It does not rain on Rivers alone;
Rivers don't carry water alone.

The Mindlessness called River Linking Proposals

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South Asia Network on Dams, Rivers & People
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Index

GOVERNMENT OF INDIA RESOLUTION ON

CONSTITUTION OF THE TASK FORCE ON RIVER LINKING

RESOLUTION NO.2/21/2002-BM; MINISTRY OF WATER RESOURCES; New Delhi, the 13th Dec 2002

The Ministry of Water Resources (then known as Ministry of Irrigation) in the year 1980 formulated a National Perspective Plan for water resources development by transferring water from water surplus basins to water deficit basins/regions by inter-linking of rivers. The National Perspective Plan has two main components i.e. the Himalayan Rivers Development and Peninsular Rivers Development. The National Water Development Agency (NWDA) was set up as a Society under the Societies Registration Act, 1860 in 1982 to carry out the detailed studies and detailed surveys and investigations and to prepare feasibility reports of the links under the National Perspective Plan.

2. NWDA has, after carrying out detailed studies, identified 30 links for preparation of feasibility reports and has prepared feasibility reports of 6 such links. The various basin States have expressed divergent views about the studies and feasibility reports prepared by NWDA. With a view to bringing about a consensus among the States and provide guidance on norms of appraisal of individual projects and modalities for project funding etc. the Central Govt hereby sets up a Task Force.

3. The Task Force shall be as under:
i. Shri Suresh Prabhu, MP, Chairman; ii. Shri C.C. Patel, Vice-Chairman; and iii. Dr. C.D. Thatte, Member-Secretary.

4. In addition to the above members of the Task Force, part-time members will also be nominated in consultation with the Chairman of the Task Force and with the approval of the PM. These part-time members will be as under:
i. a member from water deficit States; ii. a person from water surplus States; iii. an economist; iv. a sociologist; and
v. a legal/world wildlife expert.

5. The terms of reference of the Task Force will be to:
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 may be involved in some project components.

6. The Task Force shall have its headquarters in New Delhi and shall meet as and when necessary.

7. The terms & conditions for Chair, Vice-Chair, Member-Secretary & other Members shall be decided in due course.

8. The milestone/time table for achieving the goal of inter-linking of rivers by the end of 2016 is as given at Annexure.

9. The financial provisions of the Task Force will be regulated as under:
1 All the capital and revenue expenditure required to be incurred by the Task Force shall be borne by the Central Government through the grants-in-aid to National Water Development Agency; and
2 National Water Development Agency will account for expenditure of the Task Force as a part of its establishment expenditure and would provide such other secretarial/ ministerial assistance as may be required. Audit of Controller General ofAccounts and Comptroller and Auditor General of India would be incident on such expenditure in the same manner as it would be on National Water Development Agency's other usual expenditure.
(VIJAY KUMAR, Deputy Secretary to the Government of India)

Annexure

Milestone dates/Time Table for interlinking of Rivers

(i) Notification of the Task Force	**16.12.2002**
(ii) Preparation of Action Plan-I, giving an outline of the time schedules for the completion of the feasibility studies, DPRs, estimated cost, implementation schedule, concrete benefits & advantages of the project, etc.	**30.04.2003**
(iii) Preparation of Action Plan-II, giving alternative options for funding and execution of the project as also the suggested methods for cost recovery.	**31.07.2003**
(iv) Meeting with the Chief Ministers to deliberate over the project and to elicit their cooperation.	**May/ June, 2003**
(v) Completion of Feasibility Studies (already in progress).	**31.12.2005**
(vi) Completion of Detailed Project Reports. (Preparation of DPRs will start simultaneously since FSs in respect of six river links have already been completed).	**31.12.2006**
(vii) Implementation of the Project (10 years).	**31.12.2016**

(http://wrmin.nic.in/interbasin/default8.htm)

IN THE SUPREME COURT OF INDIA

Record of Proceedings in Writ Petition (Civil) No. 512/2002 "IN RE: NETWORKING OF RIVERS" on 31/10/2002. Order by Hon'ble The chief of Justice, Hon'ble Mr. Justice Y. K. Sabharwal and Hon'ble Mr. Justice Arijut Pasayat. Amicus Curiae: Mr. Ranjit Kumar Sr.Adv. Respondent (s) from the Government of India and State Govts:

Pursuant to the notice issued by this Court to all the States and the Union Territories in relation to the inter-linking of the rivers, an affidavit has been filed by the Union of India and also by the State of TN. No other State or UT has filed any affidavit and the presumption, therefore, clearly is that they do not oppose the prayer made in this WP and it must be regarded that there is a consensus amongst all of them that there should be inter-linking of rivers in India.

In the counter affidavit filed on behalf of the Union of India, it has, inter alia, been stated that after Rao Committee's Report was received, the Govt of India has been studying and planning for inter-linking of rivers for over two decades. It is also mentioned in this affidavit that the Ministry of Water Resources had made a representation on 5th Oct 2002 before the Prime Minister on inter-linking of rivers and in that presentation the Dy. Prime Minister and other senior Ministers and officers were also present. It was suggested that a High Level Task Force can be formed which will go into the modalities for bringing consensus among the States. This affidavit further states that the presentation was also made to the President of India on 16th Oct 2002 which also shows interest of the President of India in this project and it is in view of his broadcast to the nation on the eve of the Independence Day where emphasis was laid on inter-linking of rivers that has given rise to the filing of the present petition.

Learned Attorney General states that High Powered Task Force, as referred in the Affidavit of the UoI, had not yet been formed and by the next date of hearing he should be in a position to inform this Court with regard to the formation of the said TF as well as the decision of the said Force. The UoI has accepted the concept of inter-linking of rivers and in the affidavit spelt out the benefits, which will annure, the entire project has been completed.

The State of TN is the only State, which has responded to the notice, issued by this court and filed an affidavit. The said State also supports inter-linking of the rivers and in its affidavit has prayed that a direction be issued on the Union of India for constituting a High Powered Committee in order to see that the project is completed in time schedule. Alongwith this affidavit the prospective plan for implementation of inter-basin water transfer proposals prepared by the National Water Development Agency in May 2000 has been placed on record. We are distressed to note that milestone for the perspective plan indicated in the report of the Agency shows that even though the Pre Feasibility Reports regarding the Peninsular & Himalayan projects are already completed, the completion of the link projects ultimately will be by the year 2035 in respect of Peninsular Links & 2043 regarding Himalayan Link Project.

It is difficult to appreciate that in this country with all the resources available to it, there will be a further delay of 43 years for completion of the project to which no States has any objection & whose necessity & desirability is recognised & acknowledged by the UoI. The project will not only give relief to the drought prone areas but will also be an effective flood control measure & would be a form of water harvesting which is being rightly propagated by the UoI & all the States.

Learned AG states that a more realistic view will be taken and a revised programme on completion would be drawn up and be presented to the Court. 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 & the same is nearing completion & inter-linking of the rivers is complimentary to the said Project & the water ways which are so constructed will be of immense benefit to the country as a whole.

The report of the NWDA refers to negotiations and signing of agreements. This aspect is also adverted to by the Union of India in its affidavit when it mentioned that consent of all the States affected by the Inter-linking of the rivers has to be obtained. Learned Attorney General would like to consider this aspect as it is contended by Mr. Ranjit Kumar that if a legislation under Entry 56 List I of the Constitution is made, the need for the consent would not arise & the Centre would be in a position to undertake the project & complete the same within a reasonable period of time.

It is not open to this Court to issue any direction to the Parliament to legislate but the AG submits that the Govt will consider this aspect and, if so advised, will bring an appropriate legislation. Mr. Ranjit Kumar, learned amicus has drawn our attention to River Board Act, 1956 which had been enacted by the Parliament. Learned AG would look into this in order to examine whether any further piece of legislation is necessary for bringing about inter-linking of rivers.

The parties are at liberty to file in Court any reports or papers containing studies in respect of the said project. To come up for further orders on 16th Dec 2002.

SC Order on 161202 In WP 512 of 2002 with WP 668 of 2002: Order: Learned AG has brought to our notice resolution dated 13.12.2002 passed by Ministry of Water Resources, Govt of India, inter alia, stating that

National Water Development Agency has, after carrying out detailed studies and investigations for preparation of feasibility reports identified 30 links and prepared feasibility reports of six such links. It also notices that various basin states have expressed divergent views about the studies and feasibility reports prepared by the said Agency and with a view to bringing out a consensus among the States and provide guidance on norms of appraisal of individual projects and modalities for project funding etc, the Central Govt has set up a Task force details whereof are given in paras 3 & 4 of the resolution. Para 5 sets out the terms of reference of the said Task Force and para 8 sets out the time table for achieving the goal of inter-linking of rivers by the end of 2016. Mr Ranjit Kumar, learned amicus curiae, prays for a short adjournment for filing response thereto. List on 20th January, 2003.

SC Order on 200103: In WP 512 of 2002: It would be expedient if the matter is adjourned by about 3 months so that the Court is in a position to know as to what progress has been made in the matter. List the matter in the 1st week of May 2003.
W.P. (C) 668/ 2002 To come up with W.P.(C) 512/2002.

SC remark on rivers linkage was only a suggestion
BANGALORE, Dec 7 (UNI): Former Chief Justice of India B N Kirpal today said that the Supreme Court observation on linking of rivers did not amount to policy intervention as it was only a "suggestion" made to the Union Government, which was free whether or not to act upon it. He was speaking at a two-day national round table on "Law, Economic Reforms and Liberalization". (SENTINEL 081202)

Readers may recall that the whole national debate and political rhetoric surrounding the issue of linking rivers started after the Supreme Court bench headed by the then Chief Justice B N Kirpal "suggested" on Oct 31, 2002 that govt may take up linking of the major rivers of India.

Relevant Extracts from the Speech of President of India On Aug 14 2002

"We also have many challenges in front of us. We have to find a solution to the repeated droughts and floods…

"Let us now look at a long-term problem. It is paradoxical to see floods in one part of our country while some other parts face drought. This drought - flood phenomenon is a recurring feature. The need of the hour is to have a water mission, which will enable availability of water to the fields, villages, towns and industries throughout the year, even while maintaining environmental purity. One major part of the water mission would be networking of our rivers. Technological and project management capabilities of our country can rise to the occasion and make this river networking a reality with long term planning and proper investment. In addition, the vast sea around us can help by providing potable water through desalination as a cost effective technology. There are of course short-term techniques such as water harvesting by revitalizing rural ponds, water recycling to water conservation. Such programmes should have a large-scale people participation even at the conceptual and project planning stages. The entire programme should revolve around economic viability leading to continued prosperity for our people with larger employment potential, environmental sustainability, grass root level motivation and benefit sharing."

ON SUPREME COURT ORDER ON LINKING RIVERS The Supreme Court has decreed that the rivers of India shall be linked within 10 years. The usual response "one does not know whether to laugh or to cry" would be inappropriate in this case, as one is not permitted to laugh at anything that the judges say except at their jokes if they make any; but presumably one is not precluded from crying in despair. An almost abandoned idea has been given fresh currency; a dubious idea has been given legitimacy; and a wild-goose chase has been not merely sanctioned but mandated… The SC direction is not at all a defensible instance of judicial activism. That apart, turning to the merits of the direction, one wishes that the learned judges had undertaken a more careful study of the subject before deciding to issue directions. Fortunately these are interim directions, and there is still time for a reconsideration of the matter. It is to be hoped that the Task Force that is to be set up as directed by the Supreme Court will consider not merely the 'modalities' of the 'linking of rivers' but also the soundness and wisdom of the idea. Any headlong rush in the pursuit of this chimera will be disastrous.

(From Shri Ramaswmay R Iyer's article *Linking of Rivers: Judicial Activism or Error?* in EPW 161102)

RIVER LINK IN PARLIAMENT

Following information is gathered from the various answers given in the Parliament over the last few years on the issue of rivers and river linking proposals relevant to current debate. This is with the hope that the information given in the Parliament must be authentic and accurate. The question number and date of question in respective houses of Parliament is given at the end of the section, the answers being given by the respective ministers of the time.

National Scene The average annual precipitation received in the country in the form of rainfall and snow is estimated to be of the order of 4000 km^3. Of this, the average annual run off in the various river basins is of the order of 1869 km^3. The utilisable quantum has been estimated as 690 km^3 for surface water and 432 km^3 for ground water, making total utilisable as 1122 km^3. Against this, the present utilisation is estimated at about 605 km^3. Balance water could be assumed to be flowing unutilised to the sea mainly in Ganga, Brahmaputra, Mahanadi, Godavari and Narmada.

NWDA Studies NWDA has completed 137 water balance studies of basins/sub-basins, 71 water balance studies at diversion points, 74 toposheet studies of storage reservoirs, 37 toposheet studies of link alignments and 31 pre-feasibility studies of links out of which 30 links have been identified for preparation of feasibility reports. Feasibility reports of five links have been completed. The total grants-in-aid released to NWDA till date is Rs 1.049 B. The link proposals envisage additional irrigation benefits of 35 M Ha.

A preliminary assessment indicates that it would be possible to make use of about 200-250 BCM of additional water by transferring water from surplus basins to water-short basins, which can in turn generate additional irrigation potential of about 35 M Ha (22 M Ha in Himalayan component and 13 M Ha in Peninsular component; 25 M Ha from surface waters and 10 M Ha by use of groundwater) and 34 000 MW of power (the last three figures as stated in GOI affidavit in Supreme Court in Oct 2002).

Tentative estimated cost of the proposed identified links of NPP is put at Rs 3300 B at 1995-6 price level and Rs 5600 B at 2002 price.

In National Water Development Agency studies, a minimum lean season flow of 10% of the total inflow at diversion structure after meeting downstream requirements is being provided to maintain the environmental and ecological needs of the river regime.

Ganga Basin The mean annual run off in river Ganga in India is estimated to be 501.6 BCM (it became 525 BCM in reply to question no 134 on 181102 in Lok Sabha). Some of the major tributaries of river Ganga are Ramganga, Yamuna, Tons, Gomati, Ghagra, Son, Gandak, Kosi and Mahananda. An assessment of the quantity of Water that can be utilised and the quantity that is being utilised has not been made separately for each tributary of Ganga. For the basin as whole, the quantity of water that can be utilised annually is estimated to be 250 BCM. During the year 2000, the utilisation was estimated to be 150.764 BCM for irrigation 7.9 BCM for domestic use and 5.87 BCM for industrial use.

Ganga Water for Rajasthan Govt of Rajasthan submitted a proposal in 1984 for diverting 1133 cusec of Ganga water ex-Hardwar and 566 cusec of Ganga water ex-Bijnor for 100 day during Monsoon. The study conducted by CWC to explore the possibilities to divert floodwaters of Ganga for use in Rajasthan revealed that sufficient water was not available in Ganga near these two places for more than 20-30 days in a year for diversion to Rajasthan.

There is no agreement to supply water to Rajasthan from river Ganga. Rajasthan is being supplied water from rivers Yamuna, Sutlej, Ravi & Beas as per different agreements. Rajasthan is not being supplied the allocated share of Yamuna water due to constraints of capacity of conveyance system, non-completion of new canal system in Haryana and Rajasthan and re-modelling of existing canal systems. Shortage in supply of water to the State from Ravi, Beas and Sutlej River is on account of less inflow in the rivers, reduced carrying capacity of Bikaner canal and lower available storage in the reservoirs.

Brahmaputra Ganga Link Through Bangladesh The Central Water Commission in 1982 had prepared a Feasibility Report on Jogighopa Barrage and Brahmaputra-Ganga Link Canal Project flowing through Bangladesh by gravity, as the first phase of development/augmentation of the

flows of the Ganga during dry season by diversion of Brahmaputra waters to the Ganga. The second phase of the proposal envisages creation of backup storages by construction of two dams on major northern tributaries of the Brahmaputra River, viz., Dihang & Subansiri. The proposal was placed before the Indo-Bangladesh Joint Rivers Commission. However, due to reservations expressed by the Government of the Peoples' Republic of Bangladesh, the proposal was not pursued further.

Manas Sankosh Teesta Ganga According to pre-feasibility studies carried out by NWDA, Manas-Sankosh-Teesta-Ganga (MSTG), Subernarekha-Mahanadi, Ganga-Damodar-Subernarekha and Farakka-Sunderbans links of National Perspective Plan envisage providing irrigation to an area of 1.11 M Ha W Bengal.

The field survey and investigations for techno-economic evaluation of the project are under progress. However, the survey and investigations in the 114 km reach of the link canal from Manas to Sankosh falling under Manas Tiger Reserve and 24 km from Sankosh to Teesta falling under Raidak reserve Forest, Buxa Tiger Reserve & Goburbasra Reserve Forest, could not be taken up due to denial of permission by the MoEF, Govt of India. As per the pre-feasibility report, the tentative estimated cost of link canal project is Rs 116.70 B at 1994-5 price level, which envisages Head Works, Canal System, Canal Power House and Navigation.

Since March 1997, the Centre has taken up the works of the geo-technical investigation comprising of field investigations and Laboratory tests for characterisation of foundations of structures for preparation of the report of Teesta-Ganga portion of MSTG link Canal. This Link Canal Project is found to be techno-economically viable as per pre-feasibility study done in 1994.

NWDA had prepared pre-feasibility report of MSTG Link for transferring the surplus flows of Manas and Sankosh rivers, tributaries of Brahmaputra River and intermediate rivers up to Teesta into the river Ganga upstream of Farakka. Part of this surplus water is proposed for augmentation of river Ganga to meet the lean water requirement of Calcutta Port. At present the above link project is at Survey and Investigation stage for preparation of feasibility report, which is programmed to be completed by the year 2003. MSTG Link Pre-feasibility Report provides for enroute irrigation to the extent of 0.65 M Ha.

Sarda Yamuna Rajasthan Link The NWDA has completed the pre-feasibility studies of Sarda-Yamuna Rajasthan link. As per the pre-feasibility report prepared by NWDA Yamuna-Rajasthan link envisages 0.24 M Ha of irrigation benefit to Rajasthan. Survey and investigation for preparation of DPR of the link has been taken up by NWDA and is programmed for completion by 2007.

Benefit to Karnataka Drought Areas The average annual surface water availability in the west flowing rivers from Tapi to Kanyakumari including the west flowing rivers of Karnataka and inter state-rivers has been assessed as 200.9 BCM by CWC. Owing to hilly terrain, most of the water of the rivers flows unused in the Arabian Sea. As per the study conducted by CWC, drought prone areas in the State of Karnataka has been assessed as 57 645.54 km^2. Under the Peninsular Component of the NPP, NWDA has a proposal of diversion of west flowing rivers to benefit the deficit/drought prone areas of Karnataka through the Bedti-Varda and Netravati-Hemavati Links. As per the pre-feasibility reports, the irrigation benefits to Karnataka from Bedti-Varda and Netravati-Hemavati links are 60 000 Ha and 34 000 Ha respectively.

Godavari Krishna Link As per Award of Godavari Water Disputes Tribunal, 80 TMC of Godavari water at 75% dependability can be diverted from Polavaram Project in to Krishna River above Vijawada anicut for projects upstream of Nagarjuna Sagar. Out of this, 35 TMC of water is for Maharashtra and Karnataka and balance 45 TMC is for Andhra Pradesh.

Mahanadi Godavari Krishna Pennar Cauvery Vaigai The Peninsular Component of the NPP envisages inter-linking of Mahanadi-Godavari-Krishna-Pennar-Cauvery-Vaigai. As per the water balance studies of various river basins of the peninsular Component conducted by NWDA, Mahanadi and Godavari river basins are surplus in water, whereas the river basins namely, Krishna, Pennar, Cauvery and Vaigai are deficit. It is, therefore, proposed to transfer the surplus water of Mahanadi which in turn will be receiving water from the Himalayan component and Godavari basins to Krishna basin by interlinking Mahanadi to Godavari and Godavari to Krishna. The water, thus received in Krishna basin is proposed to be transferred to Pennar, Cauvery and Vaigai basins.

Lok Sabha Questions (3/ 230701,134/ 191101, 3979/ 200801, 2098/ 080300, 2027/ 021202, 7 & 16/ 181102, 6893/ 130502, 1097/ 300701, 1241/ 261102, 1728 & 1760/ 030303)
Rajya Sabha Questions (217/ 031202, 350/ 170796, 1054/ 271101, 233/ 080800, 684/ 270201, 310/ 240701)

RIVER BASINS IN INDIA

- The entire country has been divided into twenty river basins
- Twelve major basins with area exceeding 20 000 sq km each
- Eight composite river basins combining suitably the remaining medium and small river systems for the purpose of planning and development.

India's Macro Water Scene

	Particulars	**All India figures**	**Peninsular Rivers**
1	Annual flow in the river systems of India	1869 BCM	584
2	Utilisable comprising	1122 BCM	
3	Surface water	690 BCM	325
3A	Live storage by small dams	3 BCM **Hugely underestimated**	
3B	Live storage from future small dams	**NOT ESTIMATED**	
3C	Live storage capacity by large dams up to 1995	176.73 BCM	105.81
3D	Live storage from dams under construction	75.42 BCM	50.51
3E	Dams under formulation/ consideration to create	132.32 BCM	25.57
4	Replenishable Ground water	432 BCM	
4A	Developed from replenishable groundwater	154 BCM	

The assessment of water utilization

1	Utilization of water for different purposes	605 BCM
2	Utilization for irrigation	501 BCM
3	Ultimate Irrigation Potential	140 M Ha
4	Irrigation potential has been created by 1999-2000 through plan investment	95 M Ha
5	Investment through plan for creation of irrigation potential	Rs 500 B

In Indus, Krishna, Cauvery, Mahi and Sabarmati river basins over 80% of utilizable flow is already being used.

Taking into consideration the population of the country (as per 1991 census) the average per capita availability below certain limit (around 750) CM is considered as scarcity condition. Based on this criteria, 6 River Basins, namely Cauvery, Pennar, Sabarmati, East flowing rivers between Mahanadi & Godavari, East flowing rivers between Pennar and Kanyakumari & West flowing rivers of Kutch and Saurashtra including Luni fall in water scarcity category.

MAJOR RIVER BASINS (BCM)

SN	River Basin	Important rivers of the Basin	Catchment Area M Ha	Average annual water availability (BCM)	Live storage capacity of Large dams completed 1995 (BCM)	Per Capita Water Availability (CM)
1	Indus	Sutlej, Beas, Rabi, Chenab, Jhelum	32.13	73.31	13.83	1749
2a	Ganga	Yamuna, Chambal, Betwa, Ken, Son, Ramganga, Ghagra, Gandak, Kosi	86.15	525.02	36.84	1471
2-b	Brahmaputra & Barak	Subansiri, Bhorelli, Manas, Buri, Dehang, Dhansiri, Kopili, Tista, Jaldhaka, Torsa, Gumti, Muhari, Fenny, Karna-Phulli, Kaladan, Imphal, Tuxu, Nantaleik	23.61	585.6	1.10	16589
3	Brahmani	Karo, Sankh, Tikra, Baitarni, Salandi, Matai	5.18	28.48	4.76	2915
4	Mahanadi	Seonath, Jonk, Hasdeo, Mand, Ib, Tel	14.16	66.88	8.49	2513
5	Godavari	Parvara, Purna, Manjra, Pranhita, Indravati, Sabri	31.28	110.54	19.51	2048
6	Krishna	Ghatprabha, Malprabha, Bhima, Tungbhadra, Musi	25.89	78.12	34.48	1285
7	Pennar	Jayamangli, Kunderu, Shgileru, Chitravati, Papagni, Cheyyeru	5.52	6.32	0.38	651
8	Cauvery	Harangi, Hemavathi, Arkavathi, Simsha, Lakshmnathirtha, Kabbani, Suvarnavati, Bhavani, Noyil, Amravathi	8.12	21.36	7.43	728
9	Tapi	Bhokar, Suki, Mor, Harki, Manki, Guli, Aneri, Arunavati, Gomai, Gomati, Valer, Purna, Bhogvati, Vaghur, Girna, Bori, Panjhra, Buray, Amravati, Shiva, Ranagavati, Nesu	6.51	14.88	8.53	1007
10	Narmada	Burhner, Banjar, Sher, Shakkar, Sudhi, Tawa, Ganjal, Chotta, Kundi, Goi, Karjan, Hiran, Tendoni, Kolar, Man, Uri, Hatni, Orsang	9.88	45.64	6.60	3109
11	Mahi	Som, Anas, Panam	3.48	11.02	4.76	1052
12	Sabarmati	Sei, Wakal, Harnav, Hathmati, Watrak	2.17	1.35	3.81	360

COMPOSITE RIVER BASINS

SN	River Basin	Important rivers of the Basin	Catchment Area M Ha	Average annual water Availability (BCM)	Live storage capacity of large dams completed 1995 (BCM)	Per Capita Water Availability (CM)
1	Subarnrekha	Kanchi, Karkari, Kharkai	2.92	12.37	0.66	1307
2	W Flowing rivers of Kutch-Saurashtra including Luni	Shetrunji, Bhadar, Machhu, Rupen, Saraswati, Banas	32.19	15.1	4.31	683
3	W flowing rivers from Tadri to Kanyakumari	Kodiyar, Pamba, Periyar, Chaliyar	5.62	113.51	10.24	3480
4	West flowing river from Tapi to Tadri	Netravati, Sahrawati, Kalindi Mandori, Savitri, Ulhas, Vaitarna, Ambika, Purna	5.29	87.41	7.10	3383
5	E flowing rivers: Mahanadi to Pannar	Rushikulya, Bahuda, Vamsadhara, Nagawali, Sarda, Tandara, Eluru	8.66	22.52	1.63	953
6	East Flowing Pennar-Kanyakumari	Kunteru, Swarnmukhi, Araniar, Kortalaiyar, Kanyakumari Cooum, Adyar, Palar, Gingi, Ponnaiyar, Vellar, Varshalei, Vaigai, Gundar, Vaippar, Tambarparni	10.01	16.46	1.42	366
7	Area of inland drain in Rajasthan	--	6	--	--	--
8	Minor river Basins draining into Bangladesh & Mayanmar	--	3.63	31	0.31	14629

(RS Questions 149/ 230797, 338/ 121200, 310/ 240701)

RIVER LINK: SOME BASIC INFORMATION

HISTORY

August 1980 A National Perspective for Water Development framed by the Ministry of Water Resources

July 1982 National Water Development Agency set up to carry out detailed studies in the context of National Perspective

Sept 1999 Report of the NCIWRDP

Oct 31, 2002 Supreme Court order suggesting inter-linking of major rivers

Nov 2002 Govt announces that feasibility studies for six of the peninsular link proposals are ready.

Dec 16 2002 Govt appoints a task force under the chairmanship of Suresh Prabhu

Dec 7 2002 Justice (Retd) B N Kirpal clarifies that the Supreme Court observation on linking of rivers was only a suggestion.

The proposal The National Perspective Plan for inter linking of Indian rivers has been divided in two components. (i) Peninsular Rivers Development and (ii) Himalayan Rivers Development Component.

Under the Peninsular Rivers Development Component, NWDA has completed the Water Balance Studies of 137 basins / sub-basins and 52 diversion points, 58 Reservoir Studies and 18 Toposheet Studies of link alignments.

Under the Himalayan Rivers Development Component, the Water Balance Studies at 19 diversion points, Toposheet studies of 16 Reservoirs, and Toposheet Studies of 19 link alignments have been completed.

Pre-feasibility studies of 30 link schemes have been completed. Further, the Feasibility Reports of 6 links under Peninsular Component have also been completed. Field Surveys & investigations of another 18 links are under progress. It is planned to complete Feasibility Reports of all the identified links under Peninsular Component by 2004 and Himalayan Component by 2008 as per the current mandate of NWDA. (PIB PR 051002)

Proposed Links Under Study

Peninsular Component

1. Mahanadi (Manibhadra)– Godavari (d/s)
2. Godavari (Inchampalli) – Krishna (Nagarjunsagar)
3. Godavari (Inchampalli Low Dam) – Krishna (Nagarjunsagar Tail Pond)
4. Godavari (Polavaram) – Krishna (Vijaywada)
5. Krishna (Almatti) – Pennar
6. Krishna (Srisilam) – Pennar
7. Krishna (Nagarjunsagar) – Pennar (Somasila)
8. Pennar (Somasila) – Cauvery (Grand Anicut)
9. Cauvery (Kattalai) – Vaigai – Gundar
10. Ken – Betwa
11. Parbati – Kalisindh – Chambal
12. Par – Tapi – Narmada
13. Damanganga – Pinjal
14. Bedti – Varda
15. Netravati – Hemavati
16. Pamba – Achankovil – Vaippar

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. Brahmputra – Ganga (MSTG)
11. Brahmputra – Ganga (JTF) (ALT)
12. Farakka – Sunderbans
13. Ganga – Damodar – Subernrekha
14. Subernrekha – Mahanadi

(NCIWRDP: p. 180-6)

Govt's *blue ribbon* commission is sceptical about River Link Proposals

The National Commission for Integrated Water Resources Development Plan (NCIWRDP), set up by the Govt of India and which the then Union Minister claimed was a "blue ribbon commission, has been quite sceptical about the river link proposals. Shockingly, the commission was not given basic information about the Himalayan component. Let us see what the commission had to say about the various link proposals.

About the KL Rao proposal, the NCIWRDP said on p. 179 of its report dated Sept 1999, "Later, detailed examination showed that the proposal was very costly and lower cost alternatives were available."

About the garland canal of Captain Dastur, an air pilot having no experience in water resources development, the NCIWRDP said, "His scheme was *prime facie* impractical".

About the current river link proposals being perused by NWDA and the govt, the NCIWRDP says:

- "No Socio economic criteria appear to have been laid down for evaluating the proposals". (p. 181)
- **Classified data!** "Unfortunately, the Himalayan component data being classified, were not available for analysis." (p. 187) So the data was not made available even to a commission appointed by the Union govt! Can one imagine greater data paranoia of our water resources establishment? What were they afraid, except fear of exposure by some friendly scrutiny?
- "Inter basin transfer involves storage of water, construction of canals and numerous major cross drainage works which may result in water logging and other environmental impacts **more adverse than the normal water resources projects**." (Emphasis supplied.) (p. 197)
- However, looking at the available information, the NCIWRDP said (p. 187-8), "The storages and links involved are of very large sizes and lengths; and the costs of construction and environmental problems would be enormous… For Thar desert area, it would perhaps be desirable to promote and zone low density tree cover as far as possible…On the basis of published information, the Commission is of the view that the Himalayan component would require more detailed study using system analysis techniques. Actual implementation is unlikely to be undertaken in the immediate coming decades".

East flowing rivers Nine links (see the table on next page for details) are proposed for interlinking east flowing Peninsular rivers. These linkages involve construction of five dams and nine link canals. The head works will submerge 0.25 M Ha and require rehabilitation of more than 0.5 M people. The links will require concurrence between the concerned states.

- After examining the six east flowing rivers, namely Mahanadi, Krishna, Godavari, Cauvery, Vaigai and Pennar, the NCIWRDP concludes (p. 192), "**Thus, there seems to be no imperative necessity for massive water transfers.** The assessed needs of the basins could be met from full development and efficient utilisation of intra-basin resources except in the case of Cauvery and Vaigai basins." (Emphasis supplied.) Even the shortages in the Cauvery and Vaigai basins are just 5% and 8% even after increasing the present irrigated areas to 1.4 times in case of Cauvery and 1.6 times in case of Vaigai!
- About the NWDA claim that Godavari and Mahanadi being water surplus, NCIWRDP make it clear "It may be pointed out that Orissa and Andhra Pradesh have claimed that all the waters of Mahanadi and Godavari could be utilised within the basins and that there are no surpluses."

Par-Tapi-Narmada Link NCIWRDP says, "The link consists of seven reservoirs on these rivers and a 400 km long link canal connecting these reservoirs and carrying the water through Ukai reservoir and to the target command areas north of Narmada. **Taking the entire system, the cost of water delivered is high and can hardly be borne by the farmers at prevailing agricultural prices.** The irrigation rates may have to be very heavily subsidised which is not in conformity with current thinking. It is felt that these links should be deferred". (Emphasis supplied.)

Damanganga-Pinjal Link Project This water is to be supplied for domestic and industrial use for Mumbai. It involves construction of a dam across Pinjal River, a tributary of Vaitarna River. The link involves inter state issues between Gujarat and Maharashtra.

Pamba – Achankovil- Vaippar This link proposal envisages diversion of 634 Mm3 from the Pamba and Achankovil river basins in Kerala to Vaippar basin in Tamil Nadu for irrigation of 91 000 Ha in TN, generation of 500 MW through Pump Storage scheme and regulated releases of 150 Mm3. The scheme involves interstate problems. **Kerala govt, however, rejected the report of the NWDA.** Kerala Chief Minister, while replying to questions in the state assembly on 16th Feb, 1999, said the State had questioned the credibility of the NWDA study team, the report of which had been submitted for consideration to the technical advisory committee. He added that the Centre for Water Resources and Management had examined the matter and reported that Pamba and Achankovil do not have surplus water. [1]

Netravati – Hemavati This is for diversion of water from the west flowing Netravati into the East flowing Hemavati (Cauvery basin) to irrigate 33 813 Ha in Hemavati Dam canal. "The cost is rather high due to requirement of lift," says NCIWRDP.

Bedti-Varda The proposed link envisages transfer of water from the west flowing Bedti river to the Tungbhadra river, a tributary of east flowing Krishna, both within Karnataka.

Southern Tributaries of Yamuna

Ken-Betwa This proposed link envisages diversion of water from Ken Basin to Betwa basin. A 73.3 m high dam is proposed on Ken river at Daudhan with gross storage capacity of 2 775 Mm3. The total length of the link canal is 231.45 km. Two powerhouses with 60 MW and 12 MW capacities are also planned.

Kalisindh-Chambal This proposed link envisages transfer of water from Newaj river (a sub-tributary of Kalisindh river) and from Kalisindh river (a tributary of Chambal river) to Chambal river upstream of existing Gandhi Sagar/ Ranapratap Sagar reservoirs for irrigation use. This is not an inter-basin transfer.

[1] BUSINESS LINE 170299

Details of Proposed Links
For East Flowing Peninsular Rivers

SN	Name of the link	Connecting Rivers		FSL at		Length	Discharge	Annual Volume Transfer	Enroute Irrigation Vol. Mm^3	Losses
				Head	Tail					
				m	m	Km	M^3/Sec	Mm^3	Area ha.	Mm^3
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	Manibhadra to	Mahanadi	Godavari	74	13.81	392	687	11 176	3 854	822
	Dowlaiswaram							6 500	4 54 229	
2	Inchampalli to	Godavari	Krishna	142	182.77	299	1 219	16 426	1 850	376
	Nagarjunsagar							14 200	3 19 708	
3	Ichampalli to	Godavari	Krishna	106.68	69.68	270	263	4 371	4 221	150
	Pulichintala							-	6 94 882	
4	Polavaram to	Godavari	Krishna	40.232	27.965	174	361	4 903	1 448	150
	Viajaywada							3 305	1 48 418	
5	Almatti -	Krishna	Pennar	510	434.4	564	208.12	1 980	1 778	202
	Pennar							-	2 34 589	
6	Srisallam –	Krishna	Pennar	268.15	156.51	171.3	186	2 310	-	215
	Pennar							2 095		
7	Nagarjunsagar –	Krishna	Pennar	151.67	102.63	394	555	12 146	3 166	332
	Somasila							8 648	5 60 606	
8	Somasila –	Pennar	Cauvery	91.96	59.7	538	616.4	8 565	3 170	385
	Grand Anicut							3 855	4 91 200	
9	Kattalai Regulator -	Cauvery	Vaigai	100.75	78.865	250	174.14	2 252	2 007	136
	Vaigal-Gundar						29.88	-	3 53 337	

Note: (1) In col. 9, the upper figure indicates the gross diversion while the lower gives the quantity recharging the recipient river
The difference is accounted for the enroute irrigation and losses.

(2) In col. 10, the upper figures are volume used enroute and the lower figures are area-irrigated enroute.

Let's have our feet on Ground, Mr Prabhu

Indian govt and water resources establishment must go down in history as one of the most rare examples of its kind in the history for deciding the completion date of a project whose feasibility is still not known. Pause for a moment and consider the absurdity of it all: the Prime Minister, The President, the Chief Justice, the Deputy Prime Minister, the Water Resources Minister and the like are all swearing that the project will be completed by 2016 and at the same time informing everyone that only a fifth of the feasibility reports are ready!

Here is an article based a letter sent to Mr Suresh Prabhu, Chairman of the Task force on River Linking following a meeting with him on March 10, explaining why River Linking is such a mindless scheme. Reply from him is still awaited. Another letter, requesting him to make all the pre-feasibility and feasibility reports completed so far for the proposed river links has also been sent. This is minimum Mr Prabhu can do to create an informed debate on what the govt is proposing under the river linking plans. No reply to that letter either. Readers who agree may also write to him, also referring to the Freedom of Information Act 2002 passed by the Parliament.

Ever since Mr Suresh Prabhu was appointed as Chairman of the Task Force on River Linking on Dec 16, 2002, he has emerged as a forceful proponent of completing the river linking task as soon as possible without really admitting that the project is yet to be declared feasible. To his credit, though it must be stated that he clarified that if he finds certain of the proposed links not feasible, he will not recommend implementation of such links. While meeting this author, he went to the extent of saying that if he finds that none of the links are feasible or optimum solutions, he will say so, and resign from his job.

The trouble, though is that very fact that the govt has suddenly decided to go ahead with the project on a misguided suggestion from the Supreme Court raises too many questions if Mr Prabhu can or will be able to see the issues on merit, keeping the feet firmly on ground. Here are the main issues that were pointed out to Mr Prabhu during a recent meeting to show how river linking is not a good idea.

1. RAIN WATER HARVESTING To the best of our knowledge, the govt has not done assessment of rainwater harvesting potential for a single basin or sub basin of the country. Without realising such potential, beginning from the village level and going up in terms of larger area, would it make sense to go in for long distance transfer of water through river links?

Someone may ask, what is stopping anyone from rainwater harvesting? Well, the state, the govt is. The govt has told everyone that water is govt business and in fact when communities try and take up local projects, there have been many instances, including one in Alwar where the govt sent them show cause notices. Besides, it would be quite irrational, to put it most charitably, to go for long distance transfer when we have not assessed or realised local water potential.

2. Information or up keep of existing local water systems As *Dying Wisdom* and a number of other reports have shown, India has a large network and variety of local water structures and systems. We neither have a credible database to show magnitude or state of these systems. Nor are there confidence-inspiring systems for maintenance of such systems. All available evidence shows that the systems are generally in very bad shape except where communities have maintained the systems.

3. Existing Irrigation Infrastructure India has the largest irrigation infrastructure in the world. And as repeated reports from the World Bank and even our own water resources establishment has shown, this system is in very bad state. It is hardly performing anywhere near optimum levels. The irrigation efficiencies are notoriously low at around 35% at best. As mid term of review of 9th Plan made it clear, even 10% increase in irrigation efficiency could lead to additional irrigation potential of 14 M Ha. That would still be far from the optimum possible efficiency. Should we not be attempting this on priority basis?

It is true that at some places the water lost performs useful function of groundwater recharge. However, firstly, that is not true everywhere. In fact, at large number of places, such recharge is causing water logging. At last count, water logged and salinised lands thus under producing is around 13 M ha. In any case, there are no known studies to show as to which places is such groundwater recharge is really useful. Moreover, if groundwater recharge is really the objective, than we can have more cost effective ways of achieving that without going for big dams and long distance water transfers. As Planning Commission and other bodies have repeatedly said, we do not have resources for proper upkeep of these systems. In fact, in spite of additional investment of hundreds of crores, the area irrigated by canals is actually decreasing in a

number of states, AP and TN are just two cases documented by the World Bank.

When we do not have resources for maintaining existing infrastructure to get optimum outputs from them, does it make sense to allocate scarce resources for more expensive schemes?

4. Silting of Existing Reservoirs India has built some 3600 Major and Medium water projects. These are all silting up at much faster way then what was planned or what we would like. We are unable to arrest the siltation of existing reservoirs. Should we not be allotting additional resources for arresting the siltation rates instead of creating more reservoir capacities at much higher expenses?

5. FOOD PRODUCTION AND MANAGEMENT One of the arguments that have been put up in support for river links is that we need to increase our food production to 450 MT by 2050. [That figure needs some scrutiny, but we can take that up later.] Please pause for a moment and look at the present scenario where while on the one hand our godowns are overflowing, there are millions who do not have money to even purchase their share of PDS or antyodaya entitlements. This is direct result of perusing the mega project policies where you create islands of productivity and hope that such increased production will take care of the needs of the whole country. As we all know, about two thirds of India still stays in rural area and mostly depend on agriculture. Every farm, every farmer would benefit from better water management. The "islands of productivity" model has in fact lead to neglect of vast majority, who do not have adequate employment and hence capacity to purchase their food or other needs. As against that, in areas like Alwar where people have done rainwater harvesting over large areas not only out migration has stopped, some of the people who migrated earlier have returned back. The point here that is being stressed is that river-linking attempt is essentially an extension of earlier model that has clearly failed, and we need a different kind of policies & programmes.

Moreover, while our godowns are overflowing in a drought year on the one hand and in states like Punjab there is active state subsidised attempt to wean away farmers from growing foodgrains on the other hand, when there hare huge gaps between what is optimum or maximum feasible productivity either on rain-fed or irrigated lands, does it make sense to go in for such projects saying that we need more food production?

6. SUBSIDISED SUGAR EXPORTS One of the pillars of arguments in favour of river links is that we need more water for irrigation and agriculture. Even as this argument is being parroted, our godowns are glut with excess sugar and we are in fact subsidising export of sugar on the one hand and trying to find ways to increase sugarcane/ sugar consumption on the other hand. As Mr Prabhu comes from a major sugar producing state that consumes most of its irrigation water for sugarcane, he surely knows how much water sugarcane consumes and how the state is subsidising the water export in the process? Is such (mis-)use or indirect export of water justified? In such a scene are we proposing river links for more of the same results?

7. Drought proofing? Another pillar of river link proposition is that it will drought proof the country. The trouble with this piece of argument is that it ignores the past experience. As a recent CAG report has shown, in reality, after 50 years of dam building, the drought prone areas in the country has gone up! On the other hand, now we have before us hundreds of cases across the country that show that the real solution to drought problem is watershed development and local water systems. Three years back, when country was facing one of the worst drought of 20th century, when the Prime Minister was making appeals to the nation to come to the rescue of drought areas like Gujarat & Rajasthan, there were villages in those drought prone areas that did not have water shortage or other drought related problems because they had done their rainwater harvesting over an extended period of time. We do not need more of mega structures if we are *really* concerned about drought.

8. Flood Protection? Would the flood prone areas get protection from river links? After five decades of structural attempts at flood protection we today have more annual average flood damages or more annual flood casualties. Secondly, even in a few dams where there is flood cushion provided, the same is not being used for flood protection as the increased power generation or irrigation or water supply requirements take precedence over flood protection designs. There are many instances of dams, which in fact have caused greater damage in downstream areas due to sudden release of large quantity of water.

Moreover, as more than one former secretary of water resources ministry has said, the river link is not likely to provide flood protection because the quantum of water that it will transfer is too small as compared to the flood flows in rivers like Ganga or Brahmaputra in monsoon, when the water transfer is expected to be affected. Moreover, it may be worthwhile to note that while Ganga and Brahmaputra are in floods, the recipient basins are also likely to be flooded in most cases.

9. Drinking water needs? Do we need river link for our drinking water requirements? I doubt even the most die hard supporter of the proposal would suggest that if local water resources are properly developed and managed, any area of the country really require such schemes for drinking water needs. If local water resources are destroyed and polluted and when unjustified needs are given free rein as in case, for

example in Delhi, then there are some vested interests who may in fact go to the extent of saying that we need river links to take care of even drinking water requirements!

10. Hydropower? One of the figures thrown around by the proponents of river links schemes is 30 000 MW which sometimes becomes 34 000 MW as power generation potential of river link proposal. The trouble with this figure is that it is hardly credible in view of the fact that most of the links are in fact going to *require* huge amounts of power to lift water across natural barriers like ridges that the links will have to traverse. But more pertinently, Mr Prabhu having been a Power Minister knows very well the state of our power scene. There is so much theft, supply side inefficiencies, transmission and distribution losses, end use inefficiencies and so on. While need for more hydropower capacities is being promoted in the name of greater peaking capacities, there is absolutely no attempt to manage the peak or even to assure that the existing hydro capacities are used as peaking stations and not as base load stations. Nor is there adequate attempt to go for generation options other than big dams. Here it won't help to just brush aside this argument saying that if DSM does not work we have to go for supply side options. If DSM has 35% potential, as Mr Prabhu rightly says, we must ask how can we tap this potential through some honest efforts.

11. Financing resources? According to 10th five-year plan, there are today 159 major, 242 medium and 89 ERM projects ongoing from the previous plans, some of them right from 2nd plan onwards. Those projects require over Rs 80 000 crores even by the most conservative estimates. We do not have resources to complete the projects and even the 10th plan envisages completing only a fraction of these projects! As mentioned earlier, we are unable to allocate enough resources for maintenance of existing irrigation capacities. Mr Prabhu, you were right in saying that our govt behaves like an emperor who keeps losing old territories even as he tries to acquire new ones. But saying that is enough, you will agree. The point here is that while we do not have financial resources for all this and for our minimum requirements, can we think of setting up restaurants on Mount Everest, even if the cost benefit analysis were to show, but some magic that our economists and consultants are expert at, that it would indeed be beneficial?

One of the ways Mr Prabhu plans to raise finances is by attracting private investment in the 34 000 MW hydropower component of the river link schemes. However, if we look at the experience of Power Ministry in this regard till date, one would be surprised if Mr Prabhu would be too hopeful about this. As a matter of fact, towards the end of his tenure as Power Minister, Mr Prabhu had been publicly saying that it was wrong to expect any private investment in generation projects until we put our house in order in the power sector.

12. Navigation Benefits? Another benefit that has been putting forward in support of river link proposal is navigation benefits. Here one would like to draw your attention to the fact that a number of large dam projects in India have been doing exactly opposite: destruction of existing navigational benefits of rivers. One such destruction occurring right now is the destruction of navigational benefits in Narmada river in Bharuch area by the construction of Sardar Sarovar Dam in Gujarat. In fact, we do not even know (it is doubtful anyone has studied this) in how many river basins the large dams have already destroyed the available navigational benefits. Such benefits or their destruction do not even figure in cost benefit analysis of big dam projects.

13. Polluted Rivers Another issue that should cause considerable concern is the polluted state of our rivers, some of them being to the extent of being called toxic streams. In such cases, would it help linking such toxic streams with other not so toxic rivers? Pollution is in fact taking away the availability of fresh water in a number of areas from the hands of the people.

14. National Commission The only National Commission on Integrated Water Resources Development Plan (NCIWRDP) that Govt of India set up had assessment of river link option as one of its express terms of reference. That commission, in spite of many shortcomings in its functioning, in the report it submitted in Sept 1999 has been far from enthusiastic about river linking necessity even for our needs upto the year 2050. One is not sure what is Mr Prabhu's source of assessment that India would need 1441 BCM of water by 2050, but that National Commission, after looking at all the possible population and demand scenarios, have said that the higher level of projection of water requirement for 2050 is 1180 BCM, assuming the population of India would be 1581 M by then. In fact the population and demands are likely to be lower than that. We need to establish not only the need for such a proposal, but in fact the whole planning and decision making process has to be participatory, transparent to show that the selected option is indeed the least cost option for the society before we start considering the implications of any proposal.

One of the first useful steps that the govt can take is to make all the available information, studies and reports on river link proposals immediately public. That may help people see the reality of these projects. Based on this information the people can engage in a informed dialogue on this issue. One hopes, in the meantime the govt does not take steps that would destroy our rivers, else the generations to come would not forgive those who initiate steps in that direction.

Himanshu Thakkar March 14 2003

RIVER LINK NEWS

HOW OPPOSITION IS MOUNTING

Karnataka farmers oppose

Farmers in the Dakshina Kannada district of Karnataka has come out strongly against the govt's plan to interfere with the natural course of rivers. As a part of its plan to inter-link rivers across the state the govt intends to turn the Nethravathi eastwards and change the course of a few other westward flowing rivers. Framers dependent on the Nethravathi have also begun to feel that the entire project would deprive them of the water of a river that has been flowing through this region for centuries and has been the main source of sustenance for thousands of families. (BUSINESS LINE 121202)

Disaster in the making

This scheme has been subjected to severe criticism since the days of the irrigation commission of British Govt and elaborate plans like Captain Dastur's "Garland Canal" was out rightly rejected quite long ago. Inter-linking of rivers was summarily rejected by the Centre in 1990 accepting the advice of then secretary water resources M S Reddy and array of other experts. A mammoth project to link the peninsular rivers will engender a human catastrophe of an unparalleled magnitude. It will be an utter disaster for the reason when there is substantial water if we care to utilise it frugally and carefully, there is never enough if our sole mode is to use as much as possible and the factors responsible for the Cauvery crisis is traceable to the latter practice. In the disastrous Sardar Sarovar Project lakhs of landholders had to lose their lands due to the network of canals. Of these 23 500 will lose upwards of 25% of their land, with 2000 losing all their lands. Not one these households are considered project affected and eligible for rehabilitation. Linking of all major rivers is tantamount to rejection of the decentralised water systems, which can meet legitimate requirements at cheaper costs. (NEWSTIME 271202)

SC on Dec 16 The Centre has submitted an action plan in the Supreme Court stating that it complete the proposed inter-linking of major rivers by the end of 2016. The plan was placed on 16th Dec. before the three-judge bench headed by Chief Justice, G B Pattanaik, by the Attorney General. He also informed the Bench of the constitution of a task force for the purpose. Suresh Prabhu would head the task force as chairman while C C Patel would be the vice-chairman and C D Thatte would be the member secretary. Recording this, the Bench adjourned the proceedings. This was following the SC order of Oct 31 2002. (THE HINDU & INDIAN EXPRESS 181202, DRP 0203)

Not possible: Chhatisgarh

The water resource minister of Chhattisgarh has said that inter-linking of rivers is not an easy task. The states like Uttaranchal, Uttar Pradesh, Bihar and others are not agreed on this project, he revealed after attending the national conference of water resource and irrigation ministers. He said that if all states were agreed then Forest Conservation Act would be violated and hence the Inter-linking of rivers is not possible. He said that if the states like Chhattisgarh and Orissa are not agreed on a small issue of Indravati River since many years, then how can it possible, where many states are involved. (*RAJASTHAN PATRIKA* 081203)

Maharashtra, Kerala Oppose

Though interlinking of rivers is becoming an obsession with the govt, and even as the PM defended it at least two states spoke against the project at the 12th National Conference of Water Resources and Irrigation Ministers in Delhi. Maharashtra's Minister for Irrigation said "Prime Minister's ambitious project of interlinking of national rivers would not at all prove beneficial to Maharashtra". He asked the Centre to divert water from its westward bound rivers to Godavari and Tapi instead. Alleging that the National Water development Agency was planning to divert water from its territory to adjoining states, he asked the Centre to setup fresh Krishna water Disputes Tribunal. Kerala also urged the Centre not to go ahead with the Pampa-Achanakovil-Vypar link project as the state is already facing water shortage in this basin. Kerala would also oppose plans to link rivers originating from the Western Ghats as part of the Centre's ambitious interlinking project, state Irrigation Minister said. As far as Kerala was concerned, interlinking the Western Ghats rivers sounded "unscientific", he added. (THE INDIAN EXPRESS, HINDUSTAN TIMES, BUSINESS LINE 060203 & BUSINESS STANDARD 140203)

Step in Wrong Direction: Assam Expert

The noted Geographer and Head of Dept of Environmental Science, Guwahati University Dr D C Goswami said that the decision of the Central govt was nothing but a step in the wrong direction. The basic flaw in the basin linking proposal is that it has not cared to assess the water requirement status of the so called water surplus basins. Without doing all the exercises seriously it is really incomprehensible as to how they could identify the water surplus areas. According to

computer model of Brahmaputra, he said that the ground reality was such that in the so called excess areas like in Assam, there had been a gross underutilisation of water resources, which might have led to the assumption surplus water. (ASSAM TRIBUNE 100102)

Linking rivers can affect ecology, warns WWF

World Wildlife Fund director General Claude Martin has voiced reservation on the Centre's plan to interconnect rivers and warned that linking rivers like pipelines without looking at the ecological impact could lead to serious repercussions. Dr Martin said a river is an ecosystem and one cannot think of connecting them like pipelines. Doing so could lead to rivers getting dried up or getting filled up with slick and sand. Stating that such engineering solutions are basically flawed, he said a river is more than just water; there is a lot of biodiversity in it for it sustains the livelihood of all species living in and around it. He said that the concept of integrated river basin management had emerged at Johannesburg conference. (THE HINDUSTAN TIMES 100203, *RASHTRIYA SAHARA* 110203)

Better Options available: Bihar

The water resource minister of Bihar has suggested that the Centre should link the tributaries of major rivers rather than linking large rivers. He claimed that tributaries could be linked within 20% expense of total estimated cost for inter-linking project and 80% problems could be solved. (*DAINIK HINDUSTAN* 240103)

Sub-groups to undertake preliminary studies The first meeting of the task Force on Interlinking of Rivers appointed five sub-groups to study various aspects of the issue. The five sub-groups will study the economic viability, social issues, ecology, engineering and international dimensions. The Indian Institute of Management, Ahmedabad will be an adviser to the task force on organisational structure for implementation of the project. ICICI bank chief K V Kamath has been appointed the head of the sub-group to recommend the financing structure for the project. (THE HINDU 070103, BUSINESS STANDARD 100103)

Assam won't allow River Linking

The Central govt's plan to interlink the rivers, including the Brahmaputra, is poised to snowball into a major controversy in Assam with the Assam Gana Parishad and other regional parties opposing the move, terming it a deep-rooted conspiracy to deprive the people of the State their due share of water. AGP president Brindaban Goswami said "when the Centre constituted Task force, the drought in some states was given priority over Assam's annual scourge" and cautioned, "it was necessary to find out what impact it would have on Assam". He said that there is enough reason to believe that the interlinking of the rivers is aimed at supplying excess water to the dry states by depriving states like Assam. The All Assam Students' Union and Asom Jatiyabadi Yuva Chhatra Parishad too have expressed opposition to the proposal. (SENTINEL 300103, THE INDIAN EXPRESS 310103)

W Bengal says 'No'

W Bengal Irrigation Minister has written a letter to central water Resources Minister, protesting against inter-linking rivers, stating that the said project will pose a "potential threat" to W Bengal. He has sent a report with the letter stating that the Ganga basin is the largest river basin in the country, and since W Bengal is located at the "tail end" of the basin, it is a "deficit state". (THE STATESMAN 230103)

Private role in river linking: Agenda Exposed?

The Chairman of the task force of river linking has called upon the private sector to participate in the linking rivers across the country. He said the private sector could boost hydro electricity generation, navigation as well as irrigation projects by the participating in this project. The private sector companies can also form user forums and even supply water for these projects. He also mentioned that the govt would not approach any international funding agency to finance the projects. He claimed that the total resource required would be less than 1% of the GDP per year. (BUSINESS LINE 120203)

Securing budget is a pipe dream

The NWDA budgets the entire project at Rs 5600 B ($112 B) at 2002 prices. But Mr Prabhu himself says it could go up to $200 B. The Himalayan component of this plan would cost Rs 3750 B and the peninsular part, Rs 1850 B. Where is the investible capital of this magnitude available in the domestic economy? The only option would be funds from international sources. Apart from the fact that this would place a debt of about $112 on every Indian (where average annual income is $400-$800), it also raises question about how this loan is to be returned. Moreover, annual interest on this amount would range between Rs 200 B and Rs 300 B. (NEWSTIME 271102, THE HINDU 020203)

Govt's Double Talk

Deputy PM has said, "On the one hand, most of the rainwater flows into the sea without being harnessed; on the other, groundwater is depleting due to its over extraction. Proper harvesting of rainwater could solve domestic and agricultural water needs. RIGHT, Mr Advani. Why then, at the same meeting, of all places on rural water supply, you also advocated, "garland of rivers"? Its clearly not confusion that is leading to this double talk? (THE HINDU 061202)

Famine of Good Deeds and Ideas

Amidst the complete anarchy, the govt even formulated a water policy. The very officials who prepared the water policy, are today engaged in figuring out the most costly, bizarre, and impractical plans of interlinking rivers. Even the tragedy of the raging drought was not able to have such discussions and plans declared not only inappropriate but also antisocial. If supposedly responsible people and ministers waste their time in idle fantasies, then what is left to say?

Digging a well as the fire rages: thus goes an old adage. The fire of famine raged and the government started digging wells. Probably in the proverb, water is found once the well is dug. But this time there was no water to be found when the wells were dug. Water was rushed to Gujarat in tankers, trains and ships. Only aeroplanes were not put into use.

It is the first famine of the 21st century, much touted by our politicians for the past two decades or more as the beginning of the brave new millennium, into which they were steering India. So much noise is being made about the great revolution in information technology, yet famine entered half the country `quietly' without giving any sign to the great children of the great revolution.

But famine never comes quietly. It is not a guest barging in without having announced the date well in time. When monsoon wrapped itself in September, it rained the information as to which all places had recorded insufficient rainfall. But for a few exceptions neither the sons of the soil nor the collectors bothered to collect this important information. In villages, fields and cities, water was drawn out of the soil just as in the past. The result was that in 6-7 states the water table kept declining. The level dipped so low that water could not be pulled up even by the might of electricity.

We should not forget that famine never comes alone. The famine of good deeds and ideas precedes it. Here there is no difference between ideas and actions. Action, field work, grassroot-level work are necessary preconditions for well-thought-out planning. Conversely, a good idea comes from a good thought. Neither of them is a one time sprout like a terminator seed.

Even in this famine, there is an example of good deeds following good ideas in the Alwar region of Rajasthan, where an organisation called Tarun Bharat Sangh has been active for the past 15 years. The first good idea which took seed there was to build check-dams to link the small ponds and nullahs. Some 600 villages of that region and the surrounding areas quietly undertook to save every drop of rainwater. These dams revived the waters of five dried-up rivers of the region.

Good ideas led to good deeds and could easily take on the challenge of the failed monsoon. The streams, ponds and wells remained full of water. And yet, the farmers had the foresight to decide to avoid planting such crops which require substantial amounts of water. Only those crops were sown which were resistant to a dry spell. The farmers did lose some money in the process but the area is like an oasis amidst the raging desert and famine. Here the government neither have to rush in water tankers nor carry out relief operations.

In Alwar, it is not just rivers that have been linked to one another but it is people and villages who have been re-linked to their ponds and to their rivers. It is not just money that was invested in this work, but people's sweat and labour. It is this mixture of good work and good ideas that has kept the famine at bay here.

Anupam Mishra (riverlink@yahoogroups.com,
March 18 2003, From Manushi Issue 118)

River-link Notion is foolish: Editorial

The fact that the decision of inter-linking of rivers has come in response to a suggestion to this effect by the Supreme Court does nothing to erode absurd irony of the situation. The suggestion to the Central govt on the inter-linkage of rivers is monumental for potential impact and contentiousness. The govt's assurance to the court that it will achieve this by the year 2016 is grossly delusory or plain stupid. Perhaps both. The govt could have pointed out to the Court that, beginning with the '60s the idea to connect to country's rivers has been talked about at regular intervals. It has been rejected each time, with incremental doubts about the feasibility and viability about the project…. The govt itself has indicated to the Court that even a working figure for the overall project (even on the absence of firm details) would be Rs 5600 B. This implies that the govt is committed to finding Rs 400 B every year for the next decade. There is serious credibility question on such a claim. Moreover, the 10th plan adopted by the govt has no provision for this. The govt claims that its engineering exercise will transfer 1500 cubic m of water per second, from the surplus rivers to the Deficit Rivers. On the other hand, official estimate indicate that floodwaters in the Ganga, Brahmaputra, Mahanadi, and the Godavari add up to 30 000 cubic m at peak flow. This mismatch indicates that the inter-linking plan would be totally incapable of solving the annual flood problems in the country. Govt depts would point out that digging large canals displaces local populations whose resettlement creates all round misery. Hydrological officials of coastal states have already begun to express fears that the curtailment of river flows to the deltas would lead to a large scale ingression of saline water from the sea. Recent experience has shown ample proof that the revival of dead ideas can be dangerous and disastrous. The new lease-of-life to the idea of mega-linking of rivers is just that. (BUSINESS INDIA 6-190103 Editorial)

An appeal by Concerned Scientists of West Bengal Stop River Linking Project

We are greatly concerned to learn from the media about the intended project of interlinking of rivers proposed by the Govt. of India in response to a suggestion of the Supreme Court of India. It is reported that this mega project will cost US$ 112 B. Taking into account the usual cost overrun of such water projects the final bill to be paid by the people of India may be $ 500 B which is larger than the present GDP of India. We urge the Govt. to consider the following before proceeding any further on the project:

1. Make available all information on this project for a transparent and independent professional assessment.
2. What precise parameters does the project use to characterise river basins as surplus or water-scarce?
3. Any withdrawal of water at upper catchment may cause depletion of water resources lower down the river. This may cause severe inter-district, inter-state, inter-country disputes as we witness in the cases of Cauvery or Ganges. There will be a danger of severe social strife that can break the country.
4. How are the environmental damages to be caused by the interlinking project identified and their financial and human costs estimated? A systematic full cost - benefit analysis for the project on ecological changes caused in the total basin may turn out to be economically fatal for the present & future generations.
5. The criss-cross of canals for inter-basin transfer of water will completely jeopardize the hydrological balance of the region creating immense problems of waterlogging and salinization of land.
6. 3600 or more big dams constructed since independence have caused crores of oustees who have not yet been properly rehabilitated. Such a mega project will cause loss and livelihood of lakhs of people, mostly tribals & dalits, creating tremendous social strife.
7. The mountains, glaciers, rivers, deserts, oceans, forests & climate are all connected like aweb in a macro-dynamics of nature. We cannot tamper with such macro forces without a proper understanding.
8. The proposal of Govt. of India may go through a series of public hearing throughout India leading to the establishment of an independent commission consisting of geologists, geographers, hydrologists, sociologist & economist to go through the public opinion to assess the best option before the nation to fulfil its justifiable prioritised needs within the parameters of sustainable and equitous development.
9. The skewed Hydrograph of any river does not indicate excess water in the basin. The monsoon flow flush the sediment load from the riverbed and deposit fertile silt on the flood plain and thereby restore the dynamic equilibrium of the river.
10. The idea of transferring water from so called surplus to deficit areas is hardly possible in view of high infiltration and evaporation of water in dry areas. Such attempts would impair the ecosystem in both the areas.
11. The project, if implemented, would ultimately lead to total decay of the existing river systems, especially deltaic distributaries and invite an ecological disaster.

Samar Bagchi and Kalyan Rudra on behalf of
some concerned Scientists of West Bengal.

Thoughts on Interlinking of Rivers

Can we manage existing systems?

It is relevant to look in to the Water Vision draft of AP to understand the status of our "temples of Modern India". Irrigation efficiencies of some projects:

Nagarjun Sagar Right bank canal	23%
Left bank canal	33%
Sriram sagar	17%
Rajolibanda	32%
Tungabhadra LLC	46%

The figures in other states are similar. The figures of irrigation capacity generated and utilised are better not looked in to, to avoid making all of us unhappier. The game is simple. We invest Rs 10 out of which Rs 5 has magically dispappeared; out of the remaining five rupees, three Rupees did not reach where it had to but created more problems (water logging and salinisation). The strange thing is that those who have invested are happy- because it was not their money. Our irrigation system is a proverbial proud farmer owning a herd of cows but has to buy milk for drinking tea but dreams of buying more cows.

I went to Nalgonda the other day. They regularly drill borewells (about 20-30 per year/ village). It is an accepted practice now to drill borewells taking money from the lender (called borewell agents)- three fourth of the wells give lots of dust while drilling, and water flows from the eyes of the farmer (thinking of how to repay the debt). The "successful" yield water for a few years or until the neighbour drills a deeper well. The well first becomes intermittent. Marginal cost of pumping is zero (Flat rate).

Standing by the side of a field, I wanted to check the yield by filling an empty bottle "scientifically". It took that 5 HP borewell 5 minutes. The farmer had abandoned all but 50 sq m of paddy field out of 2 acres - he is still hopeful. The electricity dept official accompanying me was so disgusted with "wastage of energy"; he thought he should advise the farmer (We "the educated" have fundamental duty, right and responsibility to advise the illiterate farmer of things that we don't know and can't practice) "why can't you do some other activity instead of growing Rabi rice". The farmer replied "Sir, you are educated and wise, you get your salaries. Please leave your job for a year and explore alternatives, then show us the way. We will follow your footsteps".

"Any culture which mismanages land and water is doomed". This is an old lesson, which we have forgotten again and again. More and more villages are joining the bandwagon all across the semi-arid tracts.

With this waging "War for water" some villages have become very permeable, (so many holes in to the rock- it is a sieve). Farmers have created an excellent system to increase the groundwater recharge I was wondering why do we have to invest money on "Neeru Meeru". By the way, "Water vision" hopes to increase the percolation / recharge from current 9 to 15 %. How this state which has more unterraced cultivated lands than that terraced and bunded (that means lots of runoff), is going to increase recharge is a matter of intellectual debate but how it is going to be implemented is known already- just play with few numbers- no one is hurt, everyone is happy. I have heard a song long back "we are messing up the land, messing up the sea, messing up everyone" or words to that effect.

We are very good lawmakers. Please don't ask about implementation- the "Maya" will be lost. Who is going to bell the cat? The leaders fear that it may be "politically incorrect to implement" these- let the utilities measure agricultural electricity and charge based on consumption first (if they do measure, the last opportunity for juggling the theft and other losses under agriculture will also be gone). Spike Miligan discovered long back that every culture requires a faceless enemy who can't be seen and is far enough. We have ours- so feel safe.

Modern temples of India, green revolution, conjunctive use, interlinking rivers- we feel safe under the umbrella of slogans. Leaders generate slogans "let us develop "unutilised waters" wasted in to the sea".

Is it not high time to think about how to manage what we have rather than invest more to benefit few? Do we want more investments while we can't manage what we have already? Are there really any "unutilised" waters? How reliable is the data on unutilised water resources? Why are many large and medium dams not filling up if there are unutilised waters? If and when we build our interstate "link projects" will they also have the same fate? Does the terrain offer opportunities to divert waters and use it beneficially? Have we run out of ideas to invest on more socially beneficial programmes? Do we want to grow more food while we are unable to distribute it to the needy? Are (over) irrigated crops the only remaining options for us? Can we make farmers grow crops that irrigation systems are designed for? (Or will head enders grow sugarcane while the irrigation designers designed for irrigated dry crops?) Can we manage available water in meaningful ways?

These are uncomfortable questions. Let's try to analyse the situation clearly. Let's not give the same medicine dose to elephant and dog. Lets forget our hallucinations of towing ice from Antarctica and cultivating Annam (rice) in Andhra and see what options still remain and what we can do to cope the crisis.

Gopal Krishna Bhat (gkbhat@taru.org, Edited from message on DNRM discussion group 290303)

EXPERTS REJECT RIVER LINKING PLANS

At the Jawahrlal Nehru University, a 3-day National Workshop on Fresh Water Issues, with a Round Table on National River Linking Plans on March 31-April 2 2003 came to an end with most of the speakers rejecting the river linking proposals. Speaker after speaker from academia (JNU, DU, Punjab University, IIT Kanpur) dismissed the project and said the claims about irrigation and electricity are based on old data, which are no more relevant. They said it is painful that there is no transparency. Geological Survey of India is also not sharing information. Some of the questions raised at the meeting included: Are citizens, communities willing to have interlinking? Who is to evaluate the performances? Is there any credible evaluation of existing projects? Can advocates of this project be judges of the project too?

The Workshop was inaugurated by the Vice-Chancellor of JNU. The workshop was organised at the request of Mr Suresh Prabhu. The feedback from the workshop is to be sent to him. As to what he will do with the feedback, only Prabhu knows, said Prof. V Subramaniam, School of Environmental Sciences (SES), JNU while concluding the workshop on 2nd April. He added, the National Workshop concludes that no body is favour of this grand plan.

Earlier Prof. Rajamani said, it is bewildering that the govt is not making all the reports done so far on the issue public. Prof. Rajamani asked, where is the water? He said, go down stream there is no water. Even if it is there no state will say it has. Govt has no hard-core data. One speaker of SES said, the plan is based on old data, which does not have contemporary relevance. This idea might be fine only on paper. Dr V Ravi of JNU asked, what about fishery-will it not be destroyed as a result of shifting of water.

When a govt official was asked whether Ganga is a surplus or a defecit river, he had no answers. The question about the basis of claims about irrigation and electricity benefits went unresponded.

Gopal Krishna (riverlink@yahoogroups.com, 050402)

GOI in SC

Below are some relevant new information from the Govt of India's affidavit in the Supreme Court of India.

NWDA was set up in 1982 as an autonomous society under the Societies Registration Act, 1860 under the Ministry of Water Resources to carry out the water balance and other studies on a scientific and realistic basis for optimum utilisation of water resources of the Peninsular Rivers System for preparation of feasibility reports for interbasin transfer of water.

- In 1990 NWDA was also entrusted with the task of Himalayan Rivers Development Component of the National Perspective.
- Under Peninsular Component, feasibility reports of the following six links have also been completed: Ken – Betwa Link, Par – Tapi – Narmada Link, Pamba – Achankovil – Vaippar Link, Godavari (Polavaram – Krishna (Vijaywada) Link, Krishna (Srisailam) – Pennar (Prodattur) Link and Krishna (Nagarjunasagar) – Pennar (Somasila) Link. Currently the surveys and investigations for preparation of feasibility reports of 18 links are under progress.

Mans Sankosh Tista ganga Link This does not involve any lift. Surveys and investigations were taken up for preparing feasibility report. The reach from Tista Barrage to Ganga was taken up by NWDA while the reach from Manas to Sankosh and Sankosh to Tista was entrusted to CWC by the Ministry of Water Resources. The topographical survey work of Tista – Ganga reach by NWDA is almost complete whereas in the case of the other reach, CWC could nto take up the surveys in the Manas-Sankosh and a portion of the Sankosh-Tista reaches, because of the denial of permission by Ministry of Environment and Forests since these reaches fall under Manas & Buxa Tiger Reserves / other Wild Life Sanctuaries, in spite of concerted efforts made by CWC and Ministry of Water Resources to obtain the same. Besides, the length of canal, which falls within Bhutan territory, has also not been taken up for survey & investigations, as the required permission from the Royal Govt. of Bhutan is yet to be obtained. (Relevant excerpts from the GOI affidavit in the Supreme Court on Oct 25, 2002 in the WP (Civil) 512 of 2002 Re Networking of Rivers)

Govt: Ganga Cauvery Link devoid of flood control benefits On Aug 9, 2000, while answering a question from MPs Shri DVC Shankar Rao and Shri Dilip Kumar Gandhi, Union Minister of state for Water Resources Smt Bijoya Chakravarty said: "However, Dr. K.L.Rao proposed Ganga Cauvery Link which was examined by the Central Water Commission and found to be grossly under estimated. Besides the proposal also required a large block of power and was devoid of my flood control benefits." If that is the case than why is the river link now being pushed?

RISING SCEPTICISM ABOUT RIVER LINK RHETORIC

Civil Society Rejects River Linking proposal

New Delhi: Majority of civil society representatives resent at "A Civil Society Dialogue on the subject of India's proposed Interlinking of Rivers" organised by the WWF Switzerland in association the Delhi-based Development Alternatives felt that the country did not need river linking, rather it needed people centered local water solutions that can solve the real needs of the people. This was the view of the participants ranging from former water secretary to the grass root organizations from diverse regions like Bihar, Andhra Pradesh, Tamil Nadu, Rajasthan, Maharashtra and Delhi.

Most of the participants rejected the setting up of the eight member Special Task Force to monitor interlinking of major rivers within 15 years for claimed benefits like mitigation of droughts, floods and disputes at an estimated cost of Rs 5,60, 000 crore under the chairman ship of Suresh Parbhu.

Contrary to what has appeared in a section of the media there was no progress made at the seminar on 8th February civil society dialogue at India International Center to set up a Peoples Commission to examine the proposed mega-initiative of the Government of India. The 100-odd participants were unanimous in their view that neither the government nor the task force has shared even the basic information like the various pre-feasibility and feasibility studies conducted by the National Water Development Agency for the last 20 years or the Report of the National Commission on Integrated Water Resources Development. In a scenario like this the proposal to set-up an independent commission to assist the government was not only deemed ridiculous but a step towards self-cooption.

When the Ganga is water deficit according to the controversial Indo-Bangladesh water treaty, how can it be shown as water surplus in the new plan, questioned Shri Ramaswamy Iyer, former water resources secretary? He said, all future studies are suspect since govt is not at all transparent about it.

South Asia Network on Dams, Rivers & People representative questioned, "without the availability of basic information, transparency and accountability of the water resources establishment, how can there be a dialogue? No area of the country needs such schemes for their water needs". Shri VB Easwaran of National Wastelands Development Board made it clear that hundreds of examples from across the country have shown that local systems and watershed development can be much better, cheaper and faster way of drought mitigation than river linking proposals. The meeting was informed that Justice B N Kripal, who had given the order on Oct 31, 2002 regarding linking of rivers across the country, has said just few days after his retirement that what was said in the Supreme Court on the subject was merely a suggestion and not an order.

Suresh Prabhu turned up to exploit the civil society space by making the right kind of noises after having decided to go ahead with project. But it emerged from the seminar that there is no real need for this project. The consensus was that there were better options to the gigantic project. Basant, a farmer from Bihar expressed horror at the attempts of the new "Bhagiraths" like Prabhu and others to ferry water across the nation.

"The political consensus on the issue of interlinking of rivers is a myth. Already states like Assam, Bihar, Kerela, Punjab, Orissa, Goa, W Bengal and Maharashtra have raised objections to it," said Dr Sudhirendra Sharma, director of The Ecological Foundation.

It was feared that this initiative of Prabhu would go the same non-serious way that the govt engaged the civil society on other development issues. The proposal of the govt to start a dialogue after taking a decision does not serve any purpose and the civil society will end up being a rubber stamp. The civil society will do well to use its resources to show that such destructive schemes are not necessary and the alternatives are sustainable and viable.

A presentation by the govt showed that it would conduct a detailed project report on river links like Par-Tapi-Narmada but it did not answer whether people living on the banks of Tapi and Narmada are willing to allow the linking of their river with the heavily mercury contaminated water of Par, a query raised by Toxics Link. In total absence of any credible Post facto assessment of any of the big water resources development projects over the past fifty years, there is no accountability for the water resources establishment in the country.

There is an inherent contradiction and confusion in the govt's stance. The fact that the Prime Minister who in the summer of 2000 talked about harvesting every drop of rain where it falls did not set up any task force on rain water harvesting, rather chose to set one up on the gigantic river linking schemes raises doubts if this govt is really interested in solving country's water problems or is it just working in the interest of contractors - engineers - consultants - bureaucrats - politicians nexus.

(Press Release on Feb 10 2003. Contact: Gopal Krishna: meetgopalkrishna@rediffmail.com)

River Link Plan is impractical: Venkaiah Naidu Rural Development Minister Venkaiah Naidu, while replying to a short debate in Rajya Sabha on drinking water crisis in the country, said that the proposal to link up the major rivers of the country is not practical looking at the geographical situation in the country. He said that without needing such schemes, govt plans to provide drinking water to all the villages by March 2004. (*RASHTRIYA SAHARA* 170502)

Trade Unions in Maharashtra to campaign Against the River Linking Proposals

Mumbai: Trade unions are better known for taking up issues of their employees' job security and related rights. But with the change in times the same trade unions are now becoming socially conscious. In an unprecedented move, the Service Sector Employees' Coordination Committee, a committee representing several trade unions and social organisations, in its Pani Parishad (Water Council) held in Mumbai on February 12, 2003 adopted a Declaration and pledged to create awareness on the issues of water scarcity and governance through its cadre in various parts of the state of Maharashtra in next couple of months.

The declaration expressed serious concern over the receding supply of water to a large number of townships and villages in the country and the escalating disputes on sharing of river waters between Karnataka and Tamil Nadu and between Punjab, Haryana and Rajasthan. Instead of coordinating village-level activities and building up an integrated plan for tackling the water problem on war footing with pragmatic considerations, supported by experience and constant innovations and activated through employment guarantee schemes, the BJP govt at the Centre has suddenly sought to revive Ganga-Cauvery link which the govt had given up 20 years ago as being absolutely unwise on techno-economic considerations, the declaration noted.

Criticising the interlinking of rivers proposal, the Pani Parishad firmly rejected the concept of treating water as an economic activity for sale in the market. Water must always be considered as national wealth entirely under the control of the whole community. Mr R G Karnik, Convener of the Coordination Committee, reiterated the need for creating a strong public opinion in favour of community-oriented comprehensive programme for enhancing the availability of water (as opposed to the centralised interlinking of rivers proposal) and its equitable distribution and generation of productive employment. Mr Karnik announced the committee's decision of holding similar meetings in Thane, Pune, Nashik, Nagpur, Kolhapur and Aurangabad in the next two months. The Pani Parishad was inaugurated b, Minister of Rural Development, Water Supply of the govt of Maharashtra and attended by over 200 participants representing various trade unions.

Dr Sudhirendar Sharma

Kerala's Experiece far from happy One of the earliest instances of inter-basin transfers in the peninsular region was from the upper reaches of the Periyar to another river basin in Tamil Nadu across the Western Ghats. This was done by constructing the Mullaperiyar dam more than a century ago. This led to the deterioration of water quality downstream of the river. Salinity intrusion and pollution dispersion problems in the lower reaches of the Periyar arose due to non-availability of sufficient quantity of water for flushing. The safety of the dam structure and inundation of the eco-forest system are also aspects discussed with concern in relation to this scheme for inter-basin transfer of water. An intra-State inter-basin transfer from the Periyar to the Muvattupuzha river for power generation in Kerala has adversely affected the downstream flow in the Periyar river. (THE HINDU 111202)

Agriculture Ministry to press for Rainwater harvesting & Riverlinking Union Agriculture Ministry will press for creation of grid system for major rivers. Union Agriculture Minister said, "Since, interlinking of rivers will need states' consent, I will raise the issue in the forthcoming meeting of National Development Council". The Union minister said that rainwater harvesting was of equal importance and "no amount of irrigation system involving canals and reservoirs can substitute rain water". (THE ECONOMIC TIMES 160902)

Punjab parties oppose National River Grid All party meeting in Punjab has opposed the proposal for the National River Waters Grid and demanded scrapping of all riparian treaties signed by Punjab. It was also decided that the International Human Right Organisation and the BKU would file jointly a petition in the SC in this context. (THE TRIBUNE 150902)

Over 500 ASF Delegates Writes to PM On the 6th Jan 2003, over 510 delegates from over 200 organisations from all over the world attending the Asia Social Forum being held at Hyderabad wrote to the Hon'ble Prime Minister requesting him to withdraw from the proposed Interlinking of Rivers Project and rather focus on more viable options of local water system. Signatories included Medha Patkar (NBA), Rajendra Singh (Rashtriya Jal Biradari), Bela Bhatia (Centre for the Study of Developing Societies), Dr. B.D.Sharma (Bharat Jana Andolan), Ashish Nandy (CSDS), Simantini Dhuru (Film maker), K.R.Datye (SOPPECOM), Smitu Kothari (Lokayan) Anastasia Laitila (Friends of Earth), Dr. Uma Shankari (Neeti Samakhya) Shripad Dharmadhikary (Manthan), Dr Letha (Chalakudy Puzha Samarakshana Samiti), SANDRP, etc. The PM's response is awaited.

NAPM opposes Riverlink proposals "The National Alliance of People's Movements will oppose the interlinking-rivers project, as we consider it as the stepping stone for the privatization of water. The project is destructive for the nation's economy and environment", said Medha Patkar in a press conference in Bhubaneshwar during the 'Desh Bachao-Desh Banao' campaign. The campaign urged the central govt not to push the project. (NAPM PR 270203)

Water and the Constitution of India

ASPECTS OF FEDERALISM

Recently, there has been renewed attempt to bring the subject of water from state subject to being under concurrent or central list. The Supreme Court of India, while hearing the Cauvery dispute matter between Karnataka and Tamil Nadu, had asked solicitor general, if it is possible to put rivers under the Union List of the Constitution because this (water sharing) problem is going to happen in the case of every river. The World Bank has been pushing this for some time. To clarify the issues arising from such a proposition, we invited **Shri Ramaswamy Iyer**, former secretary, Union Water Resources Ministry and well-known expert on water resources development, to send us a Special Article for *Update*. Here is what he has sent us. Comments are welcome.

Entries in the Constitution A statement that is often made is that under the Indian Constitution water is a State subject. There is a tendency to take this proposition for granted as a basic datum from which to proceed to further propositions and arguments. Those further propositions and arguments take one of two directions: one is to assert that water is rightly a State subject, that this position must be accepted and that the Centre must refrain from encroaching into this area; the other is to deplore that water is a State subject and to argue that the Centre needs to play an important role in regard to this precious resource, and that in order to facilitate this water should be transferred to the Concurrent List. Both these views are over-simplifications.

The relevant provisions are Entry 17 in the State List, Entry 56 in the Union List and Article 262. There are other articles and entries, which may have a bearing on the matter; but the ones just mentioned are specifically concerned with water.

Entry 17 in the State List runs as follows:
"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".

It can be seen at once that it is not an unqualified entry. Water is indeed in the State List but this is subject to the provisions of Entry 56 in the Union List, which runs as follows:
"Regulation arid 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".

The legislative competence of the State Governments under Entry 17 of the State List remains unfettered only because Parliament has not made much use of the powers vested in it by Entry 56 of the Union List. It is, therefore, not quite right to say simply that water is a State subject; it is potentially as much a Central subject as a State subject, particularly as most of our important rivers are inter-State.

Moreover, we must also note the provisions of Article 262:
"262. Adjudication of disputes relating to waters of inter-state rivers or river valleys.
(1) Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any interstate river or river valley.
(2) Notwithstanding anything in this Constitution, parliament may by law provide that neither the Supreme Court nor any other court shall exercise jurisdiction in respect of any such dispute or complaint as is referred to in clause (1)."

It stands to reason that the legislative competence of a State under Entry 17 must be exercised in such a manner as not to prejudice the interests of other States and create a water dispute within the meaning of Article 262. This has been clearly stated in some of the Tribunals' awards.

Role of the Centre Water is not in the Concurrent List; but it is both in the Union List and in the State List. The role given to the Centre in regard to inter-State rivers and river valleys is at least potentially an important one; and this is reinforced by the use of the provisions of Entry 20 in the Concurrent List, namely, `economic and social planning', by virtue of which major and medium irrigation, hydro-power, flood control and multi-purpose projects have been subjected to the requirement of Central clearance for inclusion in the national plan. This has been questioned by

some State Governments but the clearance requirement remains; and there is of course the requirement of Central clearances under the Forest Conservation Act and the Environment Protection Act. It could be plausibly argued that even under the present dispensation the Centre has significant responsibilities in relation to water, and that it has not in fact discharged those responsibilities adequately.

The River Boards Act 1956, passed by Parliament under Entry 56 of the Union List, provides for the establishment of advisory boards, but no boards have been set up under the Act: the Act has remained virtually inoperative. The Inter State Water Disputes Act 1956, enacted under Article 262 of the Constitution, has also run into difficulties in recent years.

73rd and 74th Amendments Apart from the Union and the States there is now a third tier in the constitutional structure, created by the 73rd and 74th Amendments, namely, local bodies of governance at the village and city level: the village *panchayats* and the city *nagarpalikas* (municipalities/corporations). The Eleventh and Twelfth Schedules to the Constitution lay down lists of subjects to be devolved to the *panchayats* and *nagarpalikas.* The lists include, *inter alia*, drinking water, water management, watershed development, sanitation, and so on. It seems likely that in future this third tier will come to play an important role in relation to water-resource development. However, the processes of decentralization and devolution are still evolving, and the role of the third tier is yet to emerge fully.

Deficiencies of the Existing Position? In the light of the above account, can it be said that the present constitutional position in relation to water is satisfactory? The Sarkaria Commission thought so, but serious doubts in this regard seem warranted, though these are perhaps a matter of hindsight.

- First, even the most general entry regarding water, namely, Entry 17 in the State List, quickly slips into specific uses of water such as water supply, irrigation, etc.
- Secondly, irrigation looms large; and the reference to canals, embankments, drainage, water storage, and so on, shows the heavy influence of the engineering point of view.
- Thirdly, while the word `water' may doubtless be taken to include groundwater, there is no specific reference to the latter; the Constitution-makers seem to have been thinking mainly of river waters.
- Fourthly, the Centre has been given a role only in relation to inter-State rivers and river valleys, but it is conceivable that even in a river which flows entirely in one State that State's intervention might produce environmental or social consequences in another State; and such interventions in intra-State surface waters may also have an impact on groundwater aquifers cutting across State boundaries. There is no explicit recognition of this in the Constitution.
- Fifthly, the constitutional provisions do not show any direct evidence of a perception of water as a natural resource much less of water as a part of the larger environment or the ecological system. (Some of the emerging concerns were incorporated into the Constitution at a later stage. Under the 42nd Amendment of 1976, references to the protection of the environment, forests and wildlife were introduced *via* Articles 48A and 51A, and two entries relating to forests and wildlife were added to the Concurrent List.) There is also no explicit evidence of an awareness of traditional community-managed systems of rainwater-harvesting or water management, or of the role of civil society in these matters. Nor is there any *overt* reference to water as a basic essential for life and therefore a basic human and animal right.

Some of these perceptions and concerns are of relatively recent origin, and perhaps the makers of the Constitution cannot be faulted for not having foreseen these developments. Further, a Constitution provides a foundation for the laws of the land, and is essentially a *legal* document; it cannot be expected to spell out sectoral policies in detail. Subject to those caveats, however, it is possible to argue that if the kinds of thinking that have now come to prevail had been well established when the Constitution was being drafted, the constitutional provisions might well have been very different.

Amendments Needed? However, that is a speculative reflection, and a case of hindsight. The reality is the text of the Constitution as it exists. Amendments to put `water' in the Concurrent List would be enormously difficult to put through: they go counter to the persistent trend towards greater decentralization and federalism.

Moreover, it is necessary to ask ourselves what precisely will be achieved by shifting water to the Concurrent List, assuming that this proves politically feasible. Such a change will merely mean that the Centre will be enabled to legislate on water. In seeking to bring water into the Concurrent List, the Central Ministry of Water Resources is essentially trying to enlarge its own role on the ground that this will serve some useful national purposes. In the first place, there is no ground for believing that the Centre will necessarily take a more holistic view of water than the States; at both levels, limited engineering-dominated perceptions tend to prevail. Secondly, the Constitution only deals with the legislative (and correspondingly the executive) powers of *governments* at the State and Central levels; and water is not a matter merely for governments. The growing movement for a revival of the traditional water-harvesting and water-management systems and practices envisages an enlargement of the role of the community and a transformation of the relationship between the state and civil society.

Lastly, in the context of the advocacy of community-management of common pool resources, there arises the whole question of what has come to be known as `legal pluralism', i.e., the relationship between the formal law of the statute books and `customary law'. From this point of view again, constitutional amendments to bring water into the Concurrent List will be of no great help.

The question about the constitutional entries relating to water needs to be considered, not merely with reference to the narrow issue of the role of the Central Government but with some of the larger perspectives mentioned above in view. The Report of the National Commission for Reviewing the Working of the Constitution is silent on this issue. It is difficult to believe that the question did not come up before the Commission. Perhaps its silence represents a deliberate decision. If so, one can only regret it. It is not clear when another opportunity to go into this matter will present itself. Meanwhile much can be done to promote a holistic view of water, better Centre-State and inter-State relations, and a constructive relationship between state and civil society, even within the ambit of the existing constitutional entries relating to water.

National Water Resources Council: Statutory Backing? A related point is that the National Water Resources Council, an important element in Indian federalism in relation to water resources, is only an institution established by a Resolution of the Government of India and has no statutory backing. Its prestige and influence are derived from its composition with the Prime Minister as its Chairman, the Union Minister of Water Resources as Vice-Chairman and all State Chief Ministers and several Central Ministers as Members. The National Water Policy 1987 and 2002 approved by it is not a law; it has only the force of consent. It may be added that the NWRC meets very infrequently, and apart from the approval of the NWP in 1987 and of the NWP 2002 fifteen years later, it cannot be said to have done much. It is sometimes suggested that the NWRC and the NWP – not in its present form, but possibly decided in a democratic way with participation of people from across the country - should be given a statutory backing, but it is not clear whether this is in fact necessary, and if so how, and under what entries in the Constitution, this can be done.

-Shri Ramaswamy Iyer (Former Secretary, Union Ministry for Water Resources)

Why River linking is such
A mindless idea?

The basic justification behind the concept of linking rivers is to transfer water from the so called deficit areas to the so called surplus areas. First question that then arises is that do we have clear studies establishing deficit river basins and surplus river basins? This then raises the sub question as to the how do you arrive at a definition of deficit or surplus?

We all know that wettest place on earth, Cherapunjee, is facing water problems today. And there are the wonderful, unprecedented water harvesting success stories from the driest regions of India, namely Rajasthan. In fact, for the first time in the history of Independent India, President of India visited Alwar two years back to honour the people of Bhavta Kolyali villages for their successful community work in harvesting water and along with 72 other villages of Arvari river basin, make the river perennial. If there was one sound slap on the face of river linking advocates, it came from that region. Because here, people had shown that it is possible to solve local water problems and make a river perennial without importing water from elsewhere.

It was then indeed shocking that the first spark in the recent river linkage controversy came from (the speech on August 14, 2002 of) the same office of the President of India, now being occupied by another incumbent. A misguided quote from that speech then lead to a rather unfounded petition in the Supreme Court of India, giving chance to the outgoing Chief Justice of India to suggest (a day before he retired as Chief Justice) that centre set up a task force to consider river linking. And now the Prime Minister Vajpayeeji has, rather strangely, joined the bandwagon. It is strange to come from Vajpayeeji as he has been speaking rather consistently in favour of all out efforts to *first* harvest water where it falls.

Coming back to the questions with which we started, are there any studies for any river basin in India to declare it as surplus or deficit basin? The answer, is unfortunately, no. Comprehensive assessment of potential of all available sources of water, including rainwater, soil moisture, groundwater and surface water, through all available options has not been done for any river basin. In fact, comprehensive rainwater harvesting potential through local projects has not been done in a participatory way or otherwise even for any sub basin.

National Water Development Agency, under the Union Water Resources Ministry, is the agency entrusted with task of preparing studies for feasibility of inter-basin transfers across various rivers in India. The various pre feasibility and feasibility level studies it has prepared so far are essentially based on existing and planned large and small dam projects in various states. It has not done ground level or comprehensive assessment across any river basin in India. Its conclusions hence are mostly without scientific basis.

To show how unfounded the conclusions of the agency are, two of the rivers it declared as surplus are Godavari and Mahanadi. But people of many of the states through which these rivers pass, e.g. Andhra Pradesh in case of Godavari and Orissa in case of Mahanadi have protested, saying these are not surplus river basins. Similarly, attempts at floating Brahamaputra Ganga link in the past have faced strong opposition on hydrological, environmental and social grounds, besides issues of financial viability.

While talking about Ganga Cauvery link, it is assumed that Ganga is surplus and Cauvery is deficit basin. But ask any planner of UP, Bihar, W Bengal or Bangladesh if Ganga is surplus and you will get only vehement protests in return. It may be recalled that when Indo Bangladesh agreement was signed in 1996 to ensure that there is enough water for desilting of Howarah port and at the same time Bangladesh gets its due share of water, Bihar and UP had protested saying their potential water projects have been put in jeopardy by the agreement. And would you believe if you were told that Kerala govt is actually planning a project to divert waters from Cauvery basin to Bharatpuzha, one its west flowing rivers? So if Cauvery is rich enough to allow diversions to another river basin, then what is the logic in calling it deficit basin? The fundamental trouble with the idea of river linking plans, then is that the idea has no studies or sound basis.

That the river-linking plan is politically impractical and legally unviable was also argued in the Supreme Court. Let us take some concrete examples.

Sutlej Yamuna link canal is an attempt at transferring waters of Sutlej to Yamuna river basin. Here everything is supposed to be in place, including an order from the Supreme Court. But Punjab refuses to implement this plan, saying it has no surplus water. Another such example is the attempt by Karnataka to divert water

from west flowing Mahadayi to Malaprabha, a tributary of east flowing Krishna River. In this case, the former Secretary, Union Ministry of Water Resources had to in fact lose his job when he tried politicking by giving a certificate to Karnataka that it can divert some water from Mahadayi basin to Krishna basin. Goa has been steadfastly opposing this proposal, as Mahadayi is lifeline for them.

The cost of river link proposal is roughly estimated at Rs 560 000 crores. Mobilising that kind of money from all kinds of sources is impossible even in ten decades, leave aside one. As mid term review of Ninth Five year plan noted, the financial requirements of ongoing projects, some incomplete since the second five year plan, and the financial requirements of operation and maintenance of existing projects to achieve optimum results would consume budgets of at least next ten years, if not more.

In fact, as the World Bank-MWR study of India's Water Sector done in 1999 showed, India, though having the largest irrigation infrastructure in the world is not able to even maintain it to provide existing benefits, leave aside optimum benefits. In fact, in spite of spending hundreds of crores of rupees each year, the irrigated area by canals is in fact coming down in a number of states. Only vested interests would push new bigger projects like river linking while, cheaper local options are available, ongoing projects are incomplete and maintenance of existing projects is inadequate. Moreover, while the social and environmental impacts of river link proposals is not even known, it can be safely said that they will be more severe than the impacts of biggest dams in India.

Will better sense prevail when the issue next comes up before the Supreme Court on Dec. 16? Only time will tell, but in the meantime, those who care enough for our rivers and our resources, need to speak up about their concerns.

South Asia Network on Dams, Rivers and People (An edited version of this article was published in *Dainik Hindustan* (Hindi))

China's plans of cross country water project The Chinese govt has okayed a multi billion dollar plan to build the world's biggest water transfer project to transfer water from South China to North China, including Beijing. The project includes three south-north canals in the eastern, central and western parts of the country, forming a network among the nation's longest, including the Yangtze, Yeloow, Huaihe and Haihe. By 2050 the project is expected to be capable of shifting 44.8 BCM of water annually, with 14.8 BCM, 13 BCM and 17 BCM carried out by the eastern, central and western canals respectively. In the first phase the govt plans to invest $18.65B in the eastern and central canal project. (THE HINDU 271102)

Goa Disputes Karnataka claim on Mahadayi water Karnataka has claimed that the Centre has given clearance to state govt to utilise 7.56 tmcft of water of the Mahadayi River. Karnataka Water Resources Minister said the Rs 447.80 M Kalasa diversion project would use 3.56 tmcft of water and Rs 492 M Bandora, 4 tmcft of water. As per a study conducted by CWC, the total water yield of the basin has been assessed to vary between 180 to 220 tmcft at 75% dependability.

- Karnataka CM has reiterated that the CWC had given it a clearance to go ahead with what he described as "a smaller version of Mahadayi project." He recalled that the Karnataka had repeatedly approached Goa to allow utilisation of Mahadayi water for power and irrigation projects and even offered to concentrate on power projects only. However, failing to get the "right kind of response", the issue went to the CWC. The Goa CM had promptly described the said letter as a "misleading one" as the matter of water diversion of Mahadayi was still being heard by the CWC. Originally, Karnataka had plans to construct seven dams and three HEP by diverting water of river Mahadayi. Goa CM said that no state would be allowed to construct even a single major dam anywhere in the Mahadayi region, due to ecological reasons.
- **Goa CM alleged corruption by Navalawala; demands his resignation** Enraged by the unilateral letter from the Union Water Resources Secretary Navalawala allowing Karnataka to divert Mahadayi water, Goa CM alleged that the bureaucrat had indulged in corruption and must resign. (THE TIMES OF INDIA 030502, THE ECONOMIC TIMES 180502, 260602, see also special report in Update 4)

Why is the River Linking Proposal Being Pushed?

As the cacophony in favour of linking up India's rivers grew louder past few weeks, many friends told us to highlight the issues connected with the proposal. What are the problems with the proposal? Why is the proposal being floated? Who are really pushing it and what is the REAL agenda? While immediate answers to all the question are not available, in the following two pages (in addition to the previous two pages and the box on page 4), we have put together responses on this issue from some well known experts and leaders of India.

National River Grid Proposal will create many social and environmental problems. The Planning and implementation processes have been so lopsided that while there were 232 no source villages during 1st five-year plan, today the number has gone upto 90000. The water problems can be solved through rainwater harvesting. We need to convey our concern to the Supreme Court.
Rashtriya Jal Biradari 's National Executive, Nov 2002

Vajpayee's speech on drought two years ago (see box below) was focused on capturing every drop as it falls. The new turn he has taken offers no explanation of what follow up they did in past 2 years. Rs.2000 crore were announced as the budget for this. Now this grandiose scheme is clearly to ward off public opinion critical of Govt. failure to mitigate drought. Ten PMs would come and go but not a drop will be available.

L C Jain, former member, Planning Commission

Medha Patkar, Narmada Bachao Andolan This is a direct attempt to centralise control on land, water, forest resources, and impinge on people's right. It must not be forgotten that it was none other than Jawahar Lal Nehru who had rejected the Dastur plan. So many past water resources experts have also abandoned the plan."Just the other day at meeting to finalise the National Water Policy, the PM, Atal Bihari Vajpayee, announced that they would go for decentralised and community based water management projects. The judiciary took on the executive's role when it issued a diktat that the interlinking should be done, and done in 10 years. The same judiciary had declined the case on Enron and Narmada dam to take on the mantle of executive.

Who has seen the plan? Has it been discussed or debated in any public forum? This plan won't carry water but silt and floods. Disputes such as Cauvery will multiply and the displacement and environment problems will be huge.

Editorial comment in The Hindustan Times
…a mothballed idea… No surprise, of course, considering that idea was first mooted by a congress govt. but there appears to be a precious little to show whether a serious cost benefit analysis – of the financial, social, ecological, and technological parameters – of the scheme has been attempted in the 40 years that the idea has been around. So all that one can say now is that it is little more than a fancy in its infancy…. There are also wild variations in the financial cost estimates being proffered by diverse source and the time horizon being discussed. At any rate, nothing like this has been attempted anywhere in the world. Let's also remember that the impact of drought is being felt in the country even while grain stocks have reached an embarrassing high. This tells us that we need to get the delivery systems right.

Ganga Cauvery link not feasible "At Patna, which is the only point along the course with a divertive surplus, the Ganga flows 200 ft above mean sea level. If it has to be linked with any river of the peinsula, the water has to be raised over the Vindhyas chain – that is, to 2 860 ft above MSL. Pumping 20 000 cusecs of water to that height would have required an entire day's power generated in the country forty year ago. Even 40 years later, this requirement would make the link enviable. Unless you can reach water cheap to the beneficiary, the project would be unsustainable. Further, India, which has an accord with Bangladesh on the sharing of Ganga could face with protests from Bangaldesh."

R K Murthy, former engineer of Neyveli Lignite Corp

Interlinking rivers will be a disaster Connecting the rivers will be a disaster because the gigantic project, which will take decades if not a century to complete, will cause massive human displacement. The construction of dams and the excavation of thousands of kms of canals will make villages disappear, flood towns and cut through millions of Ha of agricultural land. It will uproot millions, the number exceeding the population shifts of partition. This mammoth project will be another kind of disaster as well because of its cost. The only beneficiaries will be the civil contractors and the political distributors of largesse who will become millionaire many times over.

C Rammanohar Reddy

Weak links in river's network plan It has been suggested that a Central authority should construct huge reservoirs on the Ganga and Brahmaputra and link these two mighty rivers with canals, thereby diverting surplus waters south-eastwards into Mahanadi. Any scheme that smacks of gigantomania of this kind ought to be questioned. It is not as if rivers, in the course of their flow, play no ecological role other than supplying water-parched regions. They carry silt which replenishes the topsoil and enables agriculture to flourish. Once you create reservoirs and virtually a countrywide network of canals, this will play havoc with this ecological role. It will impoverish river valleys and the prosperity these sustained, displace local communities and as one see in Punjab and Haryana, lead to water logging and salinity in the absence of proper drainage that rivers provide. Not least, a Garland canal system will fragment wildlife habitats. Animals require corridor to connect them to far-flung forests, and these will be severed.

Well-known journalist Darryl D'Monte

Not in National Interest River link project will give birth to many types of problems and controversies and this is not in the interest of the nation. It will be in the best interest of the nation that without democratic and transparent nation wide consultation, no steps should be taken in this direction by the govt.

Well-known columnist Bharat Dogra

In many parts of our country there are professional marriage arrangers. Their only interest in seeing that the marriage they arrange is carried and they get their commissions. They are not bothered if the marriages last or bust, if there is love or water among the parties involved. Now the norms of such marriages are being extended to marriages between rivers.

Dinesh Kumar Mishra, Barh Mukti Abhiyan, Bihar

As an ecologist within the CGIAR system, I personally think the idea of linking rivers will likely be disastrous from an ecological perspective. I actually believe that the result is more likely to be a funeral wreath for India's rivers than a garland!
Rebecca Tharme, Freshwater Ecologist, International Water Management Institute, Sri Lanka

(THE HINDUSTAN TIMES 231002, 221102 THE TIMES OF INDIA 061102 THE HINDU 201002, 271102 *Dainik Hindustan* 091102)

MORE DOUBTS OVER WISDOM OF RIVER LINKING PLANS

Scripting water war of the 21st Century

,,,the unholy contractor-bureaucrat-politician alliance assesses potential benefit to push the proposal. Political ramifications of the project are drawing diverse actors into it… Not only does
economics of the scheme make the project improbable, its social, geographical, ecological and political ramifications are too serious to warrant its execution… Far from increasing productivity through irrigation along its course, the large network of dams and canals will alter the natural drainage such that occasional flooding and waterlogging will inundate millions of hectares of agricultural land. .. While altering the geography of the country significantly, the equitable distribution of water across the country will inadvertently distribute pollutant load across the rivers equitably as well… Undoubtedly, the proposal of linking rivers is rooted in an engineering mindset, which believes that the only way to tackle the problem is to find and transport water – wherever it might be.

Not counting the reasons for the drying up of Sabarmati, its flow has been restored by diverting Narmada waters 225 km upstream. According to the Central Water Commission, not long ago Sabarmati had a recorded annual flow of 3,200 million cubic metres. Instead of creating favourable conditions of recharge in 21,674 square kilometres of its catchment, Sabarmati has been reduced to a canal – dependant on Narmada waters for perpetuity.

Punjab has clearly shown that improving irrigation infrastructure cannot be a solution. Thanks to assured surface irrigation, the once fertile land is fast turning a desert due to salinity and waterlogging forcing the Punjab government to give incentives to farmers to switch from water inefficient rice-wheat cropping pattern to more diverse water conserving crops. Planning Commission contends that a mere 10 per cent increase in the efficiency of the existing irrigation infrastructure would lead to 14 million hectares of additional agricultural land getting water.

Sudhirendar Sharma, Janmancha.org, Nov 12 2002

Opposition from Punjab We are opposed to the Plans to link up Rivers of India. The (Akali Dal) party would oppose this plan of the NDA government despite being an NDA constituent. Our alliance with the Union government doesn't make any difference when it come to safeguarding the interests of Punjabis. We are concerned over the apathetic attitude of the Punjab government in not reacting to the situation. No state can be deprived of its natural resources.
Former Punjab CM Prakash Singh Badal, The Times of India, Nov 29 2002

A Report on Meeting On River Linking Proposals At Bihar Vidhan Parishad on March 2, 2003

Shri Dinesh Kumar Mishra

The meeting started with the inaguration by Rabari Devi, Chief Minister of Bihar and those present included former CM Shri Lallu Yadav, Prof Jabir Hussain, Chairman – Bihar Vidhan Parishad, a good number of ministers in the state cabinet, opposition members, engineers, bureaucrats and prominent citizens.

The base paper, prepared by the Bihar Water Resources Dept was read by Prof C.P.Sinha (former prof in IIT Roorkee and Member Secretary of the 2nd Irrigation of Bihar), which detailed the linking proposals.

While Prof. Sinha was making his presentation, he was interrupted by Dr Raghuvansh Pd. Singh, former minister at the centre that he should be concentrating more on the impacts of the proposed scheme (benefits and losses) on Bihar instead of telling what it was going to do for the nation. Prof Sinha continued, however, and gave more details about the Kosi-Mechi link, Kosi-Gandak link, Kosi-Ghaghra and the Ganga Sone links etc. He said that Bihar would get an additional irrigation of 1.5 M Ha, prevent wastage of 30-40 % of its waters.

At this moment former CM Shri Lallu Yadav intervened to say that we are the source of water and it is our water that will go outside. Who will give water to us when we will need it? This question should be answered. We are not only having the 'so called' surplus, we are also having droughts and drinking water scarcities besides floods. Why should one talk about the surplus in our state and not the scarcity? It is a dangerous proposal and drums of the same are being continuously being beaten. And where is the money to take up such a scheme? They are living in the world of dreams. Go to the Ganga today in Patna and you cross the river on foot, all the water of the river was manipulated by UP and they release it only when it is surplus there. Former PM Deve Gowda went and auctioned the Ganga water and Bihar was a silent spectator. They all want to milk it like helpless she goat. Our burning ghat at Bansghat is also without water and we are waiting for some water to come from Nepal. And tomorrow, we will face anarchy in this country over the distribution of water. We will agree to the proposal if our water circulates within Bihar and we will foil the bid to take our water anywhere else. We will bring down the govt at the centre and will be prepared to face the wrath of the courts also but not allow our water to go out of the state. We will not allow this state to be desert. There was no water in our river Sone the other day and I had to phone MP CM Digvijay Singh to release some water into the river and the he ordered some release.

There are HI-Fi people living in Delhi and they are eyeing on our water. They will take it away and leave the state in lurch. Our people will get displaced and the frequent breaches in the canal will kill our people. I see dangers in the proposal but please discuss all the relevant matters and decide.

Prof Jabir Hussain said that he had organized a debate on the National Water Policy and opined that this policy, if implemented, will open the floodgates of multinationals into the country. Our Agricultural Policy also confirmed to these possibilities. There was only a hint towards the interlinking in the National Water Policy but not about its implementation. But what was not said there is becoming a reality now. We should look into the interests of our state and then decide our future course.

Radha Nandan Jha (Congress I), former speaker and minister stated that the interlinking was initiated by Arthur Cotton in 1839 and revived by KL Rao in 1972. The meeting in which KL Rao had put forward his proposal was attended by him and the scheme was questioned even then and was finally rejected. He wanted to link Cauvery, through a 2 640 km long canal, to the Ganga and the proposal was debated in the Parliament also and was dropped. A similar fantasy was proposed by Dastur and was dropped again. He talked in detail about the geography of Bihar and said that the proposal should be scrutinized in great detail before taking any decision. But it is also a fact that the interlinking proposal is taking a shape now. North Bihar has 152 MLAs and 25 MPs. We must do something through them. This area, which is already facing acute waterlogging, will be destined to doom if the proposal is carried forward.

Tara Kant Jha, former Advocate General of Bihar and an MLC said that he had written to the Water Resources Minister for organizing this debate. We must take a balanced view of the needs of the state and the nation. The Supreme Court has given its ruling and the state's view should come from the minister now. The GOI has made its intentions very clear by allocating Rs. 400 Crores for the task force and the task force will give its interim report by July. The state should decide its course now. There are 34 rivers in north and south Bihar and no comprehensive plans are made till date to tap the water in them. These plans cannot wait for the gestures from Nepal. There are over 60,000 tanks in Mithila that were used for producing fish and george nut. They are all dieing. Houses are being built in them and bananas are being grown there. Restore them and you will not have to depend on the imported fishes from AP. No paddy was grown in my village for the past 4 years because of the breached embankments. One has to shuttle between the revenue and the irrigation depts for getting them repaired but no action is taken. Before

the Task Force submits its report, sit for 3-4 days here and tell GOI that our water will only go, it will never come to us. You have to phone MP CM Digvijay Singh for the water that is legitimately ours. Bihar has, in fact, never asserted its rights over the resources. Supreme Court does not listen to speeches, it listens to arguments. Get prepared for that.

Chaturanan Mishra, former Union agriculture minister, opined that some amendments would have to be done. We also must know how much surplus we have. Supreme Court cannot issue a stay order on rivers against flooding. Has GOB studied the environmental impact of the scheme? We must also be sure that the scheme does not lead to any desertification because of lowering of the water level. Sediment is an awful problem with the river waters in the state. Our rivers are elevated because of this and we are going to spend Rs 5600 B now. We should be cautious.

Former CM Lallu Yadav intervened to ask whether other states would give us water in case of need? They will build dams in Nepal and Bhutan. One dam has been agreed upon and other three are awaiting sanction. They are likely to build a 429 kms long canal from Chatra Barrage in Nepal connecting the Manusmara, the Adhwara and the Kamala. Will this canal be good enough to carry the discharges as suggested? If this canal is carried over there, there will be no reduction in the flood prone area of the state.

Chaturanan Mishra continued to say that a 339 km long canal is proposed connecting proposed dams on the Sone and the Kadwan Reservoir and it will cross north Koel, Punpun, the Harohar and the Chandan. Is it possible to build such a canal, in the first place? They are proposing 50 m wide and 6 m deep canals in peninsular India but the same will be impractical in Himalayan rivers and the Gangetic planes. It will add to the waterlogging in this area. Rain Water harvesting and drinking water needs extra caution. There will be revolt in this country if the govt privatizes drinking water. People need potable water and they need it free of cost. Rural folks cannot buy drinking water. We have ruined the Damodar by polluting it.

D.P.Yadav, former minister at the centre asked Jagadanand Singh, Bihar Water resource Minister, to create an autonomous body like the one Prabhu has in centre to look into the state's interest. A committee should be formed under the chaimanship of Jagadanand Singh. We have many institutions like CGWB, GSI, Remote Sensing and WALMI etc. Khagaul center of Walmi is one of the best in India and one will find it hard to locate a comprehensive document on irrigation like the second Irrigation Commission Report of Bihar. We were cheated in Ban Sagar agreement and would not like that to be repeated. The transfer of water to other states should be limited to June-Oct period, never beyond that.

Bhogendra Jha, former MP (CPI) was of the opinion that Nepal is a reality and we cannot ignore her. Political stubbornness does not pay at the end. He reminded that Lallu Yadav used to say that Jharkhand can be created only over his dead body and, fortunately, he was very much alive and kicking.

Dinesh Kumar Mishra raised the points that if the performance of the Kosi and the Gandak Projects in the state were taken as an example, then one should not venture on the links. The Eastern Kosi Main Canal is irrigating less than 20% of its targeted irrigation and the Gandak irrigates just 25 %. The foundation stone of the Western Kosi Canal was laid in 1957 by Jagjiwan Ram and then by 5 more other leaders subsequently at the time of elections but the irrigation from this canal is yet to take a dignified shape. The lifts that are involved in the proposed links are not workable. He cited the examples of Sone Pump Canal and the Ghaghar Canal in Mirzapur in UP and the pathetic state of affairs of the lift irrigation schemes in Jharkhand. He cautioned that the engineers refrain from telling the truth and, although, they feel that gravity flow is the only sustainable form of flow, they keep on telling the leadership that lifts hold the key for future success of the irrigation schemes. They are only busy passing their time and writing compliance reports and rarely took any decisions. As far as the role of the state govt, he asked what our govt was doing when Ban Sagar agreement was signed or Farakka agreement was signed by Deve Gowda? There was no point in criticizing those agreements now. And who will guarantee that the state govt will not reverse its decision if a friendly govt takes over in Delhi? He wanted the matter to be well debated before any decision is taken up.

Manganilal Mandal, MLC- JD (U), said that we are not managing our water resources well. There is problem of flood and sedimentation. Our rivers have become shallow. The flood prone area of the state has gone up from 2.5 M Ha in 1954 to 6.88 in 1994. The present govt is now blaming the Farakka agreement. Would someone from the govt tell what it was doing when Kanpur Barrage was being built? How do we assess surpluses when the state faces floods even without local rains? An estimate of available water should be made which should also include the water available in tanks & ponds and then only any decision is taken up. There are many schemes where the submergence area of the dam is located in Bihar & the command is located in other states. Bihar should not be deceived anymore.

Ganesh Prasad Yadav MLA, emphasized the needs of floods. They were needed for revitalizing the soil but, at the same time, it was important to save the area against calamities. When embankmnets along the Bihar rivers

were not there, the impact of floods was less felt. As the embankments grew, the situation got worse. The floods have become an annual feature. Earlier it used to be 10-15 years cycle. The bed level of the river grew with the length of the embankments. Now they are proposing the Barahkshetra dam, which will be about 800 feet high. Embankments keep on breaching but if something goes wrong with the dam, what will be the resulting situation? Vast area of the state will be devastated. We must try to convert the amount that we spend over relief into a long-term benefit.

Nawal Kishore Pd. Sinha (BJP) opined that this is an opportunity to correct the past mistakes done by Bihar. We ought to have studied the details of the agreements that we signed in past, let us do it now, at least. After spending over Rs 1900 Crores on flood control in Bihar, our flood prone area has gone up almost 3 times. We must try to revive our traditional system of Ahar and Pynes and extend the area covered under irrigation.

Ramdeo Verma (CPM-Bachhwara) maintained that the job of the executive is now being done by the judiciary. We should not be expecting justice from there also. Our water resources are likely to be utilized elsewhere and this debate is a step in right direction. It is proposed to link the Brahmaputra with the Ganga, may be, somewhere near Katihar by building a barrage there. Another barrage will be built near Patna. These obstructions will, naturally, worsen the waterlogging. We must put a condition to correct the water logging in the Gandak-Kosi area as a pre-requisite to taking up of any linking. Secondly, the whole nation will reap benefits at our costs and, in such a case, we must ask for royalty just as Gujarat and Maharashtra get that for oil. Thirdly, we start sowing our oilseeds in the October end. Any transfer of water must stop before that. Lastly, if the center is bent on pushing this scheme, Bihar is going to be the biggest looser.

Ram Jatan Singh (Congress-Gaya) said that the surpluses are dwindling. Ferries used to ply from Haldia to Allahabad until 1958 but the Ganga is dry now. Desilting of the riverbeds may be an answer to the problem that we are facing now.

Brijendra Yadav (JD-U) said that a program is being made to transfer water from the surplus to the scarcity area. It is suggested that there is surplus water in the Brahmaputra, the Ganga, the Narmada and the Mahanadi. But the states that are located in these basins are the one most undeveloped states of the country. We are having water but the standard of development is higher in the southern states. We are supposed to make sacrifices for those states. If we are not consuming our water, that is taken as having surplus. You think of a patient who has lost his appetite. Does it mean that he has surplus food with him? We are poor today, we are worthless today but does that mean that our future generations will also remain the same. Who will give water to them? Yes, take our floodwater if you can. We will also not like to see you thirsty but nothing beyond that. Is any of the states like Karnataka, TN, Gujarat HP or Punjab poorer than us? Our agriculture is in doldrums at the moment, our productivity is low, we do not have any industry and our municipal use of water is too low. We are at the bottom in each aspect but does that mean that we should jeopardise our own growth in future? If Nepal does not agree to our proposals, we are nowhere. One should try to create a confederation of the so called surplus states like Bihar, Assam and Orissa etc and discuss the matter in that forum and decide the course of action there.

Indra Kumar said that the constitution of the country talks about the disputes of the river water. The state has full authority over the water but the centre can intervene through section 56 by taking steps to make plans of the use of this water. In case of dispute, there is provision of a tribunal but there is no mention of the trans-boundary character of these rivers. In case of any such dispute the matter will go to the union list. International rivers play havoc in north Bihar and the total losses may never be less than Rs 25-30 000 crores. It was for this only that we wanted a package from the centre that was not given. Why not insist on getting this money. Let us also make a state Task Force and ask for compensation for flood losses since 1947.

Yashoda Nandan Singh talked about the legal position of the river linking project and said that the proposed scheme will create problems for the public as well as the govts. He called it a crazy idea.

In the technical session, many papers were presented by engineers, professors and retired bureaucrats. The feeling was mixed but tilting against the linking, in general. Those participating included KN Lal, former engr in chief of Bihar, Dr T Prasad, formerly with Water Resource Development Centre - Patna, Prof A Ghosh of AN College, Prof Santosh Kumar of Bihar College of Engg, IC Kumar, IAS Retd, and Dr BP Singh etc.

Jagadanad Singh, Water Resource Minister of GOB, replied the debate and regretted that such discussions did not take place when earlier agreements like the Ban Sagar, or the Farakka were signed. National Water Policy was not debated in a forum like this. He promised that he will keep organizing such meetings in near future also and keep everybody informed. The decision to link the rivers will be put to more scrutiny.

Comments The meeting ended when Shri Lallu Prasad Yadav made his point. The engineers and bureaucrats in the state are a confused lot now. There are meetings organized by different fora to discuss the linking proposal and the bureaucrats do not attend such meetings because Shri Lallu Prasad Yadav has made his stand very clear. Engineers are watching his moves.

Who will remind the Prime Minister Vajpayee that these too were HIS words?

One of the real gains of the challenge posed by the drought, however, is that the country is today talking not only about the problem but also about solutions to it. Solutions that are practical, appropriate and durable. In particular, I see widespread interest everywhere in rainwater harvesting and other water conservation ideas.

…the one idea that stands out for its simplicity, efficacy and affordability is rain water harvesting. Capture rainwater, store it and use it – it is as simple as that. If appropriate technologies are built around this simple idea, they can provide decentralised, local-level solutions that can considerably meet the drinking water needs of our urban and rural populations.

Prime Minister Atal Behari Vajpayee
During Drought of 2000

Our culture and tradition enjoins upon us to treat our rivers as sacred. Yet, over the past few decades, more rivers are getting more polluted at more places than ever before… The policy should also recognize that the community is the rightful custodian of water. Exclusive control by the government machinery, and the resultant mindset among the people that water management is the exclusive responsibility of the government, cannot help us to make the paradigm shift that to participative, essentially local management of water resources. Both the Centre and the State governments should, therefore, actively seek the involvement of the community at all levels — from decision-making to monitoring the implementation of decisions… Let this meeting of the Council send out a powerful message that "harnessing of every drop of rainwater" is a national priority. We should lay special emphasis on localized, decentralized harnessing of water resources, which is most cost-effective and which also lends itself to better community participation.

Our catchword should be: "Catch the catchment". Wherever necessary, our farmers and rural communities should be encouraged to bund every field and bind every rivulet. This will prevent soil erosion and silting of the reservoirs. There is a suggestion that every village should earmark five percent of its area for creation of community water bodies, much like the community grazing grounds that still exist in many villages. It is a powerful idea whose time has come.

Prime Minister Vajpayee on
April 1 2002, while releasing NWP 2002