

ISWD ACT AND TRANS-BOUNDARY WATER ISSUES

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Inter-State Rivers

1. All the major river basins (Drainage area more than 20000 sq.km) and some among the medium river basins (Drainage area more than 2000 sq.km and less than 20000 sq.km) and few minor river basins (Drainage area less than 2000 sq.km) are of inter-State nature, i.e., having their drainage area lying in more than one State / Union Territory. Water resources development projects are planned and implemented by the respective State Governments as per their needs and priorities. As the development of projects by one state on an inter-State river may affect the interests of other basin States, inter-State differences arise with regard to use, distribution and control of waters of inter-State river basins.

Constitutional Provisions

2. Article 246 of the Constitution deals with the subject matter of laws to be made by Parliament and by the Legislatures of the States. The allocation of responsibilities between the Centre and the States in respects of laws to be made fall into three categories namely (i) the Union List (List – I), (ii) the State List (List –II) and the Concurrent List (List –III). Subject of ‘water’ is a matter of Entry 17 of List –II. This Entry is subject to the provisions of Entry 56 of List –I. The specific provisions in this regard are as under:

Entry 56. Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.

Entry 17. 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.

3. Article 262 of the Constitution deals with adjudication of water disputes. The provisions in this regard are:

Article 262 (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 inter-State river or river valley.

Article 262 (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).

4. Besides above, Articles 131 and 136 of the Constitution have been used by the States frequently for bringing the matters related to inter-State rivers before the Hon’ble Supreme Court. Further, Article 143(1) of the Constitution has been used by the Central Government for seeking opinion of the Hon’ble Supreme Court on the matters related to inter-State rivers.

Enactment Of ISWD Act

5. Inter-State Water Disputes Act, 1956 was enacted under Article 262 of the Constitution. ISWD Act provides for setting up of ad-hoc Water Disputes Tribunal for adjudication of disputes relating to inter-State river when negotiations do not lead to fruitful

results. According to the Act, the State Government may request the Central Government to refer a water dispute to a Tribunal for adjudication. The Act provides for the constitution of a Tribunal for adjudication of the water dispute by the Central Government if it is satisfied that disputes cannot be settled by negotiations. The Tribunal shall consist of a chairman and two members to be nominated by the Chief Justice of India from amongst the sitting Judges of the Supreme Court or of a High Court. There is provision for appointment of assessors to assist the Tribunal in the proceedings before it. The Act provides that tribunal should investigate the matter and shall submit a report and decision to Central Government. The Tribunal has to give its further report on explanation or guidance, if sought by the Central or State Governments and Decision of the Tribunal shall be deemed to be modified accordingly. Decision of the Tribunal is binding on the parties to the disputes and shall be given effect to by them. Section 11 of the Act precludes all the courts including the Supreme Court from having jurisdiction in respect of any water dispute which may be referred to a Tribunal under the Act. The Central Government shall dissolve the Tribunal after it has forwarded its report and as soon as Central Government is satisfied that no further reference to the Tribunal in the matter would be necessary.

Water Disputes Settled Before 1980 Under Iswd Act, 1956

6. Godavari and Krishna basin States sent Complaints under provision of ISWD Act, 1956 to Central Government between 1962 to 1968. After being satisfied that water disputes contained in the Complaints cannot be settled by negotiations, Godavari and Krishna water disputes Tribunal were constituted on 10th April, 1969 and the complaint of basin States were referred to the Tribunals for adjudication. Though Godavari and Krishna Water Disputes Tribunal were constituted through separate notifications, Chairman and Members of both Tribunals were same. On the request of Party States, the tribunal first took up the references on Krishna Water Disputes and submitted a report on 24th December, 1973. Thereafter it took up references on Godavari Water Disputes. Again at the request of Party States, the Tribunal took up further references on its report on Krishna Water Disputes and submitted a Further Report on 27th May, 1976. The allocation of water of Krishna basin to basin States by the tribunal was mainly on the basis of protected use, contemplated use and use of water through project considered worth consideration by the Tribunal. There was agreement among party States for protection to be given for utilisations and evaporation losses from a majority of projects. The Tribunal thereafter submitted its report on Godavari water disputes on 27th November, 1979 and Further Report on 7th July, 1980. The Tribunal in its decision appended the bilateral and multilateral agreements reached between party states from 1975 to 1980 for use and distribution of Godavari water at different points in the basin.

7. In case of Narmada Water Disputes, Central Government constituted the Tribunal on 6th October, 1969 and referred the Complaint of Government of Gujarat for adjudication. Later on 16th October, 1969 Central Government also referred the request received from Rajasthan to the tribunal. In November, 1969 the State of Madhya Pradesh filed a Demurrer before the tribunal stating that action of Central Government in constituting the tribunal and referring the requests of Government of Rajasthan and Gujarat is ultra-vires of the Act. In view of this the Tribunal first took up the Preliminary issue of Law and in Feb 1972, decided that state of Rajasthan cannot be made a party to the dispute. Against this decision, appeals were filed before the Hon'ble Supreme Court and stay on the proceedings before the Tribunal were obtained. Thereafter States of Rajasthan, MP, Maharashtra and Gujarat signed an agreement among themselves on 12th July, 1974 through which State of Rajasthan was made party to the disputes. Through this agreement, the yield of Narmada river was determined as 28 MAF at 75% dependability and share of Maharashtra and Rajasthan determined as 0.25 and 0.5 MAF

respectively and Tribunal was requested to allocate 27.25 MAF between MP and Gujarat. After the agreement stay on the proceedings before the Tribunal were vacated, Tribunal submitted its report 16th August, 1978 and Further report on 7th December, 1979. Tribunal, in its decision, allocated balance water between MP and Gujarat and also included directions with regard to setting up of machinery for the purpose of securing compliance with and implementation of the decision and directions of the Narmada Water Disputes Tribunal.

Important Amendments In Inter-State Water Disputes (ISWD) Act, 1956

8. In view of decision of Narmada Water Disputes Tribunal containing directions with regard to setting up of machinery for the purpose of securing compliance with and implementation of the decision and directions of the Tribunal, amendment to the existing Inter-State Water Disputes (ISWD) Act, 1956 was considered necessary by the Government with a view to constitute machinery as contained in the decision of the Tribunal. Accordingly, the Act was amended in 1980 and Section 6A was inserted. This Section provides for framing a scheme for giving effect to a Tribunal's award. The scheme, inter alia provides for the establishment of the authority, its term of office and other conditions of service, etc.

9. In pursuance of Punjab settlement of 1985, the President of India promulgated an ordinance on 24th January, 1986 to be called 'The Ravi and Beas Waters Tribunal ordinance, 1986' to provide for constitution of a Tribunal for the verification of quantum of usage of water claimed by farmers of Punjab, Haryana and Rajasthan from the Ravi-Beas system as on the 1st day of July, 1985 and the waters used for consumptive purposes and for adjudication of claim of Punjab and Haryana regarding the shares in their remaining waters. Later on 18th March 1986, a Bill to replace the above ordinance was also introduced in the Parliament (Lok Sabha). In the meanwhile it was felt that the object could be better achieved by constitution of a Tribunal under the ISWD Act, 1956 through a suitable amendment. Accordingly, the Act was amended in April, 1986 empowering the Union to set up a Tribunal known as "Ravi Beas Waters Tribunal", suo - motu, or on the request of concerned State Government and Section 14 was inserted accordingly.

Further References Under Provisions Of ISWD Act, 1956 Before The Tribunals

10. Ravi and Beas Water Tribunal was constituted on April, 02, 1986 for verification and adjudication of the matters referred on Paragraphs 9.1 and 9.2 respectively of the Punjab settlement in 1985 under Section 14 of ISWD Act, 1956. The Tribunal had submitted its report in January, 1987 to the Government. The Central Government as well as the party States of Rajasthan, Haryana & Punjab sought explanation and guidance on certain points from Tribunal under Section 5(3) of the Inter-State Water Disputes Act, 1956. The Tribunal could not submit its Further report to the Government so far due to various reasons. One of the reasons is pendency of a Presidential Reference under Article 143(1) of the Constitution made on 22.7.2004 to the Hon'ble Supreme Court on the constitutionality of the Punjab Termination of Agreements Act, 2004 passed by the state of Punjab on 12.7.2004 terminating all agreements related to Ravi-Beas water but protecting the existing & actual usages from the existing system.

11. The Cauvery Water Disputes Tribunal (CWDT) was constituted by the Government of India on 2nd June 1990 to adjudicate the water dispute regarding inter-state river Cauvery and the river valley thereof among the States of Tamil Nadu, Karnataka, Kerala and Puduchery (Pondichery). The Tribunal passed an Interim Order in June, 1991. The Interim Order was not acceptable to Karnataka and the State subsequently passed an Act to nullify the effect of

Interim Order. The President of India made a reference to the Supreme Court under Article 143(1) of the Constitution on the various aspects of Interim Order and validity of the above Act. The opinion of the Supreme Court became available in November, 1991 and thereafter the Interim Order was published in the Official Gazette.

12. The Cauvery Water Disputes Tribunal has to devote a long time in conducting the proceedings related to oral evidence of a number of expert witnesses produced by the party States. The Tribunal has submitted its reports and decision under Section 5 (2) of Inter-State River Water Disputes Act, 1956 to Government on 5th February, 2007. The Tribunal has taken note of the principle of equitable apportionment and past agreements for apportioning Cauvery waters among the basin States.

13. The party States and the Central Govt. have sought clarification and guidance under Section 5(3) of the Act. Further, the party States have also filed SLPs under Article 136 (1) of the Constitution in the Hon'ble Supreme Court against Cauvery Tribunal's report and Hon'ble Supreme Court has granted leave and its orders are awaited. In the meanwhile, during water year 2012-13, while hearing the issues related to implementation of Interim Order, Hon'ble Supreme Court directed Central Government to publish the decision under Section 5 (2) of Inter-State River Water Disputes Act, 1956 dated 5th February, 2007 of CWDT in the Official Gazette. The said decision was published on 19th February, 2013 in the Official Gazette and is in force now.

Further Amendments In Inter-State Water Disputes (ISWD) Act, 1956

14. Sarkaria Commission on Centre State relations was set up in 1983 and it submitted its report in 1988. It examined the manner in which the Inter-State River Water Disputes Act was administered. As per the Commission report, the main thrust of the complaint is the inordinate delay that occurs at every stage and the inability of the States to have a dispute referred to a Tribunal unless the Union Government is satisfied that no negotiated settlement is possible. The Commission noted that delay occurs at three stages: (a) in setting up Tribunal; (b) after announcement of award; and (c) in implementation of the award and recommended as under

(i) Once an application under Section 3 of the Inter-State Water Disputes Act (33 of 1956) is received from a State, it should be mandatory on the Union Government to constitute a Tribunal within a period not exceeding one year from the date of receipt of the application of any disputant State. The Inter-State River Water Disputes Act may be suitably amended for this purpose.

(ii) The Inter-State Water Disputes Act should be amended to empower the Union Government to appoint a Tribunal, suo motu, if necessary, when it is satisfied that such a dispute exists in fact.

(iii) There should be a Data Bank and information system at the national level and adequate machinery should be set up for this purpose at the earliest. There should also be a provision in the Inter-State Water Disputes Act that States shall be required to give necessary data for which purpose the Tribunal may be vested with powers of a Court.

(iv) The Inter-State Water Disputes Act should be amended to ensure that the award of a Tribunal becomes effective within five years from the date of constitution of a Tribunal. If, however, for some reasons, a Tribunal feels that the five years' period has to be extended, the Union Government may on a reference made by the Tribunal extend its term.

(v) The Inter-State Water Disputes Act 1956 should be amended so that a Tribunal's award has the same force and sanction behind it as an order or decree of the Supreme Court to make a Tribunal's award really binding.

15. The Act was amended in August, 2002 as a follow up to the Recommendations of Sarkaria Commission on Centre State relations. The tribunal has to be now constituted within a period of one year from the date receipt of request. The Tribunal has to submit report within a period of three years which could be extended by the Central Government for a further period not exceeding two years. The Tribunal has to submit Further report within a period of one year which can be extended by the Central Government for a further period as it considers necessary. As per Section 6 (2), the decision of the Tribunal, after its publication in the Official Gazette, shall have the same force as an order or decree of the Supreme Court. Central Government is also required to maintain a data bank and information system. The Act was renamed as Inter-State River Water Disputes (ISRWD) Act, 1956.

Additional Reference before KWDT-2

16. Krishna Water Disputes Tribunal Decision of 1976 provided for reviewing the same after 31.5.2000. Accordingly, based on the request received from the party States, Central Government constituted a new Tribunal for Krishna basin in April, 2004. The effective date of constitution of Krishna Water Disputes Tribunal (KWDT) was later set as 1.2.2006 by the Hon'ble Supreme Court. The party States raised the issues relating to review of decision of previous KWDT, sharing of surplus water, height of Almatti dam etc in their Complaints. The KWDT submitted its report and decision under Section 5 (2) of the ISRWD Act, 1956 on 30.12.2010 to the Central Government. Tribunal in its decision has allocated water to basin States at 65% dependability. Party States and Central Government have sought guidance/clarification from the tribunal under section 5(3) of the Act. With submission of further report on 29.11.2013 by KWDT-II, the Water Disputes related to inter-state river Krishna among basin states of Karnataka, Maharashtra and Andhra Pradesh has been settled. However, the decision of KWDT-II is not yet effective as the same has not been notified in the official Gazette. Period of submission of further report by KWDT has been extended for a further period of two years from 1st August, 2014 so as to address the terms of reference specified in clauses (a) and (b) of section 89 of the Andhra Pradesh Re-organisation Act, 2014.

PENDING WATER DISPUTES UNDER ISRWD ACT, 1956

17. In July, 2002, the State of Goa made a request under Section 3 of the Inter-State River Water Disputes Act, 1956 (as amended) for constitution of the Tribunal under the said Act and refer the matter for adjudication and decision of dispute relating to Madei River. The issues mentioned in the request included the assessment of available utilisable water resources in the basin at various points and allocation of this water to the 3 basin States keeping in view priority of the use of water within basin as also to decide the machinery to implement the decision of the tribunal etc. As per the provisions of Act, Government of Goa was requested to send a revised request since its request of July 2002 does not confirm to provision of Act. Government of Goa on January 10, 2007 has modified its request of July 2002 so that same conform to provision of Act. Subsequently Central Government constituted the water disputes Tribunal in November 2010 and referred the disputes to the tribunal for adjudication.

18. The State of Orissa in February 2006 sent a complaint to the Central Government under Section 3 of the Inter-State River Water Disputes (ISRWD) Act, 1956 regarding water disputes between the Government of Orissa and Government of Andhra Pradesh pertaining to Inter-State River Vansadhara for constitution of a Inter-State Water Disputes Tribunal for adjudication. The main grievance of the State of Orissa in the complaint sent to the Central

Government is basically adverse effect of the executive action of Govt. of Andhra Pradesh in undertaking the construction of a canal taking off from the river Vamasadhara called as flood flow canal at Katragada and failure of Govt. of Andhra Pradesh to implement the terms of inter-State agreement/ understanding etc. relating to use, distribution and control of waters of inter-State river Vansadhara and its valley. Later the State of Orrisa filed a Writ Petition before the Hon'ble Supreme Court for issuing direction to the Central government for early constitution of Tribunal. Accordingly Central Government constituted Vamsadhara Water Disputes Tribunal on February 24th, 2010 with Head Quarter at New Delhi and referred the said disputes to the Tribunal on 19th March, 2010. The Tribunal passed an interim order in December, 2013 allowing AP to construct flood flow canal at Katragada with certain conditions and restrictions.

19. Govt. of Bihar on 27.11.2013 requested the Union Ministry of Water Resources (MoWR) for constitution of a Tribunal under Section-3 of Inter-State River Water Dispute (ISRWD) Act, 1956 to settle the Sone River water dispute among the co-basin States of Bihar, Uttar Pradesh and Madhya Pradesh. The basin States are Bihar, Uttar Pradesh, Madhya Pradesh, Chhattisgarh and Jharkhand. MoWR on 16.01.2014 has requested GFCC, Patna and directed it to make efforts to find a negotiated settlement of the Dispute as provided in the Act. Chairman, Ganga Flood Control Commission (GFCC) convened two meetings on the issue one on 29th April, 2014 and other on 4th July, 2014 and submitted a report to MoWR, RD and GR. Later Chairman, CWC has been directed to find a negotiated settlement of the disputes. Chairman, CWC has convened an inter-State meeting of the basin States on 16/10/2014 at New Delhi. Further interaction /discussion with party States is continuing.

MOU WITH NEIGHBOUR COUNTRIES ON INDUS AND ITS TRIBUTARIES

The Indus Waters Treaty (IWT) With Pakistan

20. Indus basin rivers are trans-boundary rivers flowing to Pakistan through India in North Western direction. India is the upper riparian country where as Pakistan is the lower riparian for Indus basin. After independence, a network of existing canals fell within the territory of Pakistan but the installations which supplied waters to these canals were situated in India. These developments led to the need for agreed arrangements for the use of the waters of the six rivers of the Indus basin. With the good offices of the World Bank in 1951 and after extensive negotiations, '*The Indus Waters Treaty 1960*' was signed between India and Pakistan on 19.9.1960. As per the Treaty (which has twelve Articles and eight Annexure), the waters of the rivers Sutlej, Beas and Ravi (three Eastern Rivers) allocated to India, and the waters of Indus, Jhelum and Chenab (Western Rivers) to Pakistan. In addition to this, India is also entitled for the following uses on the Western Rivers:

- Domestic Use; Non-Consumptive Use; Agricultural Use as set out in Annexure C; and Generation of hydro-electric power as set out in Annexure D.
- India's unrestricted right to use waters of the Western Rivers further elaborated under Annexure D.
- The provisions relating to design and operation of the new run of river plants are laid down in Part 3 of Annexure D.

21. As per IWT, Permanent Indus Commission had been constituted for operation and maintenance of IWT. Permanent Indus commission comprises of two Commissioners (i) Indus Commissioner (Pak) with headquarters at Lahore (ii) Indus Commissioner (India) with headquarters at New Delhi. Annual meetings are held once in India and once in Pakistan to

sort out the various issues. Visits by two commissioners are also made to see the development in other country to see if there is any violation of Treaty.

22. As per Article IX of the Treaty titled as “Settlement of differences and Disputes”, if any question which arises between the Parties concerning the interpretation or application of this Treaty or the existence of any fact which, if established, might constitute a breach of this Treaty shall first be examined by the Commission, which will endeavour to resolve the question by agreement. If the Commission does not reach agreement on any of the questions mentioned above, then a difference will be deemed to have arisen, which shall be dealt with as follows:

- Either by a Neutral Expert ;
- Or a court of Arbitration shall be established to resolve the dispute

23. In the recent past, procedure outlined under Article IX of the Treaty has been used for Baglihar Plant on Chenab Main and Kishenganga HE Plant (KHEP) on Jhelum. In case of Baglihar Plant, the points of differences are as under.

(A) Design of the Baglihar Plant on Chenab Main does not conform to criteria (e) and (a) specified in Paragraph 8 of Annexure D to The Indus Waters Treaty 1960 and that the Plant design is not based on correct, rational and realistic estimates of maximum flood discharge at the site. (Pakistan estimated a maximum flood discharge of 14,900 cumec as against 16,500 cumec provided by India)

(B) The Pondage of 37.722 MCM exceeds twice the Pondage required for Firm Power in contravention of Paragraph 8 (c) of Annexure D to the Treaty

(C) The intake for the turbines for the Plant is not located at the highest level consistent with satisfactory and economical construction and operation of the Plant as a Run-of-River Plant and is in contravention of Paragraph 8 (f) of Annexure D to the Treaty.

24. The Determinations of Neutral Expert (NE) relating to the maximum design flood [point (A) of the difference referred by Pakistan] are as under

- In view of the uncertainties of flood analysis, the NE has decided to retain the value of 16,500 cumec for the peak discharge of the design flood. Climate change, with the possible associated increase in floods, also encourages a prudent approach
- The NE considers, in conformity with the state of the art, that the conditions at the site of the Baglihar plant require a gated spillway.
- This decision is consistent with the provisions of the Treaty, requiring a sound and economical design, and satisfactory construction and operation of the works.
- The NE considers that the sluice spillway, planned in India’s design and composed of five outlets, has two functions: sediment control of the reservoir and evacuation of a large part of the design flood.
- In conformity with international practice and the state of the art, he considers also that the proposed outlets should be of the minimum size and located at the highest level (808 m asl), consistent with a sound and economical design and satisfactory construction and operation of the works. But to ensure protection against flooding of Pul Doda, the outlets should preferably be located 8 m lower, at about el. 800 m asl .
- Sound operation of the outlets will necessitate carrying out maintenance of the reservoir with drawdown sluicing each year during the monsoon season.

- The dam crest elevation of the Baglihar dam, fixed in the design submitted by India at el. 844.5 m asl, resulting from a freeboard above the Full Pondage Level of 4.50 m, is not at the lowest elevation.
- The Determination of the NE is that the freeboard should be 3.0 m above the Full Pondage Level leading to a dam crest elevation at 843.0 m asl. This is possible if the design of the chute spillway is optimised by minor shape adjustments in order to increase its capacity.

The Determination relating to the volume of the pondage [point (B) of the difference referred by Pakistan]

- Applying the provisions of the Treaty and based on the state of the art, the NE considers that the first objective of pondage is to regulate the flow of the river to meet consumer demand. He considers also that the values for maximum pondage stipulated by India as well as by Pakistan are not in conformity with the criteria laid down in the Treaty.
- The Determination of the NE is that the maximum Pondage should be fixed at 32.56 M.m³, and the corresponding Dead Storage Level at el. 836 m asl, one meter higher than the level of the Indian design.

The Determination relating to the level of the power intake [point (C) of the difference referred by Pakistan].

The NE considers that the elevation of the intake stipulated by India is not at the highest level, as required by the criteria laid down in the Treaty. The determination of the NE is that the intake level should be raised by 3 m and fixed at el. 821.0 m.

25. Through a Request for Arbitration dated 17 May 2010 on KHEP, Pakistan initiated proceedings against India pursuant to Article IX and Annexure G of the Treaty. In the Request for Arbitration, Pakistan stated that the Parties had failed to resolve the “Disputes” concerning the Kishenganga Hydroelectric Project (the “KHEP”) by agreement pursuant to Article IX (4) of the Treaty. Pakistan identified “two questions that are at the centre” of the dispute in the following manner:

(a) India’s proposed diversion of the river Kishenganga (Neelum in Pak) into other tributary, i.e the Bonar-Madmati Nallah, breaches India’s legal obligations owed to Pakistan under the Treaty, namely

Article III (2) to let flow all the waters of the western rivers and not permit any interference with those waters) and

Article IV (6) (maintenance of natural channels)!

(b) Under the Treaty, India may not deplete or bring the reservoir level of a run-of-river Plant below Dead Storage Level (DSL) in any circumstances except in the case of an unforeseen emergency.

26. For the duration of these proceedings and up until the rendering of the Award, the Court of Arbitration passed an Interim Order of 23rd September, 2011 as under

(a) It is open to India to continue with all works relating to the Kishenganga Hydro- Project, except for the works specified below;

(b) India shall not proceed with the construction of any permanent works on or above the Kishenganga/Neelum River riverbed at the Gurez site that may inhibit the restoration of the full flow of that river to its natural channel; and

Pakistan and India shall arrange for periodic joint inspections of the dam site at Gurez in order to monitor the implementation of above interim measures.

27. After hearings held in August, 2013, Court delivered its Partial Award during February, 2013 as under.

(1) The Kishenganga Hydro-Electric Project, as described to the Court by India, constitute a Run-of-River Plant for the purpose of Paragraph 15 of Annexure D to the Indus Waters Treaty, and in particular sub-paragraph (iii) thereof.

(2) India may accordingly divert water from the Kishenganga/Neelum River for power generation by the Kishenganga Hydro-Electric Plant and may deliver the water released below the power station into the Bonar Nallah

(3) India is however under an obligation to construct and operate the Kishenganga Hydro-Electric Plant in such away as to maintain a minimum flow of water in the Kishenganga/Neelum River, at a rate to be determined by the Court in a Final Award
(5) Except in case of an unforeseen emergency, the treaty does not permit reduction below dead storage Level of the water level in the reservoirs of Run-of-River Plants on the Western Rivers.

(6) The accumulation of sediment in the reservoir of a Run-of-River Plant on the Western Rivers does not constitute an unforeseen emergency that would permit the depletion of the reservoir below Dead Storage Level for drawdown flushing purposes.

(7) Accordingly, India may not employ drawdown flushing at the reservoir of the Kishenganga Hydro-Electric Plant to an extent that would entail depletion of the reservoir below Dead Storage Level.

(8) Above restriction do not apply to Run-of –River Plants that are in operation on the date of issuance of this Partial Award. Likewise, do not apply to Run-of River Plants already under construction on the date of issuance of this Partial Award, the design of which, having been duly communicated by India under the provision of Annexure D, had not been objected to by Pakistan as provided for in Annexure D.

This Partial Award imposes no further restrictions on the construction and operation of the Kishenganga Hydro-Electric Plant, which remain subject to the provisions of the Treaty as interpreted in this Partial Award. To enable the Court to determine the minimum flow of water in the Kishenganga/Neelum River referred above, parties to submit to the Court the information regarding range of minimum flows. The interim measures indicated by the Court in its 23 September 2011 *Order on the Interim Measures Application of Pakistan dated June 6, 2011* are hereby lifted. The costs of the proceedings to be awarded by the Court pursuant to Paragraph 26 of Annexure G to the Treaty shall be determined in the Court's Final Award.

27 After Partial Award, both Pakistan and India submitted the studies related to range of minimum flows to be released from KHEP. India stick to its originally planned environment flows as 4.25 cumec during lean season. Having considered the Parties' submissions, during December, 2013, the Court of Arbitration unanimously decided:

- In the operation of the KHEP , Subject to paragraph below, India shall release a minimum flow of 9 cumecs into the Kishenganga/Neelum River below the KHEP at all times at which the daily average flow in the Kishenganga/Neelum River immediately upstream of the KHEP meets or exceeds 9 cumecs.
- At any time at which the daily average flow in the Kishenganga/Neelum River immediately upstream of the KHEP is less than 9 cumecs, India shall release 100

percent of the daily average flow immediately upstream of the KHEP into the Kishenganga/Neelum River below the KHEP.

- Beginning 7 years after the diversion of water from the Kishenganga/ Neelum River for power generation by the KHEP, either Party may seek reconsideration of the minimum flow in paragraph above through the Permanent Indus Commission and the mechanisms of the Treaty.
- This Final Award imposes no further restrictions on the operation of the KHEP, which remains subject to the provisions of the Treaty as interpreted in this Final Award and in the Court's Partial Award.

28. The decision of the Court of Arbitration is final and binding on both parties and there is no further appeal /review mechanism. Pakistan had requested that the Court establish a monitoring regime to permit it to evaluate India's compliance with the minimum flow fixed in this Award. In the Court's view, the appropriate is the Permanent Indus Commission. The Court recalled that Article VI(1) of the Treaty already requires the Parties to exchange "(a) Daily (or as observed or estimated less frequently) gauge and discharge data relating to flow of the Rivers at all observation sites" and "(b) Daily extractions for or releases". In light of the foregoing provisions, it is neither necessary, nor within the Court's purview, to instruct the Commission as to the manner in which it carries out its responsibilities or to mandate a special monitoring regime in implementation of this Award.

MOU With China On Sutlej

29. In April, 2005, an MOU was signed for supply of hydrological information by China to India in respect of Langquin Zangbo / Sutlej River in flood season. Accordingly, the Chinese side provided hydrological information to India beginning from monsoon 2006. On expiry of the above MOU in 2010, the revised MOU was signed on 16th December, 2010. Joint Expert Level Mechanism (JELM) have been set up to discuss interaction and cooperation on the provision of flood season hydrological data, emergency management and other issues regarding trans-border rivers. The Indian side of Joint Expert Level Mechanism (JELM) is headed by Commissioner (B&B), MoWR and Chief Engineer (FM), CWC is member of JELM.

MOU WITH NEIGHBOUR COUNTRIES ON GANGA AND ITS TRIBUTARIES

30 Ganga river basin is one of the largest river basins in India. In Ganga basin, India is sharing its boundary with other countries as Nepal, China and Bangladesh. In case of Nepal and China, India is the lower riparian whereas in case of Bangladesh, India is the upper riparian. It covers a geographical area of 10, 80,000 km² out of which 8, 61,452 km² (80%) lies in India. The remaining catchment lies in Nepal (13%), in Bangladesh (4%) and in Tibet Autonomous Region of China (3%). In India, the Ganga basin covers eleven States viz., Uttarakhand, Uttar Pradesh, Himachal Pradesh, Haryana, Delhi, Rajasthan, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand and West Bengal. The total length of the main River Ganga, from its origin at Gangotri Glacier at Gomukh to the mouth of the Hooghly River on Bay of Bengal is 2525 km. Some international Treaties/MoU's already exist between two countries on some of the rivers which are detailed below.

Kosi River Agreement 1954(Revised in 1966) and Memorandum of Understanding in 1997

31. Agreement provides for construction of barrage and related works in Nepal territory on Kosi River. Agreement authorizes Nepal to withdraw water from Kosi basin for irrigation and

other purposes as may be required from time to time. Agreement authorizes India to regulate all balance supplies in Kosi river at barrage site as available from time to time and generate hydropower. Nepal is entitled to use 50% of the power generated around barrage site on payment of agreed tariff. Memorandum of Understanding in 1997 provides to harness the water resources of river Kosi for carrying out studies for preparation of DPR of Sapta Kosi High Dam Project and Sun Kosi Storage-cum-Diversion Project and for establishment of India Nepal Joint Project Office. After exchange of letter of Understanding between the two Governments in June' 2004, a Joint Project Office (JPO) was set up in August' 2004 to undertake detailed field investigations for preparation of DPR of Sapta-Kosi High Dam Project at Barakshetra, in Nepal. The field investigations include the field works of Sunkosi diversion scheme (constructing a dam at Kurule so that the Sunkosi water could be diverted to the Kamla basin through a tunnel) in the scope of work of JPO. In Kamla basin, a dam coupled with a barrage was envisaged and included in the scope of study by the JPO. Because of political instability and frequent strikes/ bandhs in Nepal, the field investigations at Sapta-Kosi High Dam sites have been delayed. The tenure of JPO-SKSKI has been extended upto February, 2015 to complete field investigation and preparation of DPR at a revised cost of Rs.104.776 crore.

Agreement on Gandak Project 1959 (amended in 1964):

32. Agreement Provides for the construction of a barrage at Nepal-India border as well as embankments and irrigation canals on both sides of the Gandak river and for diversion of (643.5 TMC) of water annually for irrigation in India and Nepal(GCA in Nepal 143500 acres). It also provides for generation of hydropower (installed capacity 15 MW). Agreement authorizes Nepal to withdraw water from Gandak basin for irrigation and other purposes as may be required from time to time without any prejudice to above requirement.

Mahakali Treaty, 1996

33. The treaty covers Sarda Barrage, Tanakpur Barrage and Pancheshwar Project and defines principles of planning, design and implementation of the Pancheshwar Project, a joint Indo-Nepal project on the Mahakali River, for obtaining the benefits in form of power, irrigation, flood control etc. The Treaty provides that both parties have equal entitlement in the utilization of water of Mahakali River without prejudice to their respective existing consumptive use. It gives Nepal the right to a supply of 28.35 cumecs and 4.25 cumecs water during wet and dry season respectively from the Sarda Barrage. It requires India to maintain a minimum flow ($10 \text{ m}^3/\text{s}$) of water downstream of the Tanakpur and Sarda barrage to preserve the river's ecosystem. It gives Nepal the right to a supply of 28.35 cumecs and 8.5 cumecs water during wet and dry season respectively from the Tanakpur Barrage. It gives Nepal the right to a supply of 70 million KWh of energy annually on continuous basis free of cost from Tanakpur power station. It requires India to supply 10 cumecs of water for irrigation of Dodhara Chandani area of Nepal. The Treaty provides for establishment of Mahakali River Commission for implementation of the Treaty.

34. Required field investigations for the Pancheshwar Multipurpose Project have been completed by a Joint Project Office (JPO-PI) in 2002 (except for some confirmatory tests). But mutually acceptable DPR of Pancheshwar Project could not be finalized due to differences on certain contentious issues. During the 3rd meeting of Joint Committee on Water Resources (JCWR) held from 29.09.08 to 01-10-08 at Kathmandu (Nepal), it was decided to set up Pancheshwar Development Authority (PDA) at the earliest for the development, execution and operation of Pancheshwar Multipurpose Project. The constitution

of PDA has been notified on 7th August 2014. The Terms of Reference of the Authority includes, inter-alia, preparation of Detailed Project Report (DPR) acceptable to both the countries. The project inter-alia envisages construction of a dam at Pancheshwar. The tentative height of the Pancheshwar dam is kept at 315 metres above foundation level in earlier DPRs. All the parameters including height of the dam would be finalised by the PDA at the time of finalisation of the DPR of the project, acceptable to both sides. Reservoir survey about the area likely to be submerged was carried out while preparing Detailed Project Report by Joint Project Office (JPO) in 2002. This may, now, require updation at the time of finalising the DPR by PDA. It has been agreed to have a corpus fund of IRs. 20.00 crore with both India and Nepal contributing IRs.10.00 crore each, for preliminary works of Pancheshwar Development Authority (PDA).

Agreement with Bangladesh

35. Prime Ministers of Bangladesh and India signed a treaty on sharing of Ganges water in lean period in 1996 for 30 years. The flows of the Ganges would be shared at Farakka between the two countries from January 1 and May 31. India would maintain flow at Farakka equal to flow based on 10 day average availability of water of the period (1949-1988). India and Bangladesh each would get a flow of guaranteed 35,000 cusecs in alternate 10 day period from March 1 to May 10. The two countries also agreed to the need for mutual cooperation in augmenting the flow of the Ganges on a long-term basis, and for entering into similar accords in sharing the flows and developing the water resources of other common rivers. The Treaty also provides for setting up of Joint Committee for implementation of terms of the Treaty. As per the provision of the Treaty a Joint Committee has been set up for implementing, joint inspection and monitoring of the sharing arrangements at Farakka in India and at Hardinge Bridge in Bangladesh. The Treaty is being implemented to the satisfaction of both the countries since 1997.

36. India provides the flood data of Farakka for Ganga and flood data of Pandu, Goalpara and Dhubri for Brahmaputra and Silchar for Barak during monsoon period to Bangladesh for use by their flood forecasting and warning arrangements. Data of river Teesta, Manu, Gumti, Jaldhaka and Torsa etc is also given. The transmission of flood forecasting information from India has enabled the civil and military authorities in Bangladesh to take precautionary measures and shift the population affected by flood to safer places. In addition to above, India has agreed to provide flood data of above sites to Bangladesh on continuous basis for use of data in development of flood forecasting models by Bangladesh.

37. Discussions have been continuing with Bangladesh for sharing of waters of Teesta & Feni rivers besides other six common rivers namely; Manu, Muhri, Khowai, Gumti, Jaldhaka and Torsa. Govt. of India is at its endeavour to conclude the agreement of the sharing of waters of Teesta and Feni rivers with Bangladesh, which is acceptable to all parties concerned and which protects the interests of all stakeholders.

TREATY/AGREEMENTS IN BRAHMAPUTRA BASIN

Agreements with Bhutan

38. India signed an agreement with Bhutan in 1974 for construction of Chukha HE Project on a tributary of Brahmaputra located in Bhutan. As per the Agreement, India is to provide 60% of the total capital cost as grant and 40% of the cost as loan for construction of the project. Installed capacity of the Plant is 84 MW and average head is 466.34m. Bhutan agreed

to sell surplus power to India at mutually agreed rate. India signed another agreement with Bhutan in 1993 for construction of Tala HE Project on Wangchu a tributary of Brahmaputra located in Bhutan. As per the Agreement, India is to provide 60% of the total capital cost as grant and 40% of the cost as loan for construction.

39. A Joint Group of Experts (JGE) on flood management was constituted between India and Bhutan in 2004 to discuss and assess the probable causes and effects of the recurring floods and erosion in the southern foothills of Bhutan and adjoining plains in India and recommend to both Governments appropriate and mutually acceptable remedial measures. Ministry of Water Resources is also operating a separate scheme for setting up of flood forecasting system on rivers common to India and Bhutan run by Ministry of Water Resources in Bhutan for the development of mutual cooperation between the two countries in the field of hydro-meteorological data collection and flood forecasting activities on rivers common to India and Bhutan. The present network in Bhutan comprises of 32 hydro-meteorological sites on common rivers flowing from Bhutan to India for the above work. The data received from these stations are utilized in India by the Central Water Commission for formulating flood forecasts. A Joint Expert Team (JET) consisting of officials from the Government of India and Royal Government of Bhutan continuously reviews the progress and other requirements of the network.

Agreement with China

40. There is no Treaty/agreement with China on sharing waters of river Brahmaputra. The Government of India had entered into an MOU with China in the year 2002 for sharing of hydrological information on Yaluzangbu/ Brahmaputra River. A revised MOU was signed on 05-06-2008 and later in May 2013 for next five years. As per MOU, the Chinese side is providing hydrological information (Water level, discharge and rainfall) in respect of three stations, namely Nugesha, Yangcun and Nuxia located on river Yaluzangbu/Brahmaputra from 1st June to 15th, October every year. The data is utilized in the formulation of flood forecasts by the Central Water Commission. Further, both sides also signed a separate MoU on strengthening cooperation on Trans-Border Rivers on 23rd October 2013. Joint Expert Level Mechanism (JELM) has been set up to discuss interaction and cooperation on the provision of flood season hydrological data, emergency management and other issues regarding trans-border Rivers. The Indian side of Joint Expert Level Mechanism (JELM) is headed by Commissioner (B&B), MoWR and Chief Engineer (FM), CWC is member of JELM.

41. Construction activity on YarlungTsangpo/Brahmaputra River at Zangmu on the Chinese side for a Run of the River (RoR) hydroelectric project has been undertaken. Recently released 'Outline of the 12th Five Year Plan for National Economic and Social Development of the People's Republic of China' indicates that three more hydropower projects on the main stream of the YarlungTsangpo/ Brahmaputra River in Tibet Autonomous Region have been approved for implementation by the Chinese Authorities. As these four projects are considered to be run of the River (RoR) hydro-electric projects, any significant change on flow of water in the North-East of India is not expected. Government of India monitors developments on the Brahmaputra River. As a lower riparian state with considerable established user rights to the waters of the River, India has conveyed its views and concerns to the Chinese authorities, including at the highest levels of the Government of the People's Republic of China. India has urged China to ensure that the interests of downstream States are not harmed by any activities in upstream areas.

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