

National Water Development Agency
Note on interlinking of rivers projects in the Country
Details and status

1.0 Background

Suggestions for a National water grid for transferring water from water rich regions to water-deficit areas have been made from time to time. Two proposals, put forth earlier in the seventies which attracted considerable attention, are National Water Grid by Dr. K. L. Rao and Garland Canal by Captain Dastur. These proposals were not pursued further by the Government as they were not techno-economically feasible.

The continued interest shown by various quarters gave impetus to study inter-basin water transfer proposals. The then Ministry of Irrigation (now Ministry of Jal Shakti(MoJS), Department of Water Resources, River Development & Ganga Rejuvenation(DoWR, RD& GR)) formulated a National Perspective Plan (NPP) for Water Resources Development in August 1980 envisaging inter basin water transfer in the country. The National Perspective Plan comprises of two components, namely i) Peninsular Rivers Development and ii) Himalayan Rivers Development.

The National Water Development Agency (NWDA) was set up on 17th July 1982 by Government of India as a Society under Societies registration act 1860 under the Ministry of Water Resources(now MoJS, DoWR, RD&GR) to study the feasibility of the links under Peninsular Component of National Perspective Plan. The NWDA is fully funded by Government of India. Subsequently in 1990-91, NWDA Society resolved to take up the studies of Himalayan Component also. Further, on 28th June, 2006 preparation of DPR of link projects and pre- feasibility/ feasibility reports of intra-basin links as proposed by States were also included in the functions of NWDA Society. Accordingly, MoWR(now MoJS) vide resolution dtd. 30.11.2006 has modified the functions of NWDA Society. The functions of NWDA were further modified vide MoWR resolution dated 19.5.2011 to undertake the work of preparation of DPRs of intra-state links also by NWDA vide Gazette notification dated June 11, 2011. Further, two new functions in the mandate of NWDA were added vide Gazette notification dated 07.10.2016. During the 6th SGM of NWDA held on 21.08.2019, the item No.d of the functions of NWDA has been amended and the same has been notified in the Gazette on 19.03.2020.

The functions of the NWDA at present are as follows:

- (a) To carry out detailed survey and investigations of possible reservoir sites and inter- connecting links in order to establish feasibility of the proposal of Peninsular Rivers Development and Himalayan Rivers Development Components forming part of the National Perspective for Water Resources Development prepared by the then Ministry of Irrigation (now MoJS, DoWR, RD&GR) and Central Water Commission.

- (b) To carry out detailed studies about the quantum of water in various Peninsular River systems and Himalayan River systems which can be transferred to other basins/ States after meeting the reasonable needs of the basin/States in the foreseeable future.
- (c) To prepare feasibility report of the various components of the scheme relating to Peninsular Rivers development and Himalayan Rivers development.
- (d) To carry out surveys & investigations work and prepare Detailed Project Reports of river link proposals under National Perspective Plan for Water Resources Development and thereafter approach concerned States for obtaining concurrence for implementation of the project.
- (e) To prepare pre – feasibility / feasibility / detailed project reports of the intra-state links as may be proposed by the States. The concurrence of the concerned co-basin States for such proposals may be obtained before taking up their FRs / DPRs.
- (f) To undertake/construct/repair/renovate/rehabilitate/implement the projects either on its own or through an appointed Agency/Organization/PSU or Company and the projects forming part of Interlinking of Rivers, for completion of projects falling under Pradhan Mantri Krishi Sinchai Yojana (PMKSY) of which projects under Accelerated Irrigation Benefits Programme (AIBP) are also included and similar other projects.
- (g) NWDA to act as a repository of borrowed funds or money received on deposit or loan given on interest or otherwise in such manner, as directed by MoWR, RD & GR (now MoJS, DoWR, RD&GR) and to secure the repayment of any such borrowed funds/money/deposits/loan etc. by way of mortgage, pledge, charge or lien upon all or any other property, assets or revenue of the society both present and future.
- (h) To do all such other things the Society may consider necessary, incidental, supplementary or conducive to the attainment of above objectives.

2.0 Studies Completed by NWDA

NWDA carried out Water Balance Studies of 137 basins/sub-basins and 71 diversion points. It also carried out toposheet studies of 74 reservoirs & 37 link alignments. Based on these studies, NWDA identified 30 links (16 under Peninsular Component & 14 under Himalayan Component) for preparation of Feasibility Reports (FRs) (Details given in Annex-I). Out of these, FR of 14 links under Peninsular Component and FR of 2 links (Indian portion) and Draft FR of 7 links under Himalayan Component have been completed. Field surveys & investigations for the remaining links under Himalayan Component are under progress except one link namely Kosi-Mechi which lies entirely in Nepal.

**Studies/reports completed by National Water Development Agency
under National Perspective Plan**

| 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. | Prefeasibility reports (PFR) | 18 | 14 | 32 |
| 6. | Surveys and Investigations and Preparation of Feasibility Reports (FR) of specific links | 14 | 2 (Indian Portion) | 16 |
| 7. | Detailed Project Report of link Projects | 3 | - | 3 |
| 8. | Draft DPR of Godavari-Cauvery link project | 3** | | |
| B | Intra-State link proposals of State Governments | | | |
| 1 | Pre-Feasibility Report | | 37 | |
| 2 | Detailed Project Report of link | | 4*** | |

(*) 1.Ken-Betwa Link Project(Comprehensive report of Phase-I&II) 2. Damanganga-Pinjal link project 3. Par-Tapi-Narmada link project.

(**) Draft DPR of 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.

(***) 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

2.1 Pre-Feasibility Reports:

NWDA completed the pre-feasibility reports of all the 30 links identified under National Perspective Plan(NPP) for water resources development. PFR of integration of Parbati-KunoSindh link with Eastern Rajasthan Canal Project has been prepared and sent to Govts of Rajasthan, MP, WAPCOS and CWC on 29.06.2020.

2.2 Feasibility Reports:

NWDA completed the feasibility reports of i)14 links under Peninsular Component and ii)2 links(India part) under Himalayan Component. In addition, draft Feasibility Reports of 7 (seven) links (India part) under Himalayan Component have also been completed. FRs of Mahanadi (Barmul)-Rushikulya-Godavari(Dowlaiswaram) and Manas-Sankosh-Teesta-Ganga(MSTG) link projects are presently under finalisation. Modifications of Feasibility Report of Sardar-Yamuna link project based on DPR of Pancheswar Dam in Nepal are also in progress. The impact of outcome of this study will be considered in the draft FRs of Yamuna-Rajasthan and Rajasthan-Sabarmati link projects and the reports revised. Similarly, the impact of outcome of FR of Manas-Sankosh-Teesta-Ganga link project will be considered in the draft FRs of Ganga-Damodar-Subernarekha and Subernarekha-Mahanadi link projects and the reports revised.

2.3 Detailed Project Reports (DPRs) of Priority Links

Four priority links for preparation of Detailed Project Reports (DPRs) have been identified viz; Ken-Betwa link (Phase –I & II), Damanganga-Pinjal Link, Par-Tapi-Narmada link and Godavari-Cauvery link.

The Detailed Project Report of Ken-Betwa link project Phase-I was completed by NWDA in April, 2010 and submitted to Governments of MP and UP in May, 2010. Detailed Project Report of Ken-Betwa link project Phase-II has been completed in January, 2014 and submitted to the concerned State Governments of Madhya Pradesh and Uttar Pradesh. The various statutory clearances w.r.t. environment, forest and wildlife, MoTA and investment clearances for Ken-Betwa Link Project-Phase-I have been obtained. Based on the suggestions of Govt of Maharashtra, the DPRs of projects under Phase-II viz, Lower Orr dam, Kotha Barrage and Bina complex projects have been completed and are under appraisal in CWC. Most of the clearances for Phase-II projects have also been accorded/obtained from concerned Ministries/Departments. The Government will be implementing this National Project as a model link project of ILR programme after the required clearances and approval.

For the two priority links namely Damanganga-Pinjal and Par-Tapi-Narmada links, a Memorandum of Understanding (MoU) was signed by the Chief Ministers of Gujarat, Maharashtra and the Union Minister for Water Resources on 3.05.2010 for the preparation of DPRs by NWDA. The DPR of Damanganga-Pinjal link has been completed in March, 2014 and submitted to Govt. of Maharashtra and Gujarat. The techno-economic clearance for this project was accorded by Advisory committee of Ministry of Jal Shakti. The DPR of Par-Tapi-Narmada link project has also been completed in August, 2015 and submitted to Govt. of Gujarat and Maharashtra. The DPR of Par-Tapi-Narmada link has been modified in April, 2017 duly considering the suggestions of Government of Gujarat to include more tribal areas in the command of the project. The modified DPR is presently under appraisal in CWC.

Pending consensus on Manibhadra and Inchampalli dams, alternate study to divert unutilised waters of Godavari river has been carried out and a Technical

Feasibility Note for Godavari-Cauvery link is prepared and circulated among party States. Draft DPR of Godavari (Inchampalli/Janampet)-Cauvery (Grand Anicut) link project has been completed and circulated to party States, in March 2019.

DPR of Cauvery-Vaigai-Gundar link project is under finalization.

DPR of Bedti-Varada link project has been taken up including alternates suggested by Govt of Karnataka.

The consensus building for preparation of the Detailed Project Report of the Mahanadi – Godavari link, a mother link of 9 link system viz., Mahanadi – Godavari - Krishna – Pennar – Palar – Cauvery – Vaigai – Gundar linkage with concerned State of Odisha is under process.

3.0 Intra-State Link Projects

NWDA so far has received 47 proposals of Intra-State links from 9 States viz; Maharashtra, Gujarat, Jharkhand, Odisha, Bihar, Rajasthan, Tamil Nadu, Karnataka and Chhattisgarh. The Pre-feasibility Reports (PFRs) of 37 Intra-State links have been completed. The DPR of 2 Intra-State links viz. Burhi Gandak-Noon-Baya-Ganga and Kosi- Mechi link were completed and submitted to Govt. of Bihar in December, 2013 and March, 2014 respectively. The DPRs of Ponnaiyar - Palar link of Tamil Nadu and Wainganga - Nalganga link of Maharashtra were also completed and sent to concerned States in August 2018 and November 2018 respectively. Two intra-State links of Maharashtra: (i) Damanganga (Ekdare) – Godavari link and (ii) Damanganga-Vaitarna-Godavari link have been taken up for preparation of DPRs on consultancy basis. The present status of intra-state river link proposals received from the State Governments is given at Annex-II.

4.0 Benefits from Interlinking of Rivers Projects as per National Perspective Plan

The implementation of National Perspective Plan would give benefits of 35 million hectares of irrigation (25 million ha from surface waters and 10 million ha by increased use of ground waters), raising the ultimate irrigation potential from 140 million ha to 175 million ha and generation of 34000 Megawatt of hydro power, apart from the incidental benefits of flood control, navigation, water supply, fisheries, salinity and pollution control etc. The details of benefits from each link as per PFR/FR/DPR are shown in Annex-I.

5.0 Hon'ble Supreme Court Judgment regarding "Networking of Rivers"

Judgment of the Hon'ble Supreme Court

The Hon'ble Supreme Court in the matter of Writ Petition (Civil) No. 512 of 2002 "In Re: Networking of Rivers" alongwith Writ Petition (Civil) No. 668 of 2002 delivered a judgment dated 27.2.2012. The Hon'ble Supreme Court has directed that an appropriate body should be created to plan, construct and implement the inter linking of rivers program for the benefit of the nation as a whole.

5.1 Constitution of the Special Committee for Interlinking of Rivers

Union Cabinet in its meeting held on 24.07.2014 has approved the constitution of the "Special Committee on the Inter-linking of Rivers" in light of the judgment dated 27.02.2012 of the Hon'ble Supreme Court. The Special Committee has been constituted by the Ministry of WR, RD and GR vide Gazette Notification dated 23.09.2014. Seventeen meetings of Special Committee for Interlinking of River (ILR) have been held on dated 17.10.2014, 06.01.2015, 19.03.2015, 14.05.2015, 13.07.2015, 15.09.2015, 18.11.2015, 08.02.2016, 29.04.2016, 26.07.2016, 09.11.2016, 08.03.2017, 27.07.2017, 17.01.2018, 20.08.2018, 21.08.2019 and 26.02.2020 respectively.

The Special Committee for Interlinking of River decided to constitute various Sub-Committees. The Ministry of Water Resources, RD & GR(now Jal Shakti) vide O.M. dated 13.02.2015 had constituted three Sub-Committees i.e. (i) Sub-Committee for Comprehensive Evaluation of various Studies/Reports available on the issues of ILR (Sub-Committee-I); (ii) Sub-Committee for System Studies for identification of most appropriate alternative plan (Sub-Committee-II); and (iii) Sub-Committee for Restructuring of NWDA (Sub-Committee-III). The existing "Consensus Group" functioning under Chairman, CWC has been renamed as "Sub-Committee for consensus building through negotiations and arriving at agreements between the concerned States" (Sub-Committee-IV) by MoWR, RD & GR vide letter dated 20.01.2016. The Sub-Committee for Restructuring of NWDA has completed its work and submitted the Report to the Hon'ble Minister (WR, RD & GR) on 15.09.2015. Eight meetings of the Sub-Committee-I and Fifteen meetings of the Sub-Committee-II have been held so far.

5.2 Constitution of Task Force for Interlinking of Rivers (ILR)

Ministry of Water Resources, River Development & Ganga Rejuvenation(now Ministry of Jal Shakti) vide O.M. No. 2/5/2015-BM/630-645 dated 13.04.2015 has constituted a Task Force for Interlinking of River to look into the issues relating to Interlinking of Rivers. Eleven meetings of the Task Force has been held on 23.04.2015, 5.11.2015, 28.04.2016, 15.06.2016, 25.10.2016, 13.02.2017, 11.05.2017, 15.09.2017, 30.05.2018, 05.10.2018 and 18.10.2019.

5.2.1 Constitution of Group on legal aspects under Task Force for Interlinking of Rivers (TF-ILR)

In pursuance of the decision of the Task Force for Interlinking of Rivers taken in its 4th meeting held on 15th June 2016, a Group has been constituted vide Office Memorandum dated 18.07.2016 to look into legal aspects and required enabling Provisions for implementation of Interlinking of Rivers and other related issues. The Group has completed its assigned task and submitted its report to the Chairman, TF-ILR during March, 2017. The report was independently examined by CWC. Later 7th meeting of the Task Force was specially convened to discuss the Report of the Group on legal aspects. After discussion it was decided to obtain legal opinion on the recommendations of the Group. Based on request, Prof. Madhava Menon, Retd.

Director, Bangalore Law University has submitted his opinion on 11.08.2017 which was considered by the Task Force in its meeting held on 15.09.2017. Chairman, TF-ILR has submitted the report of the Legal Group to Hon'ble Minister for Jal Shakti vide letter dated 02.11.2018.

5.2.2 Constitution of the Financial Group under Task Force for Interlinking of Rivers

MoWR, RD & GR vide OM dated 12.09.2017 has constituted a Group on Financial Aspects under Task Force for Interlinking of Rivers under the Chairmanship of Dr. Prodipto Ghosh, former Secretary to the Government of India and Member of the Task Force. As per terms of reference of the Group, the Group would look into the financial aspects of various inter-basin water transfer links identified by NWDA and suggest funding pattern for implementation of these links. The Group has submitted its interim report on 07.08.2018. The Chairman, TF-ILR has submitted the report of the Financial Group to Hon'ble Minister for Jal Shakti vide letter dated 02.11.2018.

6.0 Constitution of Group on Intra-State River links

Ministry of Jal Shakti vide O.M. dated 12.03.2015 constituted a Group on Intra-State river links under the Chairmanship of Shri A. D. Mohile, former Chairman, Central Water Commission. The Group has completed the assigned task and submitted its report on 28.05.2015 to the Secretary, Department of WR,RD&GR, Ministry of Jal Shakti.

7.0 Circulation of Draft Cabinet Note(DCN)

Draft Cabinet Note for Centre-State funding pattern in the ratio of 90:10 for ILR projects (Inter-State & Intra-State), in principle approval for internal and external funding and setting up of National Interlinking of Rivers Authority(NIRA) for implementation of ILR projects circulated by MoWR,RD&GR on 20.07.2018.

8.0 National Interlinking of Rivers Authority(NIRA)

Draft bill for constitution of NIRA & draft Cabinet Note for NIRA have been prepared and sent to Ministry of Jal Shakti on 22.06.2019 and 31.07.2019 respectively. Updated draft Cabinet Note for Centre-State funding pattern in the ratio of 90:10 for ILR projects (Inter-State & IntraState), in principle approval for internal and external funding and setting up of National Interlinking of Rivers Authority(NIRA) for implementation of ILR projects has been prepared and sent to DoWR,RD&GR, MoJS on 23.10.2019.

9.0 NABARD Funding under PMKSY-AIBP

NWDA has been identified to act as an agency for borrowing resources from LTIF and release Central Assistance to the State Governments towards the prioritized PMKSY- AIBP (Major & Medium Irrigation) Projects and their CADWM works, for their completion in time bound manner. Memorandum of Agreement for

borrowing from NABARD to fund Central share in these projects was signed by the Ministry of Water Resources, RD & GR, NWDA and NABARD on 6th September, 2016.

The loan released by NABARD is being distributed to the States and Polavaram Project Authority as per the direction of MoJS.

NWDA released an amount of Rs. 22495.62 Crore as Central Assistance to various States, Polavaram project and North Koel project since 2016 to May 2020. The yearwise releases are furnished below:

| Sl. No. | Year | CA released (Rs. In crore) |
|----------------|--------------|-----------------------------------|
| 1 | 2016-17 | 5751.04 |
| 2 | 2017-18 | 6534.78 |
| 3 | 2018-19 | 5493.40 |
| 4 | 2019-20 | 3813.30 |
| 5 | 2020-21 | 903.10 |
| | Total | 22495.62 |

ANNEX – I

Present status of Inter Basin Water Transfer Links

| Sl. No | Name | States concerned | States benefited | Annual Irrigation (Lakh ha) | Domestic and Industrial supply (MCM) | Hydro power (MW) | Status |
|-----------------------------|--|--|----------------------------|-----------------------------|--------------------------------------|------------------|------------------------------|
| Peninsular Component | | | | | | | |
| 1 | Mahanadi (Manibhadra) - Godavari (Dowlaiswaram) link | Odisha, Maharashtra, AP,MP Karnataka, Telangana, Jharkhand, Maharashtra Chattisgarh, | Andhra Pradesh & Orissa | 0.91+3.52 = 4.43 | 802 | 445 | Feasibility Report Completed |
| 2 | Godavari (Inchampalli)-Krishna (Pulichintala) link | Odisha, Maharashtra, Madhya Pradesh, Andhra Pradesh, Telangana, Karnataka & Chattisgarh, | Telangana & Andhra Pradesh | 1.09+5.04 =6.13 | 413 | -- | Feasibility Report Completed |
| 3 | Godavari (Inchampalli)-Krishna (Nagarjunasagar) link | -do- | Telangana | 2.87 | 237 | 975 | Feasibility Report Completed |
| 4 | Godavari (Polavaram)-Krishna (Vijayawada) link | Odisha, Maharashtra, Telangana AP,MP, Karnataka, & Chattisgarh, | Andhra Pradesh | 5.82 | 162 | -- | Feasibility Report Completed |
| 5 | Krishna (Almatti) – Pennar link | -do- | Andhra Pradesh & Karnataka | 1.90+0.68 = 2.58 | 56 | -- | Feasibility Report Completed |

| Sl. No | Name | States concerned | States benefited | Annual Irrigation (Lakh ha) | Domestic and Industrial supply (MCM) | Hydro power (MW) | Status |
|--------|--|--|--|--------------------------------|--------------------------------------|--------------------------|--|
| 6 | Krishna (Srisaïlam) – Pennar link | Maharashtra, Andhra Pradesh, Karnataka & Telangana | -- | -- | -- | 17 | Feasibility Report Completed |
| 7 | Krishna (Nagarjunasagar) - Pennar (Somasila) link | Maharashtra, Telangana, Andhra Pradesh & Karnataka, | -do- | 5.81 | 124 | 90 | Feasibility Report Completed |
| 8 | Pennar (Somasila) - Cauvery (Grand Anicut) link | Andhra Pradesh, Karnataka, Tamil-Nadu, Kerala & Puducherry(UT) | Andhra Pradesh, Tamil Nadu & Puducherry | 0.49+4.36 + 0.06 = 4.91 | 1105 | -- | Feasibility Report Completed |
| 9 | Cauvery (Kattalai) - Vaigai - Gundar link | Karnataka, Tamil Nadu, Kerala & Puducherry(UT) | Tamil Nadu | 3.38 | 185 | -- | Feasibility Report Completed |
| 10 | Ken-Betwa link a) Ken-Betwa Link Phase-I b) Ken-Betwa link Phase-II | Uttar Pradesh & Madhya Pradesh - do- | Uttar Pradesh & Madhya Pradesh Madhya Pradesh | 2.51 + 4.47 = 6.98 2.06 | 127 102.9 | 103 (Hydro) + 27 (Solar) | DPR Phase-I completed in April 2010 & DPR Phase-II Completed in January 2014. Comprehensive report submitted in Oct.2018 |

| Sl. No | Name | States concerned | States benefited | Annual Irrigation (Lakh ha) | Domestic and Industrial supply (MCM) | Hydro power (MW) | Status |
|--------|--|---|---|---|--------------------------------------|------------------|--|
| 11 | Parbati -Kalisindh- - Chambal link | Madhya Pradesh, Rajasthan & Uttar Pradesh (UP requested to be consulted during consensus building) | Madhya Pradesh & Rajasthan | *Alt.I: 2.05+0.25 2.30 (Alt.II : 1.77 + 0.43 = 2.20) | 13.2 | -- | Feasibility Report Completed |
| 12 | Par-Tapi-Narmada link | Maharashtra & Gujarat | Gujarat | 2.32 | 76 | 22 | DPR completed in August, 2015. Modified in April 2017. |
| 13 | Damanganga - Pinjal link (As per DPR) | Maharashtra & Gujarat | Maharashtra (only water supply to Mumbai) | -- | 895 | -- | DPR Completed in March 2014. |
| 14 | Bedti - Varda link | Maharashtra, Andhra Pradesh & Karnataka | Karnataka | 0.60 | -- | 4 | Pre-Feasibility Report Completed |
| 15 | Netravati – Hemavati link | Karnataka, Tamil Nadu & Kerala | Karnataka | 0.34 | -- | -- | Pre-Feasibility Report Completed |
| 16 | Pamba - Achankovil - Vaippar link | Kerala & Tamil Nadu, | Tamil Nadu | 0.91 | -- | 508 | Feasibility Report Completed |

| ANNEX – I (contd..) | | | | | | | |
|----------------------------|--|---|-----------------------------|------------------------------------|---|-------------------------|---|
| S.L No. | Name of the Link | States/Country concerned | States benefited | Annual Irrigation (Lakh ha) | Domestic and Industrial supply (MCM) | Hydro power (MW) | Status |
| Himalayan Component | | | | | | | |
| 1. | Manas-Sankosh-Tista-Ganga (M-S-T-G) link | Assam, West Bengal, Bihar & Bhutan | Assam, West Bengal & Bihar | 2.08 + 1.82 + 2.64 = 6.54 | -- | 5287 | FR in progress |
| 2. | Kosi-Ghaghra link | Bihar, Uttar Pradesh & Nepal | Bihar & Uttar Pradesh | 8.17 + 0.67 + 1.74 (Nepal) = 10.58 | 48 | -- | FR in Indian portion in progress |
| 3. | Gandak-Ganga link | -do- | Uttar Pradesh | 37.99 + 2.41 (Nepal) = 40.40 | 700 | -- | Draft FR completed (for Indian portion) |
| 4. | Ghaghra-Yamuna link | -do- | Uttar Pradesh | 25.30 + 1.35 (Nepal) = 26.65 | 1391 | 10884 | FR completed (for Indian portion) |
| 5. | Sarda-Yamuna link | Bihar, Uttar Pradesh, Haryana, Rajasthan, Uttarakhand & Nepal | Uttar Pradesh & Uttarakhand | 3.45 + 0.30 = 3.75 | 6250 | 3600 | FR completed (for Indian portion) |
| 6. | Yamuna-Rajasthan link | Uttar Pradesh, Gujarat, Haryana & Rajasthan | Haryana & Rajasthan | 0.435 + 2.442 = 2.877 | 57 | -- | Draft FR completed |

| S.L No. | Name of the Link | States/Country concerned | States benefited | Annual Irrigation (Lakh ha) | Domestic and Industrial supply (MCM) | Hydro power (MW) | Status |
|----------------|---|---------------------------------|---------------------------------|--------------------------------------|---|-------------------------|---|
| 7. | Rajasthan-Sabarmati link | -do- | Rajasthan & Gujarat | 5.35 + 2.04= 7.39 | 282 | -- | Draft FR completed |
| 8. | Chunar-Sone Barrage link | Bihar & Uttar Pradesh | Bihar & Uttar Pradesh | 0.30 + 0.37= 0.67 | -- | -- | Draft FR completed |
| 9. | Sone Dam – Southern Tributaries of Ganga link | Bihar & Jharkhand | Bihar & Jharkhand | 2.99 + 0.08=3.07 | 360 | 95 | FR in progress |
| 10. | Ganga(Farakka)-Damodar- Subernarekha link | West Bengal, Orissa & Jharkhand | West Bengal, Orissa & Jharkhand | 7.63 + 0.30 + 0.55 = 8.47 | 484 | - | Draft FR completed |
| 11. | Subernarekha-Mahanadi link | West Bengal & Orissa | West Bengal & Orissa | 0.18 + 0.365 = 0.545 | -- | 9 | Draft FR Completed |
| 12. | Kosi-Mechi link | Bihar , West Bengal & Nepal | Bihar | 2.99 + 1.75 (Nepal) = 4.74 | 24 | 3180 | PFR completed. FR to be taken up Entirely lies in Nepal |
| 13. | Farakka-Sunderbans link | West Bengal | West Bengal | 1.50 | 184 | -- | Draft FR completed |
| 14. | Jogighopa-Tista-Farakka link (Alternative to M-S-T-G) | -do- | Assam, West Bengal & Bihar | ---- | 216 | 1115 | Alternative to M-S-T-G Link. Not to be taken up. |

FR -- Feasibility Report
PFR – Pre feasibility Report
DPR – Detailed Project
Report
S&I -- Survey and Investigation
MCM -- Million Cubic Meters

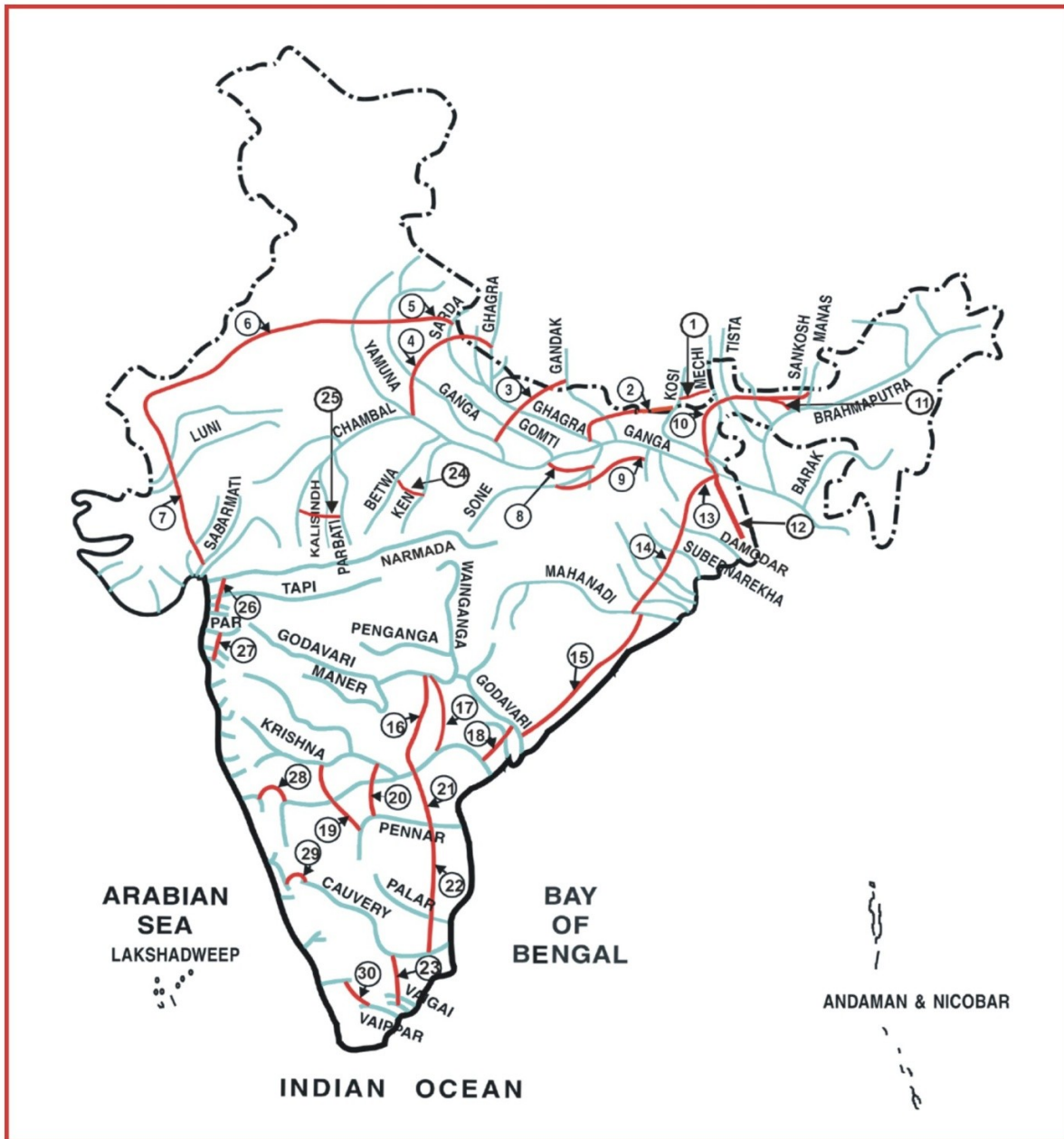
ANNEX-II**Intra – State link proposals received from the State Governments**

| Sl. No. | Name of intra-state link | Rivers | Present status of PFR/DPR |
|----------------|--|----------------------------------|--|
| | Maharashtra | | |
| 1. | Wainganga (Goshikurd) – Nalganga (Purna Tapi) | Wainganga & Nalganga | PFR and DPR completed. |
| 2. | Wainganga – Manjra Valley | Wainganga & 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 | PFR completed. DPR taken up. |
| 5.(i) | Upper Vaitarna-Godavari valley | Vaitarna&Godavari | PFR completed. |
| 5(ii) | Damanganga-Vaitarna-Godavari (Kadva Dev) Valley | Damanganga, Vaitarna & Godavari | PFR completed. DPR taken up. |
| 6. | North Konkan – Godavari Valley | Patalganga & Godavari | PFR completed (Not found feasible) |
| 7. | Koyna – Mumbai city | Koyna | PFR completed |
| 8. | Sriram Sagar Project (Godavari) – Purna – Manjira | Godavari, Purna & Manjira | PFR completed |
| 9. | Wainganga (Goshikurd) – Godavari (SRSP) | Wainganga & 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 | Krishan & Bhima | PFR completed |
| 15. | Riverlinking 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 foot hills | Dropped | Ground water recharge schemes to be studied by CGWB. Consequently not accepted by TAC of NWDA for PFR studies. |
| 19. | Kharia Ghuti Ghat – Tapi | Dropped | |
| 20. | Jigaon – Tapi – Godavari Valley | Tapi & Godavari | PFR completed (Not found feasible) |

| Sl. No. | Name of intra-state link | Rivers | Present status of PFR/DPR |
|----------------|--|----------------------------------|---|
| | Gujarat | | |
| 21. | Damanganga – Sabarmati – Chorwad | Damanganga, Sabarmati & Chorwad | PFR completed |
| | Odhis | | |
| 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 |
| | Jharkhand | | PFR completed |
| 25. | South Koel – Subernarekha | South Koel & Subernarekha | PFR Completed |
| 26. | Sankh – South Koel | Sankh & South Koel | PFR Completed |
| 27. | Barkar – Damodar – Subernarekha | Barkar, Damodar & Subernarekha | PFR Completed |
| | Bihar | | |
| 28. | Kosi – Mechi [entirely lie in India] | Kosi & Mechi | DPR completed. Techno-economic clearance given by Advisory Committee of MoWR, RD & GR. |
| 29. | Barh – Nawada | Ganga & Kiul | PFR completed (Not found feasible) |
| 30. | Kohra – Chandravat (now Kohra-Lalbegi) | Kohra & Chandravat | PFR completed (Not found feasible) |
| 31. | Burhi Gandak – None – Baya – Ganga | Burhi Gandak, None, Baya & Ganga | DPR completed. CWC suggested to consider the project as flood scheme which was communicated to Govt. of Bihar |
| 32. | Burhi Gandak – Bagmati [Belwadhar] | Burhi Gandak & Bagmati | PFR completed (Not found feasible) |
| 33. | Kosi – Ganga | Kosi & Ganga | PFR completed |
| 34. | Development of Bagmati Irrigation & Drainage Project-Phase-II (Barrage near Kataunjha in Muzaffarpur District) and Adhwara Multipurpose Project with Kosi-Adhwara-Bagmati Link | Kosi, Adhwara & Bagmati | PFR completed (Not found feasible) |

| S. No. | Name of intra-state link | Rivers | Present status of PFR/DPR |
|--------------------|---|--|--|
| 35 | Transfer of Ganga water to South Bihar through pump Canal Scheme at Buxer | Ganga | Initially, NWDA consented to take up the work but after receiving the details from Govt. of Bihar, it was found that these are not intra-state links therefore not taken up. |
| 36 | Development of Badua-Chandan Basin | Badua & Chandan | |
| 37. | Sone-Falgu link | Sone & Falgu | Prima facie, found not feasible as no water available at diversion point. |
| Rajasthan | | | |
| 38. | Mahi – Luni link | Mahi & Luni | PFR completed (Not found feasible) |
| 39. | Wakal – Sabarmati – Sei – West Banas – Kameri link | Wakal, Sabarmati, Sei, West Banas & Kameri | PFR completed (Not found feasible) |
| Tamil Nadu | | | |
| 40. | Ponnaiyar – Palar link | Ponnaiyar & Palar | PFR and DPR completed |
| Karnataka | | | |
| 41 | Almatti (Bagalkot)-Malaprabha Sub-basin | Almatti & Malaprabha | Prima Facie Not found feasible |
| 42 | Malaprabha-Tungabhadra Sub-basin | Malaprabha & Tungabhadra | Prima Facie Not found feasible |
| 43 | Bedti - Dharma - Varada link | Bedti, Dharma & Varada | PFR completed |
| 44 | Bhadra-Vedavathi(Vani Vilasa Sagar) link | Bhadra & Vedavathi | Government of Karnataka withdrew the proposal during 11 th meeting of Special Committee for ILR. |
| 45 | Diversion of west flowing rivers schemes(Barapole-upper cauvery link) | Barapole & upper cauvery | |
| 46 | Diversion from Bedti & Aghanashini to Varada | Aghanashini & Varada | Found feasible and PFR/DPR is in progress. |
| Chattisgarh | | | |
| 47 | Paity-Mahanadi link | Paity & Mahanadi | PFR completed |

PROPOSED INTER BASIN WATER TRANSFER LINKS



HIMALAYAN COMPONENT

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

* FR Completed

PENINSULAR COMPONENT

15. Mahanadi (Manibhadra) – Godavari (Dowlaiswaram) *
16. Godavari (Inchampalli) – Krishna (Nagarjunasagar) *
17. Godavari (Inchampalli) – Krishna (Pulichintala) *
18. Godavari (Polavaram) – Krishna (Vijayawada) *
19. Krishna (Almatti) – Pennar *
20. Krishna (Srisailem) – Pennar *
21. Krishna (Nagarjunasagar) – Pennar (Somasila) *
22. Pennar (Somasila)–Palar- Cauvery (Grand Anicut) *
23. Cauvery (Kattalai) – Vaigai – Gundar *
24. Ken – Betwa *
25. Parbati – Kalisindh – Chambal *
26. Par – Tapi – Narmada *
27. Damanganga – Pinjal *
28. Bedti – Varda
29. Netravati – Hemavati
30. Pamba – Achankovil – Vaippar *