

NOTE ON INTERLINKING OF RIVERS

Under the National Perspective Plan for water resources development through inter basin transfer of water, prepared by the then Ministry of Irrigation (now Ministry of Jal Shakti), for transferring water from water surplus basins to water-deficit basins, NWDA has identified 30 links (16 under Peninsular Component & 14 under Himalayan Component) for preparation of Feasibility Reports. NWDA has completed water balance studies of basins/sub-basins and catchments up to diversion points, topo sheet studies of reservoirs and linkalignments, storage capacity studies of reservoirs, pre-feasibility studies, feasibility studies and Detailed Project Report (DPR) towards the implementation of inter-linking of rivers in the country as follows:

Sl. No	Particulars	Peninsular Component	Himalayan Component	Total
A	Proposals under National Perspective Plan			
1.	Water balance studies of basins/sub-basins	137	--	137
2.	Water balance studies of diversion points	52	19	71
3.	Toposheet and storage capacity studies of reservoir	58	16	74
4.	Toposheet studies of link alignment	18	19	37
5.	Pre-feasibility reports (PFR)	19	14	33
6.	Surveys and Investigations and Preparation of Feasibility Reports (FR) of specific links	14	10 (3 Indian Portion) & (1 draft)	24
7	Detailed Project Report of link Projects	8*	-	-
B	Intra-State link proposals of State Governments			
1	Pre-Feasibility Report	39		
2	Detailed Project Report of link	6**		

(*) 1. Ken-Betwa Link Project(Comprehensive report of Phase-I&II) 2. Damanganga-Pinjal link project 3. Par-Tapi-Narmada link project, 4. Cauvery-Vaigai-Gundar link project. 5,6,7: Godavari-Cauvery(Grand Anicut) link project has been prepared comprising of Godavari(Inchampalli/Janampet) – Krishna (Nagarjunasagar), Krishna (Nagarjunasagar)- Pennar (Somasila) and Pennar (Somasila) – Cauvery (Grand Anicut) link projects 8: Draft DPR of Bedti- Varda is completed and circulated.

(**)1. Burhi Gandak-Noon-Baya-Ganga link 2. Kosi-Mechi link 3. Ponnaiyar (Nedungal) - Palar link and 4. Wainganga (Gosikhurd)-Nalganga (Purna/ Tapi) link project and 2 Draft DPRs viz; 5. Damanganga (Ekdare) - Godavari link project and 6. Damanganga (Vagh/Val) - Vaitarna-Godavari (Kadva Dev) link project are completed.

The present status of IBWT links under Peninsular and Himalayan rivers development components and link wise benefits are given at **Annexure – I and II** respectively. The present status of Intra-State links as suggested by States is given in **Annexure - III**.

Annexure-I

**Status Of Inter Basin Water Transfer Link Schemes Under
Peninsular Component**

Sl. No	Name	States benefited	Status
1	a) Mahanadi (Manibhadra) - Godavari (Dowlaiswaram) link	AP & Odisha	FR completed
	b) Alternate Mahanadi (Barmul) - Rushikulya - Godavari (Dowlaiswaram) link		FR completed and DPR in progress
2	Godavari (Polavaram) - Krishna (Vijayawada) link	AP	FR completed
3	a) Godavari (Inchampalli) - Krishna (Nagarjunasagar) link	Telangana	FR completed
	b) Alternate Godavari (Inchampalli) - Krishna (Nagarjunasagar) link *	Telangana	DPR completed
4	Godavari (Inchampalli) - Krishna (Pulichintala) link	Telangana & AP	FR completed and DPR in progress
5	a) Krishna (Nagarjunasagar) - Pennar (Somasila) link	AP	FR completed
	b) Alternate Krishna (Nagarjunasagar) - Pennar (Somasila) link *	AP	DPR completed
6	Krishna (Srisailam) - Pennar link	--	FR completed and DPR in progress
7	Krishna (Almatti) - Pennar link	AP & Karnataka	FR completed and DPR in progress
8	a) Pennar (Somasila) - Cauvery (Grand Anicut) link	AP, Tamil Nadu & Puducherry	FR completed
	b) Alternate Pennar (Somasila) - Cauvery (Grand Anicut) link *	AP, Tamil Nadu & Puducherry	DPR completed
9	Cauvery (Kattalai) - Vaigai - Gundar link	Tamil Nadu	DPR completed
10	a) Parbati -Kalisindh - Chambal link	MP & Rajasthan	FR completed
	b) Parbati - Kuno - Sindh link. \$	MP & Rajasthan	PFR completed
	c) Integration of modified Parbati - Kalisindh-Chambal link with Eastern Rajasthan Canal Project (ERCP)	MP & Rajasthan	PFR of Modified PKC Link project completed
11	Damanganga - Pinjal link (As per DPR)	Maharashtra (only water supply to Mumbai)	DPR completed (Updation of DPR including latest data is under progress)
12	Par-Tapi-Narmada link (As per DPR)	Gujarat	DPR completed (Updation of DPR including latest data is under

			progress)
13	Ken-Betwa link	Uttar Pradesh & Madhya Pradesh	DPR completed and implementation is initiated
14	Pamba - Achankovil - Vaippar link	Tamil Nadu and Kerala	FR completed
15	Bedti - Varda link	Karnataka	Draft DPR completed
16	Netravati - Hemavati link **	Karnataka	PFR completed

* Due to pending consensus on Manibhadra and Inchampalli dams, Alternate study to divert unutilized waters of Godavari river carried out and DPR of Godavari (Inchampalli/ Janampet) - Krishna (Nagarjunasagar) - Pennar (Somasila) - Cauvery (Grand Anicut) link projects completed. Godavari-Cauvery (Grand Anicut) link project has been prepared comprising of Godavari (Inchampalli / Janampet) - Krishna (Nagarjunasagar), Krishna (Nagarjunasagar)- Pennar (Somasila) and Pennar(Somasila)-Cauvery(Grand Anicut) link projects.

** Further studies are not taken up since after implementation of Yettinahole project by Govt. of Karnataka, no surplus water is available in Netravati basin for diversion through this link.

\$ Integration of Eastern Rajasthan Canal Project of Rajasthan and Parbati - Kalisindh-Chambal link

Himalayan Component

Sl. No.	Name of the Link	Country/ States benefited	Status
1.	Kosi-Mechi link	Bihar & Nepal	PFR completed
2.	Kosi-Ghaghra link	Bihar & U.P & Nepal	PFR completed & Draft FR under modification
3.	Gandak - Ganga link	U.P & Nepal	FR completed (Indian portion)
4.	Ghaghra - Yamuna link	U.P & Nepal	FR completed (Indian portion)
5.	Sarda - Yamuna link	U.P & Uttarakhand	FR completed & DPR under progress (Indian portion)
6.	Yamuna-Rajasthan link	Haryana & Rajasthan	FR completed
7.	Rajasthan-Sabarmati link	Rajasthan & Gujarat	FR completed
8.	Chunar-Sone Barrage link	Bihar & U.P	FR under modification
9.	Sone Dam - Southern Tributaries of Ganga link	Bihar & Jharkhand	PFR completed & FR under progress
10.	Manas-Sankosh-Tista-Ganga (M-S-T-G) link	Assam, W.B & Bihar	FR completed and DPR in progress
11.	Jogighopa-Tista-Farakka link (Alternative to M-S-T-G)	Assam, W.B & Bihar	PFR completed
12.	Farakka-Sundarbans link	W.B	FR completed
13.	Ganga(Farakka) - Damodar-Subarnarekha link	W.B., Odisha & Jharkhand	FR completed and DPR in progress
14.	Subarnarekha-Mahanadi link	W.B. & Odisha	FR completed & DPR under progress

Annexure-II

Benefits from Proposed Inter Basin Water Transfer Links
Peninsular Component

Sl. No	Name	States benefited	Annual Irrigation (Lakh ha)	Domestic & Industrial (Mm³)	Hydro power (MW)
1	a) Mahanadi (Manibhadra) - Godavari (Dowlaiswaram) link	AP & Odisha	4.43	700	450
	b) Alternate Mahanadi (Barmul) - Rushikulya - Godavari (Dowlaiswaram) link	AP & Odisha	6.25 (0.91 + 3.52 + 1.82**)	700 (MGL) +125**	210 (MGL) + 240**
2	Godavari (Polavaram) - Krishna (Vijayawada) link	AP	2.1	162	--
3	a) Godavari (Inchampalli) - Krishna (Nagarjunasagar) link	Telangana	2.87	237	975+70= 1045
	b) Alternate Godavari (Inchampalli) - Krishna (Nagarjunasagar) link *	Telangana	3.67	140	60
4	Godavari (Inchampalli) - Krishna (Pulichintala) link	Telangana & AP	6.13 (1.09 + 5.04)	413	27
5	a) Krishna (Nagarjunasagar) - Pennar (Somasila) link	AP	5.81	124	90
	b) Alternate Krishna (Nagarjunasagar) - Pennar (Somasila) link *	AP	2.94	218	90
6	Krishna (Srisailam) - Pennar link	--	--	--	17
7	Krishna (Almatti) - Pennar link	AP & Karnataka	2.58 (1.9+0.68)	56	13.5

8	a) Pennar (Somasila) - Cauvery (Grand Anicut) link	AP, Tamil Nadu & Puducherry	4.91 (0.49+ 4.36 +0.06)	1105	--
	b) Alternate Pennar (Somasila) - Cauvery (Grand Anicut) link *	AP, Tamil Nadu & Puducherry	2.83 (0.51+2.32)	1098 (62+1036)	
9	Cauvery (Kattalai) - Vaigai -Gundar link	Tamil Nadu	4.48	218	--
10	a) Parbati -Kalisindh - Chambal link	MP & Rajasthan	#Alt.I =2.30 Alt.II = 2.20	- 13.2	--
	b) Parbati - Kuno - Sindh link. \$	MP & Rajasthan			
	c) Integration of modified Parbati - Kalisindh-Chambal link with Eastern Rajasthan Canal Project (ERCP)	MP & Rajasthan			
11	Damanganga - Pinjal link (As per DPR)	Maharashtra (only water supply to Mumbai)	--	895	5
12	Par-Tapi-Narmada link (As per DPR)	Gujarat	2.32	76	21
13	Ken-Betwa link	Uttar Pradesh & Madhya Pradesh	10.62 (2.51+8.11)	194	103 (Hydro) & 27MW (Solar)
14	Pamba - Achankovil - Vaippar link	Tamil Nadu & Kerala	0.91 ---	--	--- 508
15	Bedti - Varda link	Karnataka	0.60	----	----
16	Netravati - Hemavati link**	Karnataka	0.34	--	--

** Benefit from Six Projects of Govt. of Odisha

Alt I- Linking with Gandhisagar Dam, Alt. II- Linking with Rana Pratapsagar Dam

Himalayan Component

Sl. No.	Name of the Link	States concerned	Country/ States benefited	Annual Irrigation (Lakh ha)	M&I (Mm ³)	Hydro power (MW)
1.	Kosi-Mechi link	Bihar & W.B	Bihar & Nepal	4.74 (2.99+1.75)	24	3180
2.	Kosi-Ghaghra link	Bihar & U.P	Bihar, U.P & Nepal	10.58 (8.17+0.67 + 1.74)	48	--
3.	Gandak - Ganga link	Bihar & U.P	U.P & Nepal	34.58(28.80 +5.78)	700	4375 (Dam PH) & 180 (Canal PH)
4.	Ghaghra - Yamuna link	Bihar & U.P	U.P & Nepal	26.65 (25.30 + 1.35)	1391	10884
5.	Sarda - Yamuna link	Bihar, U.P, Haryana, Rajasthan & Uttarakhand	U.P & Uttarakhand	2.95 (2.65 +0.30)	3054	3600
6.	Yamuna-Rajasthan link	UP, Gujarat, Haryana & Rajasthan	Haryana & Rajasthan	2.51 (0.11+ 2.40)	30	--
7.	Rajasthan-Sabarmati link	UP, Gujarat, Haryana & Rajasthan	Rajasthan & Gujarat	11.53 (11.21+0.3)	102	--
8.	Chunar-Sone Barrage link	Bihar & U.P	Bihar & U.P	0.67 (0.30+0.37)	--	--
9.	Sone Dam - Southern Tributaries of Ganga link	Bihar & Jharkhand	Bihar & Jharkhand	3.07 (2.99+ 0.08)	360	95(90 Dam PH) & 5 (Canal PH)
10.	Manas-Sankosh-Tista-Ganga (M-S-T-G) link	Assam, W.B & Bihar	Assam, W.B & Bihar	3.41 (2.05 + 1.00 + 0.36)	--	--
11.	Jogighopa-Tista-Farakka link (Alternative to M-S-T-G)	-do-	Assam, W.B & Bihar	3.559 (0.975+ 1.564+1.02)	265	360
12.	Farakka-Sundarbans link	W.B	W.B	1.50	184	--
13.	Ganga(Farakka) Damodar-Subarnarekha link	W.B., Odisha & Jharkhand	W.B., Odisha & Jharkhand	12.30 (11.18+ 0.39+ 0.73)	432	--
14.	Subarnarekha-Mahanadi link	W.B. & Odisha	W.B. & Odisha	1.63 (0.18+ 1.45)	198	9

	Irrigation benefits to Southern States through integration of Himalayan Component with Peninsular Component		Southern States	30.0		
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Note: Annual irrigation includes existing commands taken over by some links especially in U.P. and A.P.

Annexure:III

Intra – State link proposals received from the State Governments

Sl. No	Name of Intra-State link	Rivers	Present status of PFR / DPR
MAHARASHTRA			
1	Wainganga (Goshikurd) – Nalganga (Purna Tapi)	Wainganga & Nalganga	DPR completed.
2	Wainganga–Manjra Valley	Wain ganga & Manjra	PFR completed (Not found feasible)
3	Upper Krishna – Bhima (system of Six links)	Krishna & Bhima	PFR completed
4	Damanganga (Ekdare)-Godavari Valley	Damanganga & Godavari	Draft DPR completed
5(i)	Upper Vaitarna-Godavari valley	Vaitarna & Godavari	PFR completed.
5(ii)	Damanganga-Vaitarna-Godavari (Kadva/Dev)Valley	Damanganga, Vaitarna & Godavari	Draft DPR completed
6	North Konkan–GodavariValley	Patalganga & Godavari	PFR completed (Not found feasible)
7	Koyna– Mumbai city	Koyna	PFR completed
8	Sriram SagarProject (Godavari) –Purna–Manjira	Godavari,Purna & Manjira	PFR completed
9	Wainganga (Gosikhurd)–Godavari (SRSP)	Wain ganga & Godavari	Withdrawn by Govt. of Maharashtra
10	Middle Konkan–Bhima Valley	Savitri, Kundalika, Amba & Bhima	PFR completed (Not found feasible)
11	Koyna–Nira	Koyna & Nira	PFR completed
12	Mulsi–Bhima	Mulsi & Bhima	PFR completed
13	Savithri–Bhima	Savithri & Bhima	PFR completed
14	Kolhapur–Sangli–Sangola	Krishna & Bhima	PFR completed
15	River linking projects of Tapi basin and Jalgaon District	Tapi	PFR completed
16	Nar–Par–Girna valley	Nar, Par & Girna	PFR completed (Not found feasible)

17	Narmada-Tapi	Narmada & Tapi	PFR completed
18	Khariagutta-Navatha Satpura foothills	Dropped	Groundwater recharge schemes to be studied by CGWB, as such not accepted by NWDA for PFR studies.
19	Kharia Ghuti Ghat-Tapi	Dropped	
20	Jigaon-Tapi-Godavari Valley	Tapi & Godavari	PFR completed (Not found feasible)
GUJARAT			
21	Damanganga - Sabarmati - Chorwad	Daman ganga, Sabarmati & Chorwad	PFR completed
ODISHA			
22	Mahanadi-Brahmani	Mahanadi & Brahmani	PFR completed (Not found feasible)
23	Mahanadi-Rushikulya (Barmul Project)	Mahanadi & Rushikulya	PFR completed.
24	Vamsadhara-Rushikulya (Nandini Nalla project)	Vamsadhara & Rushikulya	PFR completed
25	Nagavalli- Vamsadhara - Rushikulya	Nagavalli, Rushikulya & Vamsadhara	PFR completed
JHARKHAND			
26	SouthKoel-Subernarekha	South Koel & Subernarekha	PFR completed
27	Sankh-SouthKoel	Sankh & SouthKoel	PFR completed
28	Barakar-Damodar-Subernarekha	Barkar, Damodar & Subernarekha	PFR completed
BIHAR			
29	Kosi-Mechi[entirely lie in India]	Kosi & Mechi	DPR completed. Environment & Investment clearance accorded. Updation of DPR under progress.
30	Barh-Nawada	Ganga & Kiul	PFR completed (Not found feasible)
31	Kohra - Chandravat (Kohra-Lalbegi)	Kohra & Chandravat	PFR completed (Not found feasible)
32	Burhi Gandak- None-Baya-Ganga	Burhi Gandak ,None, Baya & Ganga	DPR completed, CWC opined that the project may be considered as Flood Moderation project. Informed to Govt.of Bihar.
33	Burhi Gandak - Bagmati [Belwadhar]	Burhi Gandak & Bagmati	PFR completed (Not found feasible)
34	Kosi-Ganga	Kosi & Ganga	PFR completed
35	Development of Bagmati Irrigation & Drainage Project-	Kosi, Adhwara & Bagmati	PFR completed (Not found feasible)

	Phase-II (Barragenear Kataunjha in Muzaffarpur District) and Adhwara Multipurpose Project with Kosi-Adhwara-Bagmati Link		
36	Transfer of Ganga water to South Bihar through pump Canal Scheme at Buxer	Ganga	Initially, NWDA consented to take up the studies but after receiving the details from Govt. of Bihar, it was found that these are not intra-state links and therefore not taken up the studies.
37	Development of Badua-Chandan Basin	Badua & Chandan	
38	Sone-Falgu link	Sone & Falgu	Preliminary Study was taken up (Not found feasible)
RAJASTHAN			
39	Mahi-Luni link	Mahi & Luni	PFR completed (Not found feasible)
40	Wakal-Sabarmati-Sei-West Banas-Kamerilink	Wakal, Sabarmati, Sei, West Banas & Kameri	PFR completed (Not found feasible)
TAMIL NADU			
41	Ponnaiyar-Palar link	Ponnaiyar & Palar	PFR and DPR completed
KARNATAKA			
42	Almatti (Bagalkot)-Malaprabha Sub-basin	Almatti & Malaprabha	Prima Facie Not found feasible
43	Malaprabha-Tungabhadra Sub-basin	Malaprabha & Tungabhadra	Prima Facie Not found feasible
44	Bedti-Dharma-Varada link	Bedti,Dharma & Varada	PFR completed
45	Bhadra-Vedavathi (Vani Vilasa Sagar) link	Bhadra & Vedavathi	Government of Karnataka withdrew the proposal during 11 th meeting of Special Committee for ILR.
46	Diversion of west flowing rivers schemes (Barapole-upper Cauvery link)	Barapole & upper Cauvery	
47	Diversion from Bedti & Aghanashini toVarada	Aghanashini & Varada	PFR completed.
CHATTISGARH			
48	Paury-Mahanadi link	Paury & Mahanadi	PFR completed
UTTAR PRADESH			
49	Sharda-Gomti link	Sharda & Gomti	PFR completed

Proposed Inter Basin Water Transfer Links Under Study

