated that owing to the prevailing political situation in Nepal, it was advisable for us to take up the Peninsular component to start with. Although NWDA has completed FRs of Indian portions of some links, they are still incomplete in the absence of FRs of portions of links under the jurisdiction of neighbouring countries. The Survey & Investigation works for preparation of FRs of five links which lie in Indian portions has been completed by NWDA and further action is being taken on them. Though the Committee are aware of the limitations / problems encountered by NWDA at this**

**juncture, they desire the Government of India to discuss the issue threadbare with Nepal at the highest political and executive level so that they can appreciate the benefits accruing from these links to them as well. The Committee hope this would go a long way in not only improving our bilateral ties and place them on a more firm footing but also help us avert the calamitous situations in future of the kind that we are now facing in North Bihar as a result of breach in embankment of river Kosi in Nepal.**

**6. The Committee note that a Task Force under the Chairmanship of Shri Suresh P. Prabhu, then MP, Lok Sabha was constituted by Government of India in December 2002. As per the terms of reference, the TF on ILR was to provide guidance on norms of appraisal of individual projects with regard to economic viability, socio-economic and environmental impacts, preparation of re-settlement plans, prioritize different project components for preparation of DPRs and their implementation, etc. Furthermore, to facilitate its working, the Task Force formed 10 different Working Groups on technical, financial, legal and other such aspects. Besides, 7 Study Groups were also formed for various other studies as also to allay apprehensions of public at large on matters relating to ILR. The Task Force submitted two Action Plans before it was wound up by Government of India in December 2004. The Action Plan I submitted in April 2003 gave an outline of the time schedule for completion of FRs, DPRs, estimated costs, implementation schedule, concrete benefits of the project etc. The Action Plan-II which suggested alternative options for funding and execution of the project and methods for cost recovery etc. was submitted in April 2004. Further, the Task Force assigned the work of designing suitable organizational structure for implementation of Inter**

**Linking of Rivers Programme to IIM, Ahmedabad which submitted its report in January 2007. The IIMA suggested two tier institutional/organizational set-up for Inter Linking of Rivers alongwith a Council – National River Water Development Council to act as an apex body of the proposed set-up. The National Authority for Inter Linking of Rivers has been proposed as the first tier and the regional or branch offices or subsidiary offices as ‘Link Instrument’ are to be the second tier of this organizational set-up. The Committee, however, regret to observe that the Ministry has not been able to implement any of the recommendations of IIMA regarding setting up either of NAILR or NRDWC on the ground that as none of the links of NPP is under implementation stage, the Government of India would act on this suggestion at an appropriate time. For the present, however, the Commissioner (PR), in the Ministry of Water Resources as head of the Special Cell is carrying out the residual works of TF-ILR. The Committee desire the Ministry to set up institutional / organizational set up suggested by IIMA at the earliest as the DPR work of the Ken-Betwa Link is scheduled to be completed by December 2008 so that all requisite institutional framework to implement the link are in place well in advance to enable timely completion of the project.**

**7. The Committee observe that the National Council of Applied Economic Research (NCAER) was consulted by the Task Force on ILR to assess the economic impact of the ILR programme. NCAER had, on the basis of the NWDA study, estimated that ILR programme would cost around Rs. 4.44 lakh crore i.e. 21 to 22% lesser than the rough estimate of Rs. 5.60 lakh crore projected earlier. The completion time for the programme has been assessed to be 35 to 40 years. NCAER was, however, of the view that use of modern and remote sensing techniques could**

help in completion of the programme in 25 years. The Ministry, in this regard opined that the exact cost of projects and completion time would be available only after DPRs of various links are ready. Further, the NCAER in their revised Report submitted to the Ministry in April 2008 observed that the ILR programme would result in 7.49% increase in per capita income of rural households and 13.2% increase of agricultural dependent households in rural areas. As regards, non-agricultural dependent households, the per capita income is expected to go up by 4.8% in rural areas and 9.8% in urban areas as compared to the base line.

The Committee also observe that ICICI was consulted by the Task Force for suggesting funding options for the ILR programme. ICICI proposed that funding be partly through public, public-private and private inputs. For the present, DPR of only one line, i.e. Ken-Betwa Link is in progress and has been included in the list of National Projects for which 90% funds would be provided by the Government of India and the remaining 10% would be borne by the Governments of Uttar Pradesh and Madhya Pradesh jointly. The Ministry at this stage indicated that there are no plans to put any cess / user charges for funding the ILR programme.

8. The Committee further observe that the Government propose to establish the Irrigation and Water Resource Finance Corporation with an initial capital of Rs. 100 crores contributed by the Central Government with the State Governments and other financial institutions being invited to participate in the equity as announced by the Finance Minister in his Budget Speech of 2008-2009. This Corporation is mandated to mobilize very large resources required to fund major and medium irrigation projects. The Committee desire the Ministry to include not only the projects / links under ILR as National Projects but also ask the IWRFC to



raise funds by way of issue of bonds or other suitable instruments to fund projects under ILR. To begin with the IWRFC could raise funds for the Ken-Betwa Link for which the DPR is likely to be available by end of December 2008. The Committee are of the opinion that the benefits / growth indicators assessed by NCAER would fructify only when the ILR programme is fully implemented. They are of the firm opinion that the above measures when taken would encourage all the State Governments to come forward to earnestly take up implementation of various link projects under the ILR programme.

9. The Committee note that according to the present day Constitutional division of subjects between the Union and the States, the subject 'Water' falls both under the Union and the State Lists. It may be pointed out that while Entry 56 of the Union List in the Seventh Schedule in accordance with Article 246 empowers the Central Government to make laws to regulate and develop inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by the Parliament by law to be expedient in the public interest, Entry 17 of the State List of Seventh Schedule empowers the States to make laws to regulate and develop water for irrigation etc. subject to the provisions of Entry 56 of the Union List. Apart from the above, Article 254(1) provides that inconsistency between laws made by Parliament and laws made by the legislatures of States either in respect of subject on which Parliament is competent to enact laws or to any provision of existing law on matters enumerated in the Concurrent List, then the law made by Parliament shall prevail on the law made by Legislature of the State to that extent of repugnancy be void. The Committee, however, are constrained to observe that the Central Government has not so far

made any laws under provisions of Entry 56 of Union List under Seventh Schedule though there have been several instances of disputes among the States on the issue of water, disregarding the verdicts of tribunals resulting in avoidable delays etc. in execution of projects. Given this backdrop of the things as existing, the Committee invited Memoranda from experts / individuals on the subject of Inter Linking of Rivers wherein, the Committee observe that a majority of the individuals and experts have opined that the subject 'Water' either needs to be brought under the Concurrent List or the Union need to enact laws under the provisions of Entry 56 of the Union List under the Seventh Schedule.

10. It may be pertinent to note here that one of the experts while deposing before the Committee had expressed 'unless the Union empowers itself with powers to force solutions,..... the States are unlikely to solve the problems among themselves in a sure way.... That there are enough provisions in the Constitution to enact legislation under Entry 56 and if Union Legislature passes one or more acts and empowers the Union in various things, which *inter alia* include decisions about studying the basins and in a quasi judicial way to decide these powers that may help in putting the water sector back in order and that order today is missing.' The Committee, however, regret to observe that despite several cases of dispute among the States, the Government has preferred to pursue the ILR programme only in a consultative manner through the 'Consensus Group' formed for the purpose. The Consensus Group further failed to bring about any radical shift in the thought process of the States.

The Committee are also unhappy to take note of the submission made by the Secretary, Ministry of Water Resources during evidence that though making laws

under Entry 56 would be legally valid, the Government for the moment does not have any proposal to that effect or to declare implementation of ILR programme to be expedient in the public interest thereunder. They are further disheartened to note of the Secretary's submission that unless it comes as a recommendation from the Centre-State Relations Commission such a proposal cannot be considered. Since the Centre-State Relations Commission may take some more time in giving its recommendations, the Committee would suggest that instead of waiting for a recommendation by the Commission to that effect, Government should obtain the opinion /advice of the Ministry of Law as to the interpretation of the provisions of Entry 56 in the Union List vis-a-vis Entry 17 of the State List. The Committee are of the considered opinion that with the creation of a National Authority for Inter Linking of Rivers as recommended by the Task Force on ILR, the setting up of the IWRFC as also inclusion of the Ken-Betwa Link under the concept of 'National Projects' the enactment of laws under Entry 56 of the Union List would be a logical sequence and would go a long way in accelerating the pace of implementation of projects under ILR programme. They would like to be apprised of the opinion of the Law Ministry obtained by Government in this regard at the earliest.

11. Considering the importance of Inter Linking of Rivers and the interest shown by various quarters in the subject, the Committee invited Memoranda from individuals / experts / NGOs, etc. some of whom were also invited to depose before the Committee and give their views/opinions. After hearing the views/opinions of the experts on the subject, the Committee have come to the conclusion that a majority of them are in favour of the ILR programme. Some of them, however, have opined that before implementing projects under the ILR programme, the

people should be made aware of the facts and the benefits accruing from the programme. The Committee note that the Government have through the electronic and print media disseminated information on the website of NWDA about the ILR programme and according to Government the response of the public has been positive so far, though there are some people and groups who have apprehensions about the rehabilitation of the displaced people, the resettlement and the environmental issues. To address these issues, the Government constituted a Committee of environmentalists, social scientists and other experts on ILR with a view to make it a consultative process. The Committee chaired by Secretary, Water Resources had the Secretaries of Ministries of Social Justice and Empowerment, Environment and Forests, eminent engineers, sociologists and environmentalists as Members of the Committee. The Committee advise the Government on various environmental, socio-economic and other technical aspects at the stage of preparing of DPRs of each link of ILR project. For the present, the Committee hope that all the apprehensions would be addressed to at the time of preparation of DPR of the Ken-Betwa Link which according to them should serve as model for preparation of DPRs of all other links.

12. The Committee note that from among the individuals/experts/NGOs called for submission of Memoranda, some of them have given proposals/schemes as alternatives to the links under ILR programme claiming those to be more cost-effective and addressing the environmental and other issues more effectively than the projects under ILR programme. The Ministry have informed that these proposals were discussed by an Independent Group of Experts constituted by the Task Force with the persons who gave the proposals. Those persons were also given

**an opportunity to present their studies. The Independent Group of Experts which included CWC, NWDA and other organizations assessed these proposals and concluded that all the proposals were without detailed analysis, technically unsound, incomplete and hence could not be pursued in their present form. Therefore, these alternative proposals could not be considered alternatives to the links under ILR programme. While not disagreeing with the conclusion of the Independent Group of Experts comprising technical experts who found these proposals to be unsound, the Committee are of the view that those who have given these proposals are considered experts in the field of water management, etc. and if not all, some of the points / ideas / views contained in these proposals could definitely be of value and use while formulating the DPRs of the links under the ILR programme. The Committee, therefore, desire that while finalizing DPRs of various links the concerned authorities may have a re-look at some of the suggestions with an open mind. These are likely to give some better ideas for improvement in the ILR programme.**

**13. The Committee on Water Resources visited a number of States and held informal discussions with the officials of the State Governments on the subject of ILR programme and sought their views thereon. The views of the State Governments so obtained can be summarized into two categories, one where most of the States give preference to smaller and intra-State Links and the second category, where the States are not satisfied with the benefit that would accrue from the links under ILR programme. The Committee are happy to note that almost all States agree to the ILR programme in principle and the only apprehension related to inequitable distribution of water / benefits out of the programme. The Committee**

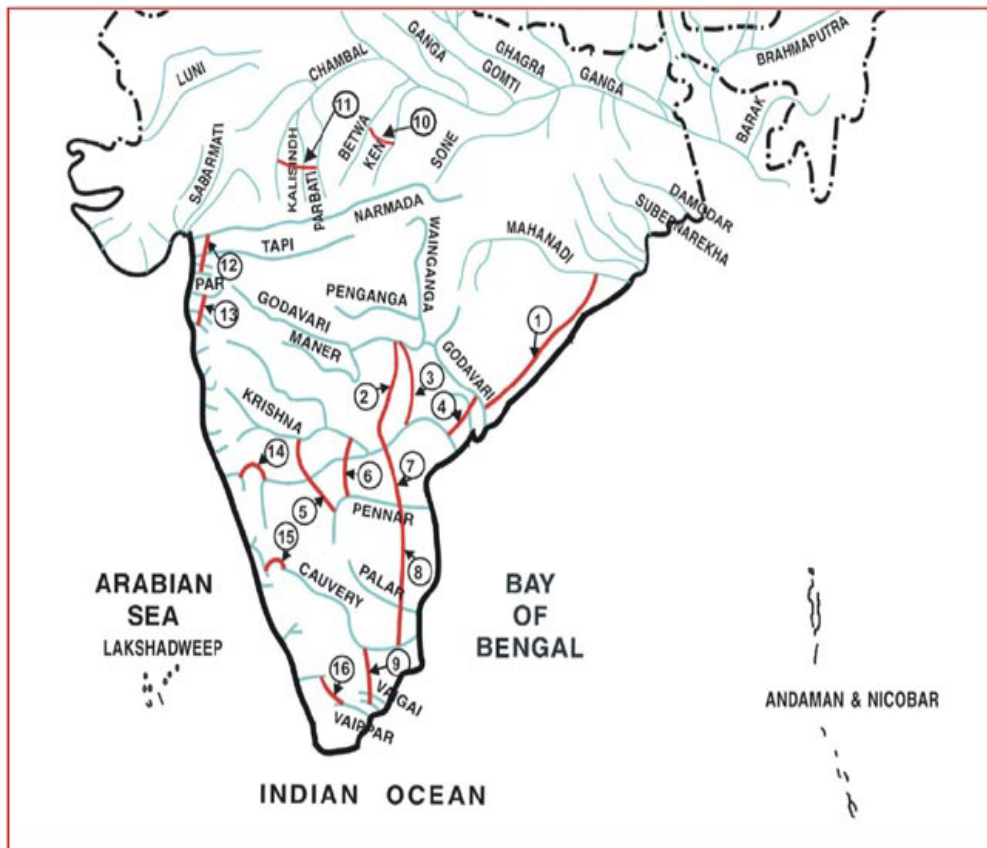
appreciate the stand taken by the Government of Bihar in identifying a number of intra-State river links and the engagement of the services of consultancy firms for preparation of DPRs of some of the intra-State Links. The Committee note the view of the Orissa Government regarding absence of legal framework on Inter Linking of Rivers at the Central level. The Committee, therefore, desire the Ministry to take all necessary and appropriate steps to address the apprehensions of the States as well as make efforts to implement the suggestions of the State Governments both at the stage of preparation of DPR as well as its implementation thereafter.

14. All said and done, the Committee are of the considered opinion that delaying the ILR programme on one or the other pretext any further would only result in delay in accrual of benefits of the programme viz. growth of agricultural production, employment generation and resultant slowing down of the economy. The Committee are highly optimistic of the success of the ILR programme provided all concerned including CWC, NWDA, the State Governments and all concerned Ministries of Government of India work in tandem in a spirited, homogenous and harmonious way with the ultimate aim of enhancing national good as the end object. The Committee, therefore, urge one and all to work in unison to achieve the successful implementation of the identified links under ILR programme in the shortest possible time in a cost effective way. They hope Government would give due consideration to the recommendations of the Committee on various issues expressed in this Report and implement the ILR programme in an earnest manner.

NEW DELHI  
20 October, 2008  
28 Asvina, 1930(Saka)

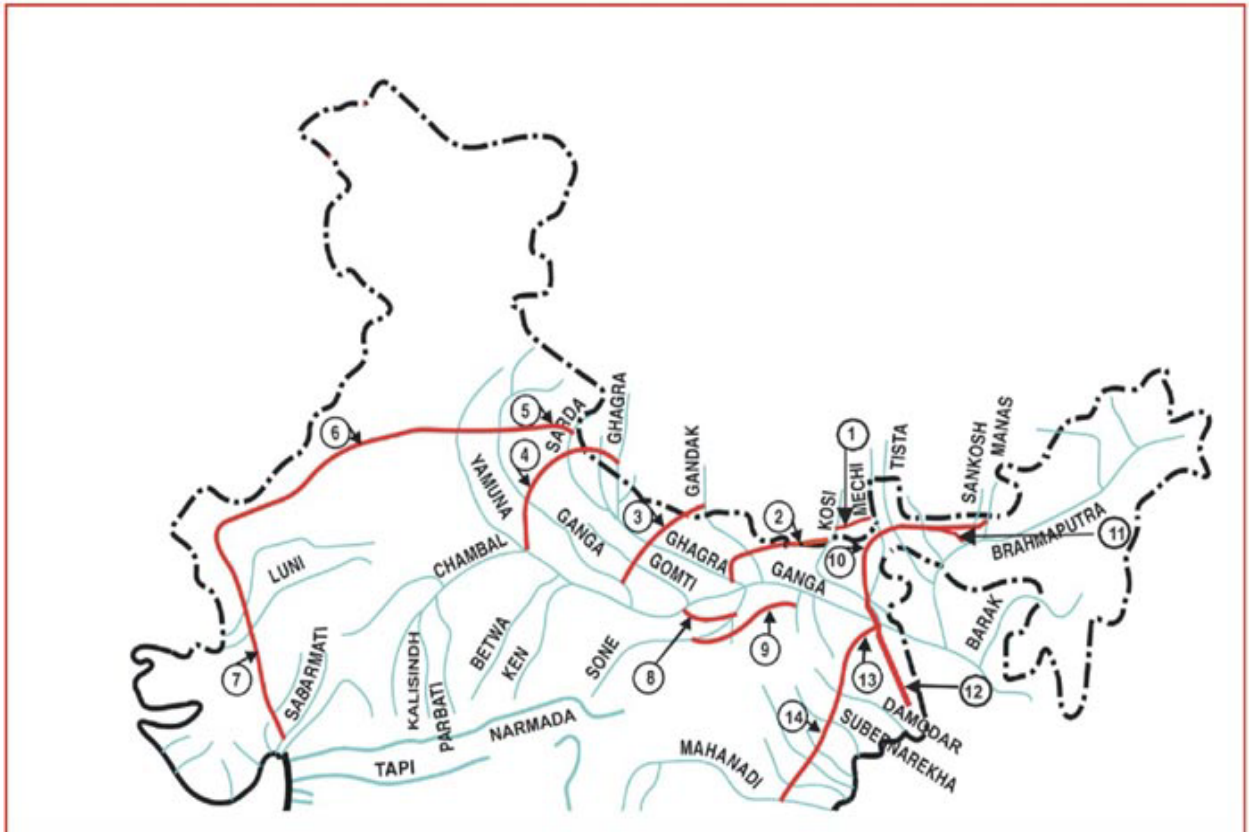
R.SAMBASIVA RAO,  
*Chairman,*  
*Standing Committee on Water Resources*

**PROPOSED INTER BASIN WATER TRANSFER LINKS**  
**PENINSULAR COMPONENT**



- |  |   |
|--|---|
| 1. Mahanadi (Manibhadra) – Godavari (Dowlaiswaram) *   | 9. Cauvery (Kattalai) – Vaigai – Gundar * |
| 2. Godavari (Inchampalli) – Krishna (Nagarjunasagar) * | 10. Ken – Betwa *                         |
| 3. Godavari (Inchampalli) – Krishna (Pulichintala) *   | 11. Parbati – Kalisindh – Chambal *       |
| 4. Godavari (Polavaram) – Krishna (Vijayawada) *       | 12. Par – Tapi – Narmada *                |
| 5. Krishna (Almatti) – Pennar *                        | 13. Damanganga – Pinjal *                 |
| 6. Krishna (Srisailem) – Pennar *                      | 14. Bedti – Varda                         |
| 7. Krishna (Nagarjunasagar) – Pennar (Somasila) *      | 15. Netravati – Hemavati                  |
| 8. Pennar (Somasila) – Palar- Cauvery (Grand Anicut) * | 16. Pamba – Achankovil – Vaippar *        |
- \* FR Completed

## PROPOSED INTER BASIN WATER TRANSFER LINKS HIMALAYAN COMPONENT



1. Kosi – Mechi
  2. Kosi – Ghagra
  3. Gandak – Ganga
  4. Ghagra – Yamuna \*
  5. Sarda – Yamuna \*
  6. Yamuna – Rajasthan
  7. Rajasthan – Sabarmati
  8. Chunar- Sone Barrage
  9. Sone Dam – Southern Tributaries of Ganga
  10. Manas – Sankosh - Tista - Ganga
  11. Jogighopa – Tista – Farakka (Alternate)
  12. Farakka – Sunderbans
  13. Ganga (Farakka) – Damodar – Subernarekha
  14. Subernarekha – Mahanadi
- \* FR Completed



**APPENDIX – III**  
**(Para 2.23)**

**DETAILS OF THE LINKS HAVING INTERNATIONAL DIMENSIONS**

S. No.	Name of Link	Name of River	Total Link length (km)	Link length in neighbouring countries (km)	Name of Dam	Country
1.	Kosi – Mechi	Kosi	113	113	Sapta Kosi High Dam	Nepal
2.	Kosi – Ghaghra	Kosi	429	278	Sapta Kosi High Dam	Nepal
3.	Gandak – Ganga	Kali Gandaki	533	130	Kali Gandaki-I Dam	Nepal
		Burhi Gandaki			Burhi Gandaki Dam	Nepal
		Seti			Seti Storage Dam	Nepal
		Marshyandi			Marshyandi Dam	Nepal
		Narayani (Gandak)			Gandak regulating dam	Nepal
4.	Ghaghra – Yamuna	Karnali (Ghagra)	431	113	Chisapani Dam	Nepal
					Chisapani regulating dam	Nepal
5.	Sarda – Yamuna	Mahakali (Sarda)	370	–	Pancheswar Dam	Nepal
		Mahakali (Sarda)			Poornagiri Dam	Nepal
6.	Manas – Sankosh – Tista – Ganga (M – S – T – G)	Manas	457	13	Manas Dam	Bhutan
		Sankosh			Sankosh Dam	Bhutan
7.	Jogighopa – Tista – Farakka (J – T – F) Alternative to M – S – T – G	Sankosh	441	6	Sankosh Dam	Bhutan

**APPENDIX – IV**  
**(Para 3.10)**

**COMPOSITION OF WORKING GROUPS/STUDY GROUPS OF TASK FORCE**

Sl. No.	Specialised Discipline or Aspects to be addressed	Member(s) of the Task Force who will look into the discipline	Resource Person(s) / Adviser,	Resource Institutions
1.	Technical Review of Link Plan, technical negotiations with the States & Prioritisation of Links	Dr. C.C. Patel, V.C. Dr. C.D. Thatte, M.S. Dr. A. Mohanakrishnan Shri G.C. Sahu R.S. Prasad, Coordinator (TF)	NWDA Chief Engineers of the concerned link or link(s)	NWDA <sup>1</sup> , CWC <sup>2</sup> , CGWB <sup>3</sup> , ISRO <sup>4</sup> , IIT <sup>5</sup> s & IISc <sup>6</sup> NIH <sup>7</sup>
2.	Finance Funding aspects  Cost Recovery Aspects Economic Impact Aspects	Shri K.V. Kamath Shri Piyush Goel Shri Deepak Dasgupta  - do-  - do-		ICICI <sup>8</sup> , NIPF&P <sup>9</sup>  NCAER <sup>10</sup> , NIPF&P
3.	Environment Ecology & related issues	Dr. R.K. Pachauri, Shri Deepak Dasgupta Dr. B.R. Chauhan Member-Secretary	Shri D.K. Biswas,  Shri Samar Singh	NEERI <sup>11</sup> TERI <sup>12</sup> FRI <sup>13</sup> & Wild life Institute
4.	Social Issues	Vice Chairman, Dr. Hari Babu, Prof. B.G. Verghese Shri Deepak Dasgupta		XIRR <sup>14</sup> CDSA <sup>15</sup>
5.	Legal (Water Law) Aspects	Vice Chairman, Member-Secretary Prof. B.G. Verghese Dr. B.R. Chauhan	Shri V.S. Chauhan	

<sup>1</sup> National Water Development Agency

<sup>2</sup> Central Water Commission

<sup>3</sup> Central Ground Water Board

<sup>4</sup> Indian Space Research Organisation

<sup>5</sup> Indian Institute of Technology

<sup>6</sup> Indian Institute of Science, Bangalore

<sup>7</sup> National Institute of Hydrology

<sup>8</sup> ICICI Bank Ltd.

<sup>9</sup> National Institute of Public Funding and Policy, New Delhi

<sup>10</sup> National Council of Applied Economic Research, New Delhi

<sup>11</sup> National Environmental Engineering Research Institute, Nagpur

<sup>12</sup> The Energy Research Institute, New Delhi

<sup>13</sup> Forest Research Institute, Dehradun

<sup>14</sup> Xavier Institute for Social Studies, Ranchi

6.	International Dimensions	Vice Chairman, M.S. Prof. B.G. Verghese Prof. Dr. B.R. Chauhan	Shri Chandrasekhar Chauhan	
7.	Application of Remote Sensing Technologies for speedy ILR implementation	Dr. Kasturi Rangan Dr. C.C. Patel Dr. C.D. Thatte Dr. A. Mohanakrishnan Shri G.C. Sahu	Dr. Rame Gowda	ISRO NWDA Survey of India
8.	Communication & coordination with NGOs	Shri Suresh Prabhu Dr. B.G. Verghese	Shri Seshadri Chari	Communication Core Group
9.	Execution & Implementation	Dr. C.C. Patel, V.C. Member-Secretary Shri G.C. Sahu		CWC, NWDA, Industry nominees
10.	Institutional Mechanism for ILR implementation	Vice Chairman, Member-Secretary Shri G.C. Sahu Dr. B.R. Chauhan Shri Deepak Dasgupta	Dr. Rame Gowda	IIMA <sup>16</sup> , NWDA
<b>Other Groups :</b>				
1.	Critical Review Group	Dr. C.C. Patel, V.C. Member-Secretary Chairman (CWC) Commissioner (PR) CE (N/S), NWDA Coordinator	CE (HQ.), NWDA	
2.	Review Committee for TOR for DPR	Vice Chairman, Shri Deepak Dasgupta Shri G.C. Sahu Coordinator	CE (HQ.), NWDA	
3.	Communication Core Group	Shri V.B. Patel Shri Vinay P. Sahasrabudhe, Co-Chairman Dr. B.G. Verghese Shri Sahab Singh Shri A.K.K.Meena Dr. N. Bhaskara Rao Shri Ashok K. Maitra Shri Vivek Bharti Smt. M. Roy Shri Arabinda Ghose	Shri Seshadri Chari	

		Shri M.K. Singh Shri Jyoti Prakash Shri V. Palanichamy Dr. A.K. Sharda- MS		
4.	Committee of Experts (COE) for the preparation of TOR for DPR	Shri S.K. Das, Member, CWC Shri N.B. Desai, Retd. Secy, GO Gujarat Shri M.L. Gupta, CMD, TEHRI Prof. A.C. Kamraj Shri R.S. Prasad, Coordinator, TF-ILR		
5.	Independent Group of Experts	Prof. Subhash Chander Prof. PBS Sarma		
6.	Agriculture & Aquaculture	Dr. C.C. Patel, VC Dr. J.S. Samra Dr. S. Ayappan Dr. S. Bhowmik Shri Sudeep Banarjee Shri MKR Nair Shri Anoop Bhadwa Coordinator, TF-MS		

**APPENDIX – V**

**(Para 6.1)**

**COMPOSITION OF COMMITTEE OF ENVIRONMENTALISTS, SOCIAL  
SCIENTISTA AND OTHER EXPERTS ON “INTER-LINKING OF RIVERS” AND  
TERMS OF REFERENCE**

***(i) COMPOSITION***

- |     |  |                     |
|-----|--|---------------------|
| 1.  | Secretary, Ministry of Water Resources,<br>Govt. of India, New Delhi   | Chairman            |
| 2.  | Secretary, Ministry of Social Justice & Empowerment,<br>Government of India, New Delhi                                       | Member              |
| 3.  | Secretary, Ministry of Environment & Forests,<br>Govt. of India, New Delhi   | Member              |
| 4.  | Chairman, Central Water Commission, Govt. of India, New Delhi  | Member              |
| 5.  | Director General, National Water Development Agency,<br>New Delhi.   | Member              |
| 6.  | Shri Z.Hasan, Former Secretary (WR), GOI, Noida.   | Member              |
| 7.  | Shri A.C. Kamraj<br>Chairman, NAWAD Council, Madurai, Tamil Nadu.  | Member              |
| 8.  | Shri P. Sen, Rtd. Member, CWC, Kolkata, West Bengal.   | Member              |
| 9.  | Shri Rajinder Singh, Noted Sociologist, Alwar, Rajasthan   | Member              |
| 10. | Dr. Ms Mala Kapoor (Sociologist), Director,<br>Development and Research Foundation, New Delhi                                | Member              |
| 11. | Dr. Ashok Khosla<br>President, Development Alternatives, New Delhi.  | Member              |
| 12. | Prof. M.N. Madhyastha, Environmentalist,<br>Centre for Ecological & Environment Studies,<br>Mangalore University, Karnataka. | Member              |
| 13. | Secretary, TFILR/Joint Secretary (Special Cell on ILR)<br>MOWR New Delhi   | Member<br>Secretary |
| 14. | Dr. Vijay Paranjpe,<br>President and Founder of Gomukh and Gangotree Trusts, Pune  | Member              |
| 15. | Shri Himanshu Thakkar, Coordinator of Centre for Water Policy<br>& Editor of Journal title ‘Dams, River & People’, New Delhi | Member              |

(ii) *TERMS OF REFERENCE*

The Committee will advise the Government on the following aspects of the proposed project :

- 1 Environmental and socio-economic issues covered in the Terms of Reference (TOR) for preparation of Detailed Project Reports (DPRs) finalised by the Task Force.
2. Rehabilitation & Resettlement package for the persons affected by ILR programme keeping in view the national R&R policy and structure of the agency for its implementation.
- 3 Additional studies needed to be carried out, to address any other concerns in the ILR Programme.
- 4 Impacts of proposed inter basin transfer of water links on settlements, occupations and other socio-economic activities, while preparing the DPRs.
- 5 Adoption of appropriate measures for optimum utilisation of transferred water especially in the water short basins while preparing the various DPRs.
6. All capital and revenue expenditure required to be incurred by the Committee shall be borne by Central Government through the grants in aid to National Water Development Agency (NWDA); and NWDA will account for expenditure of the Committee as a part of its establishment expenditure. Audit of Controller General of Accounts and Comptroller and Auditor General of India would be incident on such expenditure in the same manner as it would be on NWDA other usual expenditure. The Secretarial assistance to this committee will be provided by NWDA. Commissioner (PR), MOWR, will attend all the meetings of this committee as a special invitee.
7. Terms and conditions of the non-official Members will be issued separately.
8. This issues as per decision taken by the Prime Minister and with the approval of Minister of Water Resources.

**APPENDIX - VI**  
**(Para 7.1)**

**LIST OF NON-OFFICIAL WITNESSES WHO APPEARED BEFORE THE COMMITTEE**

Sl. No.	Name
1.	Shri B.G. Verghese, Eminent Journalist - Individual
2.	<b><i>Indian National Hydro Power Association</i></b> Shri Yogendra Prasad Shri B.K. Mittal Shri S.R. Narsimhan
3.	<b><i>Institution of Engineers (India) Ltd.</i></b> Shri B.J. Vasoya, Chairman, CLIR & Past President, IEI Dr. C.C. Patel, Patron, Committee for ILR Shri M. Gopalakrishnan, Vice Chairman, ILR
4.	<b><i>International Commission on Irrigation &amp; Drainage</i></b> Shri M. Gopalakrishnan, Secretary General
5.	<b><i>Water &amp; Food Equitable Distribution Organisation</i></b> Shri K.V. Rupchand Shri N.Seshadri Kumar
6.	<b>SAHAYOGA</b> Shri B.S. Bhavani Shankar
7.	Dr. P. Shivu - Individual
8.	<b><i>National Civil Society Committee on Inter-Linking of Rivers</i></b> Dr. Ashok Khosla Prof. Yoginder K. Alagh Prof. Kanchan Chopra Shri Anil. D. Mohlie Ms. Medha Patkar Shri Ramaswamy R. Iyer Ms. Srabani Das
9.	Prof. A.K. Rastogi, IIT, Mumbai - Individual
10.	Dr. C.D. Thatte, Former Chairman, CWC - Individual
11.	Shri C.C. Patel, Former Secretary, MoWR – Individual
12.	Shri P.R. Janbandhu, Ex. Engineer, Wardha - Individual
13.	Prof. S.K. Mazumder - Individual Former AICTE Emeritus Professor & Prof. of Civil Engg. DCE

14.	Dr. Kirit S. Parikh, Member, Planning Commission - Individual
15.	Shri A.D. Mohile, Consultant, - Individual Water Resources and former Chairman, CWC
16.	Dr. K. Malaisamy, Member of Parliament, Rajya Sabha – Individual
17.	Shri V. Jayaraman, - Individual Retd. Section Engineer, Southern Railway
18.	Shri Martin D. Alumkara, Advocate, High Court - Individual
19.	<b>SUJALAM</b> Shri S.D. Budhisagar Shri Arvind Kulkarni Shri R. Chandrashekhar Shri Vaikunth Rajwadkar
20.	Shri Y. Prabhakara Rao – Individual Retd. CO, Zilal Parishad, Guntur
21.	<b>Indigo Water Recycling Pvt. Ltd.</b> Shri Ramakrishna Koduri
22.	<b>Sustainable Approach for Development of All</b> Sh. Ramesh Kumar Mumukshu
23.	Dr. Kaushal Kumar Sharma - Individual Reader, Kirorimal College, Delhi
24.	Shri M.S. Menon, Former Chief Engineer, CWC - Individual
25.	<b>Indian National Trust for Art and Cultural Heritage</b> Shri Manu Bhatnagar, Advisor (NHD)
26.	<b>Centre for Equity Studies</b> Shri Shekhar Singh Honorary Director
27.	<b>Institute for Resource Management &amp; Economic Development</b> Prof. Kamta Prasad, Chairman
28.	<b>NAWAD Council</b> Shri A.C. Kamraj, Chairman Shri V. Kasi
29.	<b>Research Foundation for Science Technology and Ecology</b> Dr. Vandana Siva, Founder Director
30.	Shri Ramaswamy R. Iyer, Former Secretary - Individual Ministry of Water Resources.



31.	Prof. R.R. Singh, Social Scientist - Individual
32.	Shri R.C. Tripathy, Retd. Engineer-in-Chief - Individual Water Resources, Government of Orissa

**APPENDIX -VII**  
**(Para 7.23)**

**Brief of proposals by Individuals/NGO on ILR along with observations  
of MoWR**

**“Ganga – Kumari National Waterways Project” proposal by  
Shri A. C. Kamaraj**

**Gist of the Proposal**

This proposal envisages construction of three waterways. (i) **The Himalayan Waterway** - This will be about 4500 km long. The Waterway will be at 500 m contour (MSL) connecting all the tributaries of Ganga and Brahmaputra, (ii) **The Central Waterway** - This Waterway will be about 5750 km long and at 300 m contour (MSL) connecting tributaries of Ganga (on south), Mahanadi, Narmada, Tapi etc., (iii) **The Southern Waterway:** This Waterway will be about 4650 km long and at 300 m contour (MSL) connecting Godavari, Krishna, Cauvery, West flowing rivers in Kerala.

The waterways is indicated to have triple function of impounding, transmitting and distributing flood water among various basins, and is having an annual impounding capacity about 15, 000 TMC of flood water. It is mentioned that with the natural ground formation of our country it may be possible to maintain one particular elevation which would permit water to travel at an even height; so that no pumping is required in the entire stretch and the flow of water can be made purely by differential water head. There will also be a balancing waterway on the upper side of the Waterways which will act as one long reservoir and check dam.

The benefits claimed to be accrued from this project are: i) A new cheap and sustained transport system (National Waterways) through out the year ii) 600 millions of people will get drinking water, iii) Floods and droughts will be well controlled, iv) Oil import will be reduced by 65, 000 Crore / year, v) 60,000 MW hydropower will be generated, vi) 150 million acres of additional land will get irrigation etc.

**Observations of MoWR**

This NWP proposal is only a variant of Captain Dastur’s Garland Canal Scheme and at conceptual stage. No detailed study has been carried out to establish the concept of Two – Way water diversion theory. There is no consideration of vast and varying geographical conditions of country. The project is conceptualized on contour theory without

visualising heavy cutting or filling and ignoring actual terrain & slopes in the country, and outside the country. No detailed hydrological studies have been carried out to tap flood waters in the proposal and its dependability. The NWP proposal from geological point of view entails grave risk and possibility of land slides due to the numerous number of cross drainage works along the slopes of hills in the Himalayan region. The proposed interconnections between the Himalayan waterway and the Central waterway are technically infeasible and will not enable transfer of the indicated quantum of water in the time frame envisaged in the proposal. Further, NWP project is conceptualized as a multi purpose project including Navigation, fisheries cultivation, tourism, irrigation, drinking water supply etc. Each of the purpose has its own water requirements and their demand pattern varies affecting the power generation. 1/3<sup>rd</sup> of the Himalayan Waterway (500 m contour) i.e. about 1500 Km passes through Nepal and Bhutan territory which will invariably involve international ramifications.

## **Proposal of Dr. P. Shivu**

### **Gist of the Proposal**

Dr. P. Shivu in his proposal named as Reticular Canal System (RCS) suggested to link the rivers of the country for utilization of Water Resources of the country. Dr. P. Shivu in his proposal suggested that the river itself as the main channel and proposed to create multiple 'primary channels' from the river itself with controlling gates. Primary channels shall be connected with secondary or the tertiary channels etc. The primary channels are to be selected at multiple sites from the river and / or from the valley's and they will interconnect the entire Nation. The interconnection in such a fashion has been named Reticular Canal System. It is proposed to link various rivers from North to South of country and is cost effective & less harmful manner. He has claimed not to dig the entire canal system and to create channels for one or two kilometers at some points.

Dr. P. Shivu has also illustrated increase in per capita income of villagers to Rs. 53000/- from Rs. 14,800/-. He has worked out cost of this project to the tune of about Rs. Fifty Thousand Crores and annual income of Rs. 6287 crores but without much detail. Total cost and benefits are workout merely on assumption only.

Dr P. Shivu has proposed a new water supply system for the entire Nation for the irrigation, industrialization, and for drinking purpose. He has claimed that with implementation of his scheme, proposed land value of all irrigated lands shall become equal.

### **Observations of MoWR**

In his assumption / knowledge, the rivers in Himalayan range are having abundant flow through out the year and carries enough water to be diverted in Secondary, tertiary channels. The transfer of water from low levels to higher rivers / channels level has not been properly explained. The alignment of the various channels in the proposal has been thought without giving weightage to natural slopes and bed level of river. The study is not based on any hydrological analysis. Any water diversion channel has to have water

storage structures and not gates to store water. Considering the fact that rainfall is confined to a few monsoon months only, continuous water supply throughout the year in primary channel/river is only possible with storages and proper regulators. The proposal also does not consider the fact that large parts of the country such as Rajasthan, Saurashtra region of Gujarat, etc. are drought prone. Therefore, the principle of Reticular Canal System will not have any relevance to these areas. Details of quantum of water available, water to be diverted from one river basin to another and area to be irrigated etc are not furnished. It is incomprehensible how canals can be directly taken out from these rivers. Further, total storage envisaged in river bed is prime-facie impractical. The author has not considered the vast variation of topographical and geological conditions of country, faults, folds, dikes etc. in the river. In brief the Reticular Canal System as proposed by Dr. Shivu is not rooted in the basic tenets of the temporal and spatial hydrology of the river basins and thus not technically feasible.

## **Proposal of Shri K. V. Rupchand**

### **Gist of the Proposal**

The Indian River Grid (IRG) proposal, mooted by Water and food Equitable Distribution Organization - WEDO, envisages water flows in TWO – WAY direction i.e. in clockwise as well as anticlockwise direction through 3 level canals viz. Northern Waterway (4400 km long, at a level of 470 – 530 m connecting the Northern rivers), Vindhyan Waterway (7300 km long at a level of 270 – 330 m connecting the rivers around Vindhyas) and Deccan Waterway (4800 km long at level of 270 – 330 m connecting the Southern rivers). The width of Waterways will be 100 m or more depending on the site conditions and depth of waterways will be 10 m to allow navigation of medium sized ships and barges. Besides the volume of the water to be stored in waterways, the storage of the system will be augmented by the upstream reservoirs, existing, under construction, planned and future. The system can be formed in stages until the ultimate utilization of 500 km<sup>3</sup> (17500 TMC) is realised. These 3 waterways are long, serpentine reservoirs allowing TWO – WAY transfer of waters depending on the point of drawal and will be suitably connected to allow continuity of navigation. The benefits as claimed in this proposal are that water to be drawn at any desired location, straight forward uses in the required places, does not involve any pumping, can generate up to 65,000 MW of hydro power, more command area is available, provides year round availability of water & navigation through the year, impact on Environment & Ecology is least, Cost of the proposal is about Rs. 3.90 lakh crores, implementation can be done in 5 – 8 years etc.

### **Observations of MoWR**

This IRG proposal (which happens to be very similar to National Waterways Project (NWP) proposal of Shri A. C. Kamaraj) is only a variant of Captain Dastur's Garland Canal Scheme and at conceptual stage i.e. can be termed as rough Desk Top Study. Capt. Dastur's "Garland Canal Scheme" was examined by expert groups comprising senior engineers of the CWC, Professors from the IIT, Delhi and Roorkee University and Scientists of the GSI and the IMD and found impractical. Further, the logic put forward in this proposal lacks the basic principles of hydrology & hydraulics. No detailed study

has been carried out to establish the concept of Two – Way water diversion theory. There is no consideration of vast and varying geographical conditions of country. The concept of flow in both the directions appears to be technically infeasible as the huge quantity of water cannot suddenly flow in opposite direction as and when required. It will also be difficult to design an acceptable control mechanism for these waterways and hence there are chances of many disputes between the States for withdrawal of water. It is also felt that IRG while framing the project has not done any risk analysis for the construction of Waterways in hilly slopes. The irrigation benefits are without any proper planning and highly exaggerated in the IRG proposal. IRG assessment of hydropower generation without having detailed information i.e. available discharge, head, and storage etc. appears to be on very higher side. The claim of IRG for the flood moderation, meeting drinking water needs of entire country as well as drought mitigation seems to be exaggerated. Similarly cost of the proposal seems to be underestimated to advocate the proposal as the best proposal. A significant portion of the Northern Waterway involves international ramifications.

## **Proposal of Shri P. R. Janabandhu**

### **Gist of the Proposal**

As an alternative to NWDA proposal, he has given a proposal named as “Water resources and irrigation development project of India”. In the proposal the water is proposed to be collected above 550 m MSL in Himalayas by constructing medium dams (55Nos) across river Ganga, Brahmaputra and their tributaries. The proposed dams are to be constructed at 600 to 700m MSL. Water from Himalayan dams is proposed to be diverted to main collecting channel (MCC) proposed to be laid parallel to Himalayan foothills at an approximate elevation of 225 m MSL through pen stock. Syphon i.e. transporting channel pipe are proposed to be laid down from MCC to transfer water from Himalayans to Peninsular India. Wherever, these siphons i.e. transporting channel (pipe) meets at 450 to 500 m MSL i.e. Ground level in Peninsular India, on land canals are proposed to be constructed for further distribution through distribution channels. Hydroelectricity is proposed to be generated wherever falls occur in Himalayan and Peninsular systems. During monsoon, large amount of hydro-power can be generated.

### **Observations of MoWR**

Major portion of proposal of Shri Janabandhu contains the information collected from various sources regarding droughts in India, floods in India, Water Resources data, various inter basin water transfer proposals as mooted from time to time, for example National Water Grid by Dr. K. L. Rao, Garland Canal by Capt. Dastur, National Perspective Plan of Ministry of Water Resources as being pursued by NWDA etc. It may be mentioned here that his critical review regarding NWDA studies is based on his personal views not supported by any detailed scientific or engineering logic. Further, the proposal prima-facie is unworkable as it is not based on sound engineering basis. The water from MCC (main collecting channel) at MSL 225 m which happens to be an open channel cannot be transported to Peninsular region at MSL 450 to 500 m above MSL

through syphon under differential head as proposed by Sh. Janabandhu. It is also felt that while framing the project, the proposer has not done any risk analysis for the construction of such huge canals in hilly slopes. Thus this proposal appears geo – physically impracticable and techno – economically unviable. The information on water availability, upstream uses downstream demands and proposed diversion has not been furnished in the proposal. No consideration has been given to the vast and varied geology and topography of the area, considering the uniform diameter of pipe (50 m) for main collecting channel perhaps it may not be possible to collect vast flows. Likely water head loss through such siphon system having a length of 2145 km and distribution links (open channel length 6990 km) in Southern canals has also not been computed. Idea of laying of 50 meter dia main collecting channel (pipe) at an elevation of 225 meter does not seem to be feasible. As, it will be receiving water through the penstocks from the dams located at an elevation of 550m MSL, hence the pressure head in the main collecting channel will be approximately 300 meter or more. The claim of providing irrigation to additional 133 M ha is beyond realistic assessment. The proposal seems to be only schematic and no engineering/ geological/technical and hydrological details have been given to critically examine the project.

## **Memorandum submitted by Shri A. D. Mohile on Interlinking of Rivers**

### **Gist of the Memorandum:**

Shri Mohile while submitting his memorandum to the Standing Committee on Water Resources supported the concept of Inter Basin Transfer of Water. He expressed that the main socio – economic objectives of the proposals like providing livelihood & increasing incomes in rural areas, National economic development and providing infrastructure for food self sufficiency can be effectively fulfilled. At the same time he mentioned that there are critiques of these proposals and suggested some corrective measures of these critiques. He also suggested that the proposals of Interlinking of Rivers (ILR) may be classified as Long Distance Water Transfers (LDWT) or Inter Basin Water Transfers (IBWT) or water transfers to non – co – basin states etc. He advocated for enforcement of policies and laws related to transfer of water from one area to another and Parliament enacts and empowers the Union in this regard. In the author's view, there is no need to amend Constitution for sensitive water related issues as it is preferable for the Union to enact laws to regulate the waters of the interstate basins. Shri Mohile has also raised the issues of Rehabilitation & Resettlement of project affected people, ecological consequences etc. He also raised some specific questions on the Feasibility Report of ken – Betwa link.

Thus, the Memorandum submitted by Sh. Mohile is basically in form of suggestions on the interlinking of rivers programme being persued by Government of India under NPP. The comments on these suggestion are given below:

### **Observations of MoWR**

Various suggestions made by Shri Mohile in his memorandum regarding Rehabilitation & Resettlement of project affected people, ecological consequences etc. have already

been covered in the ‘Terms of References for preparation of Detailed Project Report (DPR) of Ken – Betwa link’ based on which the DPR is being under preparation by NWDA. The suggestions given by Shri Mohile about improvement in preparation of reports are already being kept in view while preparing Detailed Project Report for the links.

His suggestion regarding putting in public domain the information about the proposals and decision making process has already been implemented by NWDA ([www.nwda.gov.in](http://www.nwda.gov.in)).

The Interlinking of Rivers (ILR) is only a programme or broad concept comprising of various independent or interdependent links transferring water from one river to other including enroute use by Inter Basin Water Transfer (IBWT) link proposals. As the length of various links proposed by NWDA vary from 11.0 Km to 828 Km, naming the project as Long Distance Water Transfers (LDTW) will not convey proper meaning for this project.

As envisaged in the National Common Minimum Programme (NCMP) of the UPA Government, after completion of comprehensive assessment, the Govt. decided to pursue ILR with focus on Peninsular Component in the consultative manner. MOWR/NWDA is trying to arrive consensus among the States within the existing legal provisions which is the most appropriate & time tested method .

### **“Note on the Inter-linking of Rivers” submitted by Prof. R.R. Singh**

#### **Gist of the Note**

Prof. R.R. Singh has not furnished any proposal but expressed his reservations about Interlinking of Rivers for various reasons ranging from environmental, social, economic, legal and technical issues. Prof. Singh has mentioned various concerns he thinks about the Interlinking of Rivers Projects. He has also made few suggestions / steps which need to be taken up before taking a decision about implementation of interlinking of rivers project.

## **Observations of MoWR**

The points raised by Prof. R.R. Singh to justify his reservations about Inter linking of Rivers are of very general nature applicable to any major Water Resources Project, mostly based on news paper reports rather than in depth study of Feasibility Reports of various links & Terms of Reference (TOR) for preparation of Detailed Project Report (DPR) kept on the Website of NWDA for public information. The issues highlighted by him are taken care of at various stages of planning, design, construction and maintenance of Water Resources Project. It appears that he has considered the Interlinking of River Project as of a unique nature and first time in the country. The issues raised by him can be broadly grouped as environmental & ecological, social, legal and technical.

National Water Development Agency (NWDA) after carrying out various technical studies such as water balance studies of basins/sub basins, water balance studies at diversion points, Toposheet and storage capacity studies of reservoir, toposheet studies of link alignment, Pre-feasibility reports of links, has identified 30 links i.e. 16 links under Peninsular and 14 under Himalayan river development components for preparation of feasibility reports. The quantum of water proposed to be diverted from the surplus river basin to the deficit basin has been worked after meeting water requirement of surplus basin for ultimate stage of development.

NWDA has prepared the Terms of Reference (TOR) for preparation of DPR of ILR proposals links. The TORs are placed on the Website of NWDA [www.nwda.gov.in](http://www.nwda.gov.in). NWDA has also taken up the work of preparation of DPR of Ken - Betwa link. The rehabilitation and resettlement plan will be worked in respect of individual link at the time of preparation of Detailed Project Report (DPR). The rehabilitation and resettlement packages will be provided as per R&R policy of Govt. of India. Therefore the reservations of Prof. R. R. Singh on Interlinking of Rivers are baseless.

It is proposed that ILR proposals will be executed only with consensus of concerned states along with full transparency by keeping various studies on the Website.

A committee of Environmentalists, Social Scientists and other Experts on Interlinking of Rivers has been constituted by MoWR in December 2004. The Committee is constituted with a view to make the process of proceedings on Interlinking of Rivers (ILR) in a fully consultative manner.

The Committee will advise the Government on various aspects of the proposed project. The Committee has held four meetings so far. It is expected that the issues raised by Mr R.R.Singh would be duly taken care of by this committee.

## **Memorandum submitted by Shri Ramaswamy R. Iyer.**

### **Gist of the Memorandum:**

Shri Ramaswamy R. Iyer has addressed his letter in response to his hearing before Parliamentary Standing Committee on 26<sup>th</sup> September, 2006. Shri Iyer in his letter, has broadly attempted to stress his views expressed during above hearing about his credentials in water resources field, his views on floods, Rajasthan canal, social tensions, gigantism, link or concept of ILR, Kerala's views on Pamba-Achankovil-Vaippar link, Polavaram project etc.. Further, Shri Iyer on the aspect of Interlinking of Rivers has asked Parliamentary Standing committee to refer: (i) His paper 'River Linking Project – A Critique', presented in XI<sup>th</sup> National Water Convention, and (ii) River Linking Project: Many questions', included in the book 'River linking: A Millennium Folly?' edited by Ms Medha Patkar.

His paper "River Linking Project – A Critique" broadly covers his apprehensions about ILR being mega project, stand of Govt. and Supreme Court monitoring, concept of project, its analogy with national water grid, concept of surplus and deficit basins, non availability of FRs, applicability of ILR on flood control, power generation, drought, water for irrigation, gigantism, impacts & consequences of ILR, international dimensions, diversion from Ganga and need for examination of individual links etc.

### **Observations of MoWR**

In response to various issues raised by him, it may be stated that the planning for water resources development takes into consideration the topographical, geological, geographical, agro-climatic, hydro-geological, meteorological and techno-economic factors before deciding the type of structure i.e. surface/groundwater, micro, mini, medium or major. Inter Basin Water Transfer (IBWT) proposals as based on National Perspective Plan (NPP) are envisaged an important strategy in the overall development of water resources scenario in the country and to address national food self-sufficiency. The storages proposed envisaged efficient utilization of the water resources for irrigation, hydro-power, drinking water supply & navigation besides mitigating the ravages of floods & miseries caused by droughts, by diverting water from water rich to water short areas. The project planning of IBWT links, and implementation shall be done to minimise the adverse impacts and enhance the positive impacts. With reference to Shri Iyer's assertion regarding recent Floods & the ILR project, it may be stated that objective of IBWT is not only flood mitigation but also to provide irrigation, Industrial and domestic water needs, Hydropower and other benefits. As far as climate change is concerned, it



may be mentioned that the experts have yet to arrive at a conclusive regional scenario because of its impacts. These likely impacts particularly on river flows as well as crop production make it imperative to go in for all the possible options for our food security.

## **“Inter – linking of rivers in India” proposed by Shri S.D. Buddhisagar of “Sujalam”**

### **Gist of the Proposal**

The concept of this proposal is to tap the river flows before they enter the plains and transfer the water to the needy areas to facilitate countrywide irrigation and transport. The proposal comprises a 2400 km long, 50 m deep, 500 m wide canal, named Himalayan canal, connecting natural valleys and forming 19 dams totaling 80 km in length to collect water from Himalayan rivers. The Himalayan canal will collect about 39,000 TMC (1080 BCM) of water annually. The 19 dams will have a holding capacity of about 2100 TMC (60 BCM) of water. Another canal, called “main canal” comprising the Aravali canal of 820 km length, a twin Valley canal of 170 km long, the Sahyadri high canal and Sahyadri low canal with lengths of 1290 km and 370 km respectively. The main canal is proposed to be connected to the Himalayan canal through a link canal of 310 km long and it has a holding capacity of 275 TMC (8 BCM). It is proposed to maintain the bed elevations of these canals with construction of huge embankments of heights ranging from 250 m to 600 m and the tail end of the last reach of the Sahyadri low canal will be at the mean sea level.

Benefits of irrigation, drinking water, navigation and hydropower generation are envisaged through this proposal. Some suggestions are also given for raising the capital for investment in the project.

### **Observations of MoWR**

This proposal was also examined by Independent Group of Experts (IGE) comprising Prof. Subhash Chander, formerly Prof. & Emeritus Fellow IIT, Delhi and Prof. B.S. Sharma, Professor Emeritus (AICTE) set up by the erstwhile Task Force on ILR. IGE, after its examination concluded in its Report that the proposal is technically unsound, incomplete and hence cannot be pursued within its present form.

“Sujalam” project is at a very elementary stage and lacks in basic tenets of Hydrology. The claimed storages and diversions are without any proper analysis and may be over assessed. Further the link canals proposed in the project are conceptualized without considering the vast and fragile geological and geophysical characteristics of Himalayan, Aravali and western ghats and other vast land of the country. The very high embankments proposed to carry water at claimed high heads may not be geologically / geo – technically stable and may lead to major socio – economical and environmental hazards. The claimed benefits from project are also highly exaggerated and the project cost seems to be too high. In view of the above, it may not be possible to pursue further the project proposal in its present shape.

**APPENDIX – VIII**

**MINUTES OF THE SITTINGS OF THE COMMITTEE HELD ON “INTER  
LINKING OF RIVERS”**

**MINUTES OF THE SEVENTH SITTING OF THE STANDING COMMITTEE  
ON WATER RESOURCES (2004-2005) HELD ON TUESDAY, 25 JANUARY 2005**

The Committee sat from 1100 hours to 1300 hours in Committee Room ‘B’,  
Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS**

**LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Rajen Gohain
4. Shri Raghuv eer Singh Kaushal
5. Smt. Manorama Madhavraj
6. Shri Munshiram
7. Shri Lonappan Nambadan
8. Shri Prabodh Panda
9. Shri Harilal M. Patel
10. Shri Laxmanrao Patil
11. Shri Arjun Charan Sethi

**RAJYA SABHA**

12. Shri Indramoni Bora
13. Shri Manoj Bhattacharya
14. Dr. Gyan Prakash P ilania

**SECRETARIAT**

- |    |                      |   |                      |
|----|----------------------|---|----------------------|
| 1. | Shri John Joseph     | - | Additional Secretary |
| 2. | Shri N.K. Sapra      | - | Joint Secretary      |
| 3. | Shri A.S. Chera      | - | Deputy Secretary     |
| 4. | Shri P.V.L.N. Murthy | - | Under Secretary      |



**MINUTES OF THE SIXTH SITTING OF THE STANDING COMMITTEE ON  
WATER RESOURCES (2005-2006) HELD ON TUESDAY, 17 JANUARY, 2006**

The Committee sat on 17 January, 2006 from 1530 hours to 1815 hours in Committee Room 'D', Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS  
LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Rajen Gohain
4. Shri Raghuvveer Singh Kaushal
5. Smt. Manorama Madhavraj
6. Shri Munshiram
7. Shri Lonappan Nambadan
8. Shri Harilal. Madhavaji Bhai Patel
9. Shri Laxmanrao Patil
10. Shri Kamla Prasad Rawat
11. Smt. Minati Sen

**RAJYA SABHA**

12. Shri Manoj Bhattacharya
13. Dr. Gyan Prakash Pilonia

**SECRETARIAT**

- |    |                      |   |                 |
|----|----------------------|---|-----------------|
| 1. | Shri N.K. Sapra      | - | Joint Secretary |
| 2. | Shri A.S. Chera      | - | Director        |
| 3. | Shri P.V.L.N. Murthy | - | Under Secretary |

**List of Non-Official witnesses**

<b><u>Sl. No.</u></b>	<b><u>Name</u></b>	<b><u>Time (Hours)</u></b>
1.	Shri B.G. Verghese	1540 to 1630
2.	Shri Yogendra Prasad (i) Shri B.K. Mittal (ii) Shri S.R. Narsimhan	1700 to 1745
3.	Sh. Ramesh Kumar Mumukshu	1745 to 1815

At the outset, the Hon'ble Chairman wished a very Happy New Year and welcomed the Members to the sitting of the Standing Committee on Water Resources. The Hon'ble Chairman then informed that the Committee would undertake on-the-spot Study Tour to Ahmedabad, Goa, Mysore and Bangalore from 8-13 February 2006. He drew attention of the Members to the Revised Guidelines issued by the Hon'ble Speaker, Lok Sabha in connection with the Study Tours by the Parliamentary Committees and requested them to strictly adhere to the said Guidelines during the Study Tour of the Committee.

2. Thereafter, the Hon'ble Chairman welcomed each of the Non-Official witnesses invited to offer their views before the Committee on the subject 'Inter-Linking of Rivers'. He drew their attention to the provision of Direction 55(1) of the Directions by the Speaker, Lok Sabha and requested them to introduce themselves to the Committee.

3. After the introduction, the Committee took oral evidence of the Non-Official witnesses on the subject 'Inter-Linking of Rivers'. Thereafter, the Hon'ble Chairman and the members sought certain clarifications in brief on various aspects of the subject and the witnesses responded thereto.

4. A verbatim record of the proceedings of the sitting of the Committee has been kept separately.

The Committee then adjourned.

**MINUTES OF THE SEVENTH SITTING OF THE STANDING COMMITTEE  
ON WATER RESOURCES (2005-2006) HELD ON WEDNESDAY, 18 JANUARY,  
2006**

The Committee sat on 18 January, 2006 from 1100 hours to 1340 hours and 1440 hours to 1800 hours in Committee Room 'D', Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS  
LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Raghuvveer Singh Kaushal
4. Smt. Manorama Madhavraj
5. Shri Munshiram
6. Shri Lonappan Nambadan
7. Shri Harilal. Madhavaji Bhai Patel
8. Shri Laxmanrao Patil
9. Shri Pannian Ravindran
10. Shri Kamla Prasad Rawat
11. Smt. Minati Sen

**RAJYA SABHA**

12. Dr. Gyan Prakash Pilonia

**SECRETARIAT**

- |    |                      |   |                 |
|----|----------------------|---|-----------------|
| 1. | Shri N.K. Sapra      | - | Joint Secretary |
| 2. | Shri A.S. Chera      | - | Director        |
| 3. | Shri P.V.L.N. Murthy | - | Under Secretary |

**List of Non-Official witnesses**

<b><u>Sl. No.</u></b>	<b><u>Name</u></b>	<b><u>Time (Hours)</u></b>
1.	Shri A.C. Kamaraj (i) Shri V. Kasi	1100 to 1220
2.	Dr. Kaushal Kumar Sharma	1220 to 1250
3.	Shri K.V. Rupchand (i) Shri N.S. Kumar	1250 to 1340
4.	Shri M.S. Menon	1440 to 1510
5.	Shri B.S. Bhavani Shankar	1510 to 1540
6.	Shri Manu Bhatnagar	1540 to 1600

7.	Dr. P. Shivu	1600 to 1645
8.	Shri M. Gopalkrishnan	1645 to 1725
9.	Shri Shekhar Singh	1725 to 1800

At the outset, the Hon'ble Chairman welcomed the Members to the sitting of the Standing Committee on Water Resources.

2. The Hon'ble Chairman then welcomed Shri Pannian Ravindran, M.P., Lok Sabha who attended the sitting of the Committee for the first time after his nomination to serve as a Member of the Committee.

3. Thereafter, the Hon'ble Chairman welcomed each of the Non-Official witnesses invited to offer their views before the Committee on the subject 'Inter-Linking of Rivers'. He drew their attention to the provision of Direction 55(1) of the Directions by the Speaker, Lok Sabha and requested them to introduce themselves to the Committee.

4. After the introduction, the Committee took oral evidence of the Non-Official witnesses on the subject 'Inter-Linking of Rivers'. Some of the Non-official witnesses also gave a brief power point presentation to the Committee on the subject. Thereafter, the Hon'ble Chairman and the members sought certain clarifications in brief on various aspects of the subject and the witnesses responded thereto.

5. A verbatim record of the proceedings of the sitting of the Committee has been kept separately.

The Committee then adjourned.

**MINUTES OF THE TENTH SITTING OF THE STANDING COMMITTEE ON  
WATER RESOURCES (2005-2006) HELD ON TUESDAY, 20 JUNE, 2006**

The Committee sat on 20 June, 2006 from 1500 hours to 1800 hours in  
Committee Room 'B', Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS  
LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Bikram Keshari Deo
4. Dr. M.Jagannath
5. Shri Raghuvveer Singh Kaushal
6. Smt. Manorama Madhavraj
7. Shri Harilal Madhavaji Bhai Patel
8. Shri Pannian Ravindran
9. Shri Kamla Prasad Rawat
10. Smt. Minati Sen
11. Shri Chandra Bhushan Singh

**RAJYA SABHA**

12. Shri Indramoni Bora
13. Dr. Gyan Prakash Pilia

**SECRETARIAT**

- |    |                      |   |                 |
|----|----------------------|---|-----------------|
| 1. | Shri N.K. Sapra      | - | Joint Secretary |
| 2. | Shri A.S. Chera      | - | Director        |
| 3. | Shri P.V.L.N. Murthy | - | Under Secretary |

**List of Non-Official witnesses/Organisations**

<b><u>Sl. No.</u></b>	<b><u>Name</u></b>	<b><u>Time (Hours)</u></b>
1.	<b>National Civil Society Committee on Inter-Linking of Rivers</b>	
	(i) Dr. Ashok Khosla,	1500 to 1645
	(ii) Prof. Yoginder K. Alagh	
	(iii) Prof. Kanchan Chopra	
	(iv) Shri Anil. D. Mohlie	
	(v) Ms. Medha Patkar	



(vi) Shri Ramaswamy R. Iyer

(vii) Ms. Srabani Das

2. Prof. A.K. Rastogi  
IIT, Mumbai

1700 to 1800

At the outset, the Hon'ble Chairman welcomed the Members to the sitting of the Standing Committee on Water Resources.

2. Thereafter, the Hon'ble Chairman welcomed each of the Non-Official witnesses invited to offer their views before the Committee on the subject 'Inter-Linking of Rivers'. He drew their attention to the provision of Direction 55(1) of the Directions by the Speaker, Lok Sabha and requested them to introduce themselves to the Committee.

3. After the introduction, the Committee took oral evidence of the Non-Official witnesses on the subject 'Inter-Linking of Rivers'. Some of the Non-official witnesses also gave a brief power point presentation to the Committee on the subject. Thereafter, the Hon'ble Chairman and the members sought certain clarifications in brief on various aspects of the subject and the witnesses responded thereto.

4. A verbatim record of the proceedings of the sitting of the Committee has been kept separately.

The Committee then adjourned.

**MINUTES OF THE ELEVENTH SITTING OF THE STANDING COMMITTEE  
ON WATER RESOURCES (2005-2006) HELD ON WEDNESDAY, 21 JUNE, 2006**

The Committee sat on 21 June, 2006 from 1100 hours to 1400 hours in Committee Room 'B', Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS  
LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Bikram Keshari Deo
4. Shri Rajen Gohain
5. Dr. M.Jagannath
6. Shri Raghuv eer Singh Kaushal
7. Shri Munshiram
8. Shri Harilal Madhavaji Bhai Patel
9. Shri Pannian Ravindran
10. Shri Kamla Prasad Rawat
11. Smt. Minati Sen
12. Shri Chandra Bhushan Singh

**RAJYA SABHA**

13. Shri Indramoni Bora
14. Dr. Gyan Prakash Pilania

**SECRETARIAT**

- |    |                      |   |                 |
|----|----------------------|---|-----------------|
| 1. | Shri N.K. Sapra      | - | Joint Secretary |
| 2. | Shri A.S. Chera      | - | Director        |
| 3. | Shri P.V.L.N. Murthy | - | Under Secretary |

**List of Non-Official witnesses**

<b><u>Sl. No.</u></b>	<b><u>Name</u></b>	<b><u>Time (Hours)</u></b>
1.	Prof. Kamta Prasad	1100 to 1230
2.	Shri C.C. Patel (i) Dr. C.D. Thatte	1240 to 1400

At the outset, the Hon'ble Chairman welcomed the Members to the sitting of the Standing Committee on Water Resources.

2. Thereafter, the Hon'ble Chairman welcomed each of the Non-Official witnesses invited to offer their views before the Committee on the subject 'Inter-Linking of Rivers'. He drew their attention to the provision of Direction 55(1) of the Directions by the Speaker, Lok Sabha and requested them to introduce themselves to the Committee.

3. After the introduction, the Committee took oral evidence of the Non-Official witnesses on the subject 'Inter-Linking of Rivers'. Some of the Non-official witnesses also gave a brief power point presentation to the Committee on the subject. Thereafter, the Hon'ble Chairman and the members sought certain clarifications in brief on various aspects of the subject and the witnesses responded thereto.

4. A verbatim record of the proceedings of the sitting of the Committee has been kept separately.

The Committee then adjourned.

**MINUTES OF THE TWELFTH SITTING OF THE STANDING COMMITTEE  
ON WATER RESOURCES (2005-2006) HELD ON FRIDAY, 07 JULY, 2006**

The Committee sat from 1430 hours to 1745 hours in Committee Room 'C',  
Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**MEMBERS**

**LOK SABHA**

	Dr. M. Jagannath	-	In the Chair
2.	Shri Bhanwar Singh Dangawas		
3	Shri Bikram Keshari Deo		
4	Shri Rajen Gohain		
5.	Shri Raghuv eer Singh Kaushal		
6.	Shri Munshiram		
7.	Shri Lonappan Nambadan		
8.	Shri Laxmanrao Patil		
9.	Shri Pannian Ravindran		
10.	Shri Kamla Prasad Rawat		
11.	Shri Arjun Charan Sethi		

**RAJYA SABHA**

12.	Shri Indramoni Bora		
13.	Dr. Gyan Prakash Pilia		

**SECRETARIAT**

1.	Shri N.K. Sapra	-	Joint Secretary
2.	Shri A.S. Chera	-	Director
3.	Shri P.V.L.N. Murthy	-	Under Secretary

**List of Non-Official witnesses/Organisations**

<b><u>Sl. No.</u></b>	<b><u>Name</u></b>	<b><u>Time (Hours)</u></b>
1.	Shri P.R. Janbandhu	1430 to 1530
	(i) Shri Shirish Rajurkar	
2.	Prof. S.K. Mazumder	1530 to 1630
3.	Dr. Vandana Siva	1645 to 1745

In the absence of Hon'ble Chairman, Standing Committee on Water Resources, the Committee chose Dr. M. Jagannath to act as Chairman for the Sitting under Rule 258 (3) of the Rules of Procedure and Conduct of Business in Lok Sabha. The Chairman then welcomed the members to the sitting of the Committee.

2. Thereafter, the Chairman welcomed each of the Non-Official witnesses invited to offer their views before the Committee on the subject, 'Inter-Linking of Rivers'. He drew their attention to the provisions of Direction 55(1) of the Directions by the Speaker, Lok Sabha and requested them to introduce themselves to the Committee.

3. After the introduction, the Committee took oral evidence of the Non-Official witnesses on the subject 'Inter-Linking of Rivers'. Some Non-official witnesses also gave brief power point presentations to the Committee on the subject. Thereafter, the members sought certain clarifications in brief on various aspects of the subject and the witnesses responded thereto.

4. A verbatim record of the proceedings of the sitting of the Committee has been kept separately.

The Committee then adjourned.

**MINUTES OF THE SECOND SITTING OF THE STANDING COMMITTEE ON  
WATER RESOURCES (2006-2007) HELD ON TUESDAY, 26 SEPTEMBER 2006**

The Committee sat from 1500 hours to 1615 hours in Committee Room 'E',  
Basement, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS**

**LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Bikram Keshari Deo
4. Shri Raghuv eer Singh Kaushal
5. Smt. Manorama Madhavraj
6. Smt. Kiran Maheshwari
7. Shri Shankhlal Majhi
8. Shri Mukeem Mohammad
9. Shri Subodh Mohite
10. Shri Lonappan Nambadan
11. Shri Harilal Madhavaji Bhai Patel
12. Smt. Minati Sen

**RAJYA SABHA**

13. Shri Indramoni Bora
14. Shri K.E. Ismail
15. Shri K.P.K. Kumaran
16. Prof. P.J. Kurien
17. Dr. Gyan Prakash P ilania

**SECRETARIAT**

1. Shri N.K. Sapra - Joint Secretary
2. Shri P.V.L.N. Murthy - Under Secretary

**Non-Official Witness**

1. Shri Ramaswamy R. Iyer, Former Secretary, Ministry of Water Resources.

At the outset, the Chairman welcomed the Members to the sitting of the Committee. He particularly welcomed the new Members who attended the sitting of the Committee for the first time after being nominated as its Member.

2. Thereafter, the Chairman welcomed the Non-Official witness invited to offer his views before the Committee on the subject 'Inter-Linking of Rivers'. He drew his attention to the provisions of Direction 55(1) of the Directions by the Speaker, Lok Sabha and requested him to introduce himself to the Committee.

3. After the introduction, the Committee took oral evidence of the Non-Official witness on the subject 'Inter-Linking of Rivers'. Thereafter, the members sought certain clarifications in brief on various aspects of the subject and the witness responded thereto.

4. A verbatim record of the proceedings of the sitting of the Committee has been kept separately

The Committee then adjourned.

**MINUTES OF THE TENTH SITTING OF THE STANDING COMMITTEE ON  
WATER RESOURCES (2006-2007) HELD ON WEDNESDAY, 16 MAY, 2007**

The Committee sat from 1500 hours to 1700 hours in Committee Room 'B',  
Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS  
LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Bikram Keshari Deo
4. Smt. Preneet Kaur
5. Shri Raghuvveer Singh Kaushal
6. Shri Sankhlal Majhi
7. Shri Abu Ayes Mondal
8. Shri Harilal. Madhavaji Bhai Patel

**RAJYA SABHA**

9. Shri Ajay Singh Chautala
10. Shri K.E. Ismail
11. Shri K.P.K. Kumaran
12. Dr. Gyan Prakash Pilania
13. Shri Nandi Yellaiah

**SECRETARIAT**

1. Shri A.S. Chera - Director
2. Shri P.V.L.N. Murthy - Deputy Secretary

**List of Non-Official witnesses**

<b><u>Sl. No.</u></b>	<b><u>Name</u></b>	<b><u>Time (Hours)</u></b>
1.	Dr. Kirit S. Parikh, Member, Planning Commission	1500 to 1545
2.	Shri A.D. Mohile	1545 to 1630
3.	Dr. K. Malaisamy, MP (RS)	1630 to 1700



At the outset, the Hon'ble Chairman welcomed the Members to the sitting of the Standing Committee on Water Resources.

2. Thereafter, the Hon'ble Chairman welcomed each of the Non-Official witnesses invited to offer their views before the Committee on the subject 'Inter-Linking of Rivers'. He drew their attention to the provision of Direction 55(1) of the Directions by the Speaker, Lok Sabha and requested them to introduce themselves to the Committee.

3. After the introduction, the Committee took oral evidence of the Non-Official witnesses on the subject 'Inter-Linking of Rivers'. Thereafter, the Hon'ble Chairman and the members sought certain clarifications in brief on various aspects of the subject and the witnesses responded thereto.

4. A verbatim record of the proceedings of the sitting of the Committee has been kept separately.

The Committee then adjourned.

**MINUTES OF THE TWELFTH SITTING OF THE STANDING COMMITTEE  
ON WATER RESOURCES (2006-2007) HELD ON MONDAY, 11 JUNE 2007**

The Committee sat from 1100 hours to 1300 hours in Committee Room 'E',  
Basement, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS  
LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Rajen Gohain
4. Shri Prakesh B. Jadhav
5. Shri Raghuvver Singh Kaushal
6. Smt. Manorama Madhavraj
7. Shri Mukeem Mohammad
8. Shri Abu Ayes Mondal
9. Shri Lonappan Nambadan
10. Shri Harilal M. Patel
11. Dr. Arun Kumar Sarma
12. Smt. Minati Sen

**RAJYA SABHA**

13. Shri Indramoni Bora
14. Shri K.E. Ismail
15. Prof. P.J. Kurien
16. Dr. Gyan Prakash Pilonia
17. Shri Nandi Yellaiah

**SECRETARIAT**

- |    |                      |   |                  |
|----|----------------------|---|------------------|
| 1. | Shri N.K. Sapra      | - | Joint Secretary  |
| 2. | Shri A.S. Chera      | - | Director         |
| 3. | Shri P.V.L.N. Murthy | - | Deputy Secretary |

**List of Non-Official witnesses**

<b><u>Sl. No.</u></b>	<b><u>Name</u></b>	<b><u>Time (Hours)</u></b>
1.	Prof. R.R. Singh	1100 to 1140
2.	Shri V. Jayaraman	1140 to 1220
3.	Shri R.C. Tripathy	1220 to 1300



**MINUTES OF THE THIRTEENTH SITTING OF THE STANDING  
COMMITTEE ON WATER RESOURCES (2006-2007) HELD ON FRIDAY, 22  
JUNE 2007**

The Committee sat from 1500 hours to 1700 hours in Committee Room 'B',  
Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS**

**LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Bikram Kesari Deo
4. Shri Rajen Gohain
5. Shri Prakesh B. Jadhav
6. Shri Raghuvveer Singh Kaushal
7. Smt. Manorama Madhavraj
8. Smt. Kiran Maheshwari
9. Shri Shankhlal Majhi
10. Shri Abu Ayes Mondal
11. Shri Lonappan Nambadan
12. Shri Harilal M. Patel
13. Dr. Arun Kumar Sarma
14. Smt. Minati Sen

**RAJYA SABHA**

15. Shri K.P.K. Kumaran
16. Prof. P.J. Kurien
17. Dr. Gyan Prakash Pilonia

**SECRETARIAT**

1. Shri A.S. Chera - Director

**List of Non-Official witnesses**

<b><u>Sl. No.</u></b>	<b><u>Name</u></b>	<b><u>Time (Hours)</u></b>
1.	Shri Martin D. Alumkara	1500 to 1545
2.	Shri S.D. Budhisagar	1545 to 1630
3.	Shri Y. Prabhakara Rao	1630 to 1700

At the outset, the Hon'ble Chairman welcomed the Members to the sitting of the Standing Committee on Water Resources.

2. Thereafter, the Hon'ble Chairman welcomed each of the Non-Official witnesses invited to offer their views before the Committee on the subject 'Inter-Linking of Rivers'. He drew their attention to the provision of Direction 55(1) of the Directions by the Speaker, Lok Sabha and requested them to introduce themselves to the Committee.

3. After the introduction, the Committee took oral evidence of the Non-Official witnesses on the subject 'Inter-Linking of Rivers'. Thereafter, the Hon'ble Chairman and the members sought certain clarifications in brief on various aspects of the subject and the witnesses responded thereto.

4. A verbatim record of the proceedings of the sitting of the Committee has been kept separately.

The Committee then adjourned.

**MINUTES OF THE FOURTEENTH SITTING OF THE STANDING  
COMMITTEE ON WATER RESOURCES (2006-2007) COMMITTEE HELD ON  
WEDNESDAY, 18 JULY 2007**

The Committee sat from 1500 hours to 1630 hours in Committee Room 'G074',  
Ground Floor, Parliament Library Building, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS  
LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Bikram Keshari Deo
4. Shri Rajen Gohain
5. Smt. Preneet Kaur
6. Smt. Manorama Madhavraj
7. Smt. Kiran Maheshwari
8. Shri Shankhlal Majhi
9. Shri Abu Ayes Mondal
10. Shri Lonappan Nambadan
11. Shri Harilal M. Patel
12. Dr. Arun Kumar Sarma

**RAJYA SABHA**

13. Shri K.E. Ismail
14. Shri K.P.K. Kumaran
15. Dr. Gyan Prakash Pilonia

**SECRETARIAT**

1. Shri A.S. Chera - Director
2. Shri P.V.L.N. Murthy - Deputy Secretary

**List of Non-Official witnesses**

1. Shri S.D. Budhisagar
2. Shri Arvind Kulkarni
3. Shri R. Chandrashekhar
4. Shri Vaikunth Rajwadkar



**MINUTES OF THE THIRD SITTING OF THE STANDING COMMITTEE ON  
WATER RESOURCES (2007-2008) HELD ON THURSDAY, 13 SEPTEMBER  
2007**

The Committee sat from 1400 hours to 1715 hours in Committee Room 'B',  
Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS  
LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Raghuvveer Singh Kaushal
4. Shri Shankhlal Majhi
5. Shri Abu Ayes Mondal
6. Shri Vishnu Deo Sai
7. Dr. Arun Kumar Sarma

**RAJYA SABHA**

8. Prof. P.J. Kurien
9. Dr. Gyan Prakash Pilania
10. Shri Tiruchi Siva
11. Shri Nandi Yellaiah

**SECRETARIAT**

- |    |                      |   |                      |
|----|----------------------|---|----------------------|
| 1. | Shri S.K. Sharma     | - | Additional Secretary |
| 2. | Shri N.K. Sapra      | - | Joint Secretary      |
| 3. | Shri P.V.L.N. Murthy | - | Deputy Secretary     |

**List of Non-Official witnesses**

<b><u>Sl. No.</u></b>	<b><u>Name</u></b>	<b><u>Time (Hours)</u></b>
1.	<b>Representatives of Institution of Engineers (India)</b>  (i) Dr. C.C. Patel, Patron, Committee for ILR (ii) Shri B.J. Vasoya, Chairman, CILR & Past President, IEI (iii) Shri M Gopalakrishnan, Vice Chairman, CILR	1400 to 1600
2.	Shri Ramakrishna Koduri	1615 to 1715



At the outset, the Hon'ble Chairman welcomed the members to the sitting and particularly also welcomed Shri Vishnu Deo Sai, MP, Lok Sabha who was nominated for the first time to the Committee.

2. Thereafter, the Hon'ble Chairman welcomed the representatives of the Institution of Engineers (India) invited to offer their views before the Committee on the subject 'Inter-Linking of Rivers'. He drew their attention to the provision of Direction 55(1) of the Directions by the Speaker, Lok Sabha and requested them to introduce themselves to the Committee.

3. After the introduction, the Committee took oral evidence of the Non-Official witnesses on the subject 'Inter-Linking of Rivers'. Thereafter, the Hon'ble Chairman and the members sought certain clarifications in brief on various aspects of the subject, and the witnesses responded thereto.

**(Tea Break from 1600 Hrs. to 1615 Hrs.)**

4. After the tea break, the Chairman welcomed Shri Ramakrishna Koduri invited to offer his views before the Committee on the subject, 'Inter-Linking of Rivers'. He drew Shri Koduri's attention to the provision of Direction 55(1) of the Directions by the Speaker, Lok Sabha and requested him to introduce himself to the Committee. Thereafter the Committee took oral evidence on the subject and members sought certain clarifications on various aspects of the subject to which the witness responded in brief.

A verbatim record of the proceedings of the sitting of the Committee has been kept separately.

The Committee then adjourned.

**MINUTES OF THE NINTH SITTING OF THE STANDING COMMITTEE ON  
WATER RESOURCES (2007-2008) HELD ON SATURDAY, 12 APRIL 2008**

The Committee sat from 1130 hours to 1330 hours in Committee Room 'D',  
Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS**

**LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Bikram Keshari Deo
4. Shri Raghuvveer Singh Kaushal
5. Shri Shankhlal Majhi
6. Shri Abu Ayes Mondal
7. Dr. Arun Kumar Sarma

**RAJYA SABHA**

8. Kumar Deepak Das
9. Shri K.E. Ismail
10. Shri Tiruchi Siva

**SECRETARIAT**

1. Shri C.S. Joon - Director
2. Shri P.V.L.N. Murthy - Deputy Secretary

**REPRESENTATIVES OF MINISTRY OF WATER RESOURCES**

1. Shri U.N. Panjiar, Secretary, WR
2. Shri S. Manoharan, Addl. Secretary, WR
3. Shri A.D. Bhardwaj, Director General, NWDA
4. Shri K. Vohra, Sr. Joint Commissioner (BM), WR

At the outset, the Hon'ble Chairman welcomed the Members to the sitting of the  
Standing Committee on Water Resources.

2. The Hon'ble Chairman then welcomed Shri Kumar Deepak Das, M.P., Rajya Sabha who attended the sitting of the Committee for the first time after his nomination to the Committee to serve as a member of the Committee. Thereafter, the Hon'ble Chairman welcomed the Secretary, Ministry of Water Resources as well as his colleagues to the sitting of the Committee and requested them to introduce themselves to the Committee.
3. After introduction, the representatives of the Ministry of Water Resources gave a detailed briefing on the different aspects of the subject 'Inter-Linking of Rivers' through a power-point presentation.
4. Thereafter, the Members of the Committee sought certain clarifications in brief on various aspects of the subject. The Secretary, Ministry of Water Resources and others replied to the queries raised by the Members.
5. A verbatim record of the proceedings of the Sitting of the Committee has been kept.

The Committee then adjourned.

**MINUTES OF THE FOURTH SITTING OF THE STANDING COMMITTEE ON WATER  
RESOURCES (2008-2009) HELD ON MONDAY, 20 OCTOBER 2008**

The Committee sat from 1500 hours to 1545 hours in Committee Room 'C', Ground Floor, Parliament House Annexe, New Delhi.

**PRESENT**

**Shri R. Sambasiva Rao – Chairman**

**MEMBERS**

**LOK SABHA**

2. Shri Bhanwar Singh Dangawas
3. Shri Bikram Keshari Deo
4. Shri Rajen Gohain
5. Shri Shankhlal Majhi
6. Shri Abu Ayes Mondal
7. Shri Lonappan Nambadan
8. Shri Harilal Madhavbhai Patel

**RAJYA SABHA**

9. Shri Kumar Deepak Das
10. Smt. Vasanthi Stanley

**SECRETARIAT**

1. Shri N.K. Sapra - Additional Secretary
2. Shri P.K. Grover - Joint Secretary
3. Shri P.V.L.N. Murthy - Deputy Secretary

At the outset, the Hon'ble Chairman welcomed the Members to the sitting of the Committee and briefed the Members on some important aspect of examination of the subject "Inter Linking of Rivers".

2. Thereafter, the Committee took up for consideration the following :

- (i) \*\*\*
- (ii) Draft Report on the subject "Inter Linking of Rivers".

After some discussion, the Committee adopted both the Reports without any amendment/modification.

3. The Committee then authorized the Chairman to have the above draft Reports finalized on the basis of factual verification from the Ministry of Water Resources and to present the same to both the Houses of Parliament.

The Committee then adjourned.