LET US STRIVE FOR FOOD SUFFICIENCY AND WATER SECURITY BY CONSERVING EACH DROP "JAL HAI TO JAAN HAI"
An Overview of NWDA Activities

Presence in Pride of India Exhibition

Pledge on National Voter’s Day

In 17th meeting of Special Committee for Interlinking of Rivers at New Delhi

Field Inspection for Bedti-Varda River Link

Signing of MoU with NIH
From Director General’s Desk

It gives me immense pleasure in placing the quarterly issue of “Jal Vikas-April 2020” of NWDA. The reporting period of the issue is starting from 01st January to 31st March 2020. The in-house bulletin gives a recap of works and functions of NWDA particularly with respect to Interlinking of Rivers (ILR) Programme of Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD&GR), Ministry of Jal Shakti (MoJS), Government of India and related activities carried out by NWDA.

The key functions of NWDA are to take up scientific studies and field investigations on ILR Projects for optimum utilization of water resources on sustainable basis and addressing water security of the country. During the reporting period, concerted efforts were made by NWDA in conducting review meetings, surveys & investigation works and preparing Detailed Project Reports (DPRs) and Feasibility Reports (FRs) of ILR proposals coming under the Water Resources Development Components of National Perspective Plan (NPP) pertained to Peninsular and Himalayan Regions and Intra-State links as suggested by State Governments. Efforts were also made on building consensus among States for the implementation of the interlinking projects particularly Ken Betwa Link Project. Mutual cooperation and support of concerned States is paramount for implementation of ILRs. NWDA is also actively supporting States in carrying out the feasibility/detailed studies of potential Intra-State river linking projects. NWDA has already prepared four numbers of DPRs of Intra-State Links and works on DPRs of two Intra-State Links of Maharashtra are in progress on consultancy basis. Here, it is pertinent to mention that during the reporting period NWDA received Rs 9.25 Crores from the Government of Maharashtra for preparation of the DPR of Damanganga-Vaitarna-Godavari Intra-State Link Project and it gives an encouragement to the Organisation, which has built up expertise in this field over the years.

While we were releasing the magazine, almost the whole world including India is suffering from COVID-19. In a very short spell, the disease spread into almost all States of India and has impacted our working too. It would be a challenge for all of us to work effectively while keeping us safe. I am hopeful that we will emerge from the crisis very soon.

When flip through the inner pages of the magazine, you will find not only the article on Ken-Betwa Link Project, but also brief detailing on Technical Digest; ILR in Parliament; Water Resources in Media; Glimpses of NWDA; World Water Day; International Women’s Day; NWDA Activities at a Glance; and Family Corner Articles Contributed by NWDA Fraternity etc.

I would take this opportunity to extend my sincere gratitude to my entire Editorial Team of Jal Vikas in assembling the value added articles and bringing the April 2020 Issue to an informative one. Our efforts to further improve and expand the Jal Vikas Issues will continue with your encouragements and contributions.

(Bhopal Singh)
Director General
# Contents

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functions of NWDA</td>
<td>4</td>
</tr>
<tr>
<td>Highlights of NWDA Activities</td>
<td>5</td>
</tr>
<tr>
<td><strong>Technical Article</strong></td>
<td></td>
</tr>
<tr>
<td>• Ken-Betwa Link Project-Present Status-An Overview</td>
<td>7</td>
</tr>
<tr>
<td><strong>Technical Digest</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>ILR in Parliament (Lok Sabha and Rajya Sabha)</strong></td>
<td>14</td>
</tr>
<tr>
<td><strong>Water Resources in Media</strong></td>
<td>22</td>
</tr>
<tr>
<td>• KCR, Jagan reach water sharing deal</td>
<td>22</td>
</tr>
<tr>
<td>• ‘Ice stupas’ could help irrigate Ladakh fields</td>
<td>23</td>
</tr>
<tr>
<td>• ‘Rising CO2 levels may double floods, storms’</td>
<td>23</td>
</tr>
<tr>
<td>• Committee to study Ulsoor lake pollution</td>
<td>24</td>
</tr>
<tr>
<td>• Nine Delhi districts had contaminated groundwater in 2019 : Jal Shakti Minister</td>
<td>24</td>
</tr>
<tr>
<td>• Centre working on exclusive body for river-linking projects / Apex Body on river linking in pipeline</td>
<td>25</td>
</tr>
<tr>
<td>• T.N.'s outreach to neighbours raises river linking expectations</td>
<td>26</td>
</tr>
<tr>
<td>• DDA told to form Special Purpose Vehicle for Yamuna rejuvenation</td>
<td>26</td>
</tr>
<tr>
<td><strong>Glimpses of NWDA</strong></td>
<td>27</td>
</tr>
<tr>
<td>• Meetings of Special Committee for Interlinking of Rivers(SCILR)</td>
<td>27</td>
</tr>
<tr>
<td>- 14th meeting of Sub-Committee of SCILR</td>
<td>27</td>
</tr>
<tr>
<td>- 17th meeting of SCILR</td>
<td>28</td>
</tr>
<tr>
<td>• World Water Day Celebrations</td>
<td>29</td>
</tr>
<tr>
<td>• NWDA Woman Employees and Relevance of International Women's Day</td>
<td>30</td>
</tr>
<tr>
<td><strong>Activities of NWDA at a Glance</strong></td>
<td>31</td>
</tr>
<tr>
<td><strong>Appointments, Promotions and Retirements</strong></td>
<td>35</td>
</tr>
<tr>
<td><strong>Participation of NWDA Officials in Trainings/Seminars/Conferences and Workshops</strong></td>
<td>36</td>
</tr>
<tr>
<td><strong>Family Corner</strong></td>
<td>37</td>
</tr>
<tr>
<td>कविता</td>
<td>41</td>
</tr>
</tbody>
</table>

## Editorial Board

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The views and opinions expressed by the Authors are their own and not necessarily of NWDA
Functions of National Water Development Agency

Ministry of Irrigation (now MoJS; DoWR, RD & GR), Government of India formulated a National Perspective Plan (NPP) in the year 1980 for optimum development and utilization of Water Resources of our country India. The NWDA was set up as a Society under the Ministry of Jal Shakti in July 1982 to give a feasible shape to the proposal of the NPP with the following functions:

- To carry out detailed surveys and investigations of possible reservoir sites and interconnecting links in order to establish feasibility of the proposal of Peninsular Rivers Development Component (1981)* and Himalayan Rivers Development Component (1994)* forming part of the NPP for Water Resources Development prepared by the then Ministry of Irrigation (now the Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation) and Central Water Commission.

- To carry out detailed studies about the quantum of water in various Peninsular River Systems (1981)* and Himalayan River Systems (1994)* which can be transferred to other basins/States after meeting the reasonable needs of the basin/States in the foreseeable future.

- To prepare feasibility report of the various components of the scheme relating to Peninsular Rivers Development (1981)* and Himalayan Rivers Development (1994)*.

- To carry out surveys and investigations work and prepare Detailed Project Reports (DPRs) 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 (2020)*.

- To prepare Pre – Feasibility / Feasibility (2006)*/ DPRs (2011)* 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.

- To undertake/construct/repair/renovate / rehabilitate / implement the projects either of 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 PMKSY of which projects under Accelerated Irrigation Benefits Programme (AIBP) are also included and similar other projects (2016)*.

- 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 the then Ministry of Water Resources, River Development and Ganga Rejuvenation (now the Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation) and to secure the repayment of any such borrowed funds/money deposits/loan etc. by way of mortgage, pledge, change or lien upon all or any other property, assets or revenue of the society both present and future (2016)*.

- To do all such other things the Society may consider necessary, incidental, supplementary or conducive to the attainment of above objectives (1981)*.

*Year of Gazette Notification
Highlights of NWDA Activities

- 12th meeting of the Committee to Monitor and Review the Environmental Impact Assessment (EIA) studies of Par-Tapi-Narmada (P-T-N) and Damanganga - Pinjal (D-P) Link Projects was held on 03.01.2020 at Gandhinagar in presence of Chief Engineer (EMO), CWC; Chief Engineer (South)[CE(S)] and Superintending Engineer, Valsad, NWDA; Representatives from M/s WAPCOS; NGOs, EIA Consultants, Officers of Gujarat and Maharashtra Governments,

- NWDA Participated in the Pride of India Exhibition of "107th Indian Science Congress", held on 04.01.2020 at Bengaluru,

- Alignment inspection for Bedti -Varda river link project was made by CE(S), NWDA with other Officers of NWDA on 30.01.2020,

- Keynote talk on "Water Resources Management through Strategic Solutions" was delivered by CE(S) NWDA at Karnataka Smart Cities Investment Summit held on 06.02.2020 at Bengaluru,

- A lecture on "Status of Peninsular River Systems" was made by CE(S), NWDA at a function held at Indian Institute of Science, Bengaluru on 11.02.2020,

- A meeting regarding ILR proposals of Karnataka State was held by CE(S) with Additional Chief Secretary(WR) and Secretary (WR), Government of Karnataka and Officers of NWDA on 12-02-2020,

- 14th Meeting of the Sub-Committee on "System Studies for Identification of most Appropriate Alternative Plan" of Special Committee for ILR was held on 18-02-2020 at New Delhi,

- Hon’ble Minister for Jal Shakti held discussions at Lucknow with Hon’ble Chief Minister of Uttar Pradesh (UP) on 25.02.2020 regarding Ken-Betwa Link Project (KBLP),

- 17th meeting of Special Committee for ILR under the Chairmanship of Hon’ble Minister of State, Ministry of Jal Shakti was held on 26-02-2020 at New Delhi,
DG, NWDA held a meeting with Principal Secretary, Irrigation & Water Resources, Government of UP on 28.02.2020 regarding discussions on KBLP,

DG, NWDA attended a meeting with the Principal Secretary, Department of I&WRD(UP); and HoD and Engineer-in Chief (UPI&WRD) convened by Advisor( MoJS) on 03-03-2020 in Shram Shakti Bhawan, New Delhi for considering the draft Memorandum of Agreement (MoA) for the implementation of KBLP,

DG, NWDA participated in a meeting convened by Hon’ble Minister of Jal Shakti on 05-03-2020 in Shram Shakti Bhawan to discuss the Private Member’s Resolution in Lok Sabha,

The International Women’s Day was celebrated in NWDA on 11-03-2020 at Palika Bhawan, New Delhi,

DG, NWDA chaired the 130th Rajbhasha quarterly meeting held on 12-03-2020 at NWDA Office at Palika Bhawan, New Delhi,

DG, NWDA attended a programme on Flag-in-of Ganga-Aamantran Kayaking and Rafting Expedition organised by National Mission for Clean Ganga (NMCG) on 13-03-2020 in Ashoka Hotel, New Delhi,

DG along with other Officers of NWDA attended a meeting on integration of the modified Parbati-Kalisindh-Chambal (PKC) link with Eastern Rajasthan Canal Link Project convened by Advisor(MoJS) with Officials of CWC, WAPCOS and Governments of Madhya Pradesh and Rajasthan held on 16-03-2020,

DG, NWDA chaired 2nd internal meeting of NWDA held on 17-03-2020 in New Delhi to review the progress achieved in the month of February, 2020; Action Plan for the month of March, 2020; and Work Plan for the year 2020-21,

Memorandum of Understanding (MoU) between NWDA and National Institute of Hydrology (NIH) was signed on 17.03.2020 to carry out System Studies on Mahanadi-Godavari Link Project by NIH.
1.0 General

Ken-Betwa Link is one of the priority links of 30 links identified under the National Perspective Plan (NPP) for Water Resources Development under Interlinking of Rivers (ILR) Programme. Ken-Betwa Link Project (KBLP) will be a boon to the Bundelkhand region of Madhya Pradesh (MP) and Uttar Pradesh (UP), which is under distress since long and the migration of people for livelihood from this region is enormous. The region is constantly in the grip of severe droughts. The failure of monsoon on a regular basis has severely affected the available water in the river systems. The resulting diminishing surface water resources and depletion of ground water tables has not only decreased the availability of drinking water for people and domestic animals, but also impacted the natural vegetation and growth of grass.

The proposed comprehensive KBLP, is a multi-purpose project with irrigation, hydropower and water supply benefits. A tripartite Memorandum of Understanding (MoU) was signed between MP, UP and the Union Government of India on 25th August 2005 for the preparation of DPR of the KBLP. The KBLP has been included as a National Project and also a part of Prime Minister’s Bundelkhand package. The Hon’ble Supreme Court in the matter of Writ Petition (Civil) No. 512 of 2002 “In Re: Networking of Rivers” along with Writ Petition (Civil) No. 668 of 2002 vide its judgment of 27.02.2012 has directed that Ken-Betwa Link Project should be taken up for implementation at the first instance itself.

Based on the tripartite MoU dated 25th August, 2005 for the preparation of DPR of KBLP, the DPR of KBLP was completed in December, 2008 and submitted to the concerned State Governments of UP and MP for offering their views/comments. Subsequently, as per the decisions taken during the Secretary Level Meeting held in February, 2010, the DPR was split into two phases, viz. Phase-I and Phase-II, Phase I comprising Ken Project and Phase II comprising Betwa Projects.

The DPR of KBLP, Phase-I was completed in April, 2010 comprising a 77 m high Daudhan dam with gross storage capacity of 2853 MCM and reservoir submergence area of 9000 ha alongwith a 221 km long main canal, two power houses and other components. Whereas, DPR of Phase-II comprising Lower Orr Dam, Bina Complex and Kotha barrage as proposed by Government of MP was completed in January, 2014.

Subsequently, based on various discussions/negotiations with states, NWDA revised components of project and planning of KBLP and prepared a Comprehensive Report of KBLP (by merging DPR of Phase-I & Phase-II) consisting of Daudhan Dam, Lower Orr Dam, Kotha Barrage, Bina Complex Multipurpose Project, the additional CCA, repair/strengthening of Bariyarpur Pickup Weir, Parichha Weir and Barwa Sagar Dam etc.

The proposed comprehensive KBLP is a multi-purpose project with irrigation, hydropower and water supply benefits. The project envisages to provide enormous benefits to the water starved districts viz. Panna, Tikamgarh, Chhatarpur, Sagar, Damoh & Data of MP State and Banda, Mahoba, Jhansi & Lalitpur of UP State, especially coming in Bundelkhand region as well as to Vidisha, Shivpuri and Raisen districts of MP.
The project will provide an annual irrigation to CCA of 9.04 lakh ha (6.53 lakh ha in MP and 2.51 lakh ha in UP) out of which 6.98 lakh ha lies in Bundelkhand region. The project will provide 194 MCM of drinking water supply to a population of about 62 lakhs and also generate 103 MW of hydropower and 27 MW solar power utilizing about 4843 MCM of water. A part of the power generation will be utilized to develop micro irrigation in the project. Brief of total benefits from various components under the KBLP is tabularized at Table-I and the Index Map of the link project is enclosed as Plate-I.

The total estimated cost of the KBLP has been worked out as Rs.35111.24 crore at 2017-18 price level. The benefit-cost ratio and IRR has been worked out as 1.58 and 10.96% respectively.

**Table-I Benefits from Ken-Betwa Link Project**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Component</th>
<th>CCA (ha)</th>
<th>Water Utilisation (MCM)</th>
<th>Cost (Rs. crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Daudhan Dam and its Components</td>
<td>MP - 4,47,368</td>
<td>MP - 2,349.87*</td>
<td>27,018.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UP - 2,51,064</td>
<td>UP - 1,700.08*</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>* includes irrigation, domestic requirement and transmission losses</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Lower Orr Dam</td>
<td>MP - 90,000</td>
<td>MP - 291.77</td>
<td>3,065.14</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(includes irrigation and domestic requirement)</td>
<td></td>
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<tr>
<td>3.</td>
<td>Kotha Barrage</td>
<td>MP - 20,000</td>
<td>MP - 88.19</td>
<td>708.73</td>
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<td></td>
<td></td>
<td></td>
<td>(includes irrigation, domestic and industrial requirement)</td>
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<tr>
<td>4.</td>
<td>Bina Complex</td>
<td>MP - 96,000</td>
<td>MP - 413.35</td>
<td>4,318.88</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(includes irrigation, Domestic &amp; industrial requirement)</td>
<td></td>
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<tr>
<td></td>
<td><strong>Sub-total</strong></td>
<td><strong>MP - 6,53,368</strong></td>
<td><strong>MP - 3,143.18</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>UP - 2,51,064</strong></td>
<td><strong>UP - 1,700.08</strong></td>
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<td></td>
<td><strong>Total (MP &amp; UP)</strong></td>
<td><strong>9,04,432 ha</strong></td>
<td><strong>4,843.26</strong></td>
<td><strong>35,111.24</strong></td>
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<tr>
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<td>Say 9.04 Lakh ha</td>
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<td>5.</td>
<td><strong>Domestic/Industrial Water Requirement (MCM)</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(a)</td>
<td>Daudhan Dam and its Components</td>
<td>MP - 60</td>
<td>127</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>UP - 67</td>
<td></td>
<td></td>
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<tr>
<td>(b)</td>
<td>Lower Orr Dam</td>
<td></td>
<td>MP - 6.0</td>
<td></td>
</tr>
<tr>
<td>(c)</td>
<td>Kotha Barrage</td>
<td></td>
<td>MP - 7.5</td>
<td></td>
</tr>
<tr>
<td>(d)</td>
<td>Bina Complex</td>
<td></td>
<td>MP - 88.4</td>
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</tbody>
</table>

**Total Domestic/Industrial Water Requirement** 228.9
2.0 Clearances Status

2.1 Clearances Received:

The details of clearances received for KBLP are as given below:

(A) Daudhan Dam, its canal system, tunnels and power houses

(i) Techno-economic Clearance of KBLP, Phase-I (DPR-2010) has been accorded by the Project Appraisal Organisation, Central Water Commission, New Delhi vide letter dated 04.08.2016.
(ii) Investment Clearance of KBLP, Phase-I has been accorded by the Ministry of Water Resources, RD&GR, Govt. of India vide letter dated 19.06.2017 for estimated cost of Rs. 18057.08 crore at price level 2015-16
(iii) Standing Committee of National Board for Wild Life has recommended the proposal in its 39th meeting held on 23rd August, 2016 vide letter 19.09.2016.
(iv) Clearance from Ministry of Tribal Affairs (MoTA) for R&R Plan for STPAFs has been accorded vide letter dated 04.01.2017.
(v) Forest Clearance Stage-I/In-Principle Approval has been granted by Ministry of Environment and Forests & Climate Change (MoEF&CC), New Delhi vide letter dated 25.05.2017.
(vi) Environment Clearance has been accorded by MoEF&CC, New Delhi vide letter dated 25.08.2017.

(B) Bina Complex Multipurpose Project

(i) Environmental Clearance 
(ii) Forest Land Diversion Clearance.

(c) Lower Orr Project

(i) MoTA clearance
(ii) Stage-I forest clearance

2.2 Clearances Required:

(i) Clearance from Central Empowered Committee constituted under Hon’ble Supreme Court
(ii) Techno-economic Clearance of KBLP (Comprehensive Report)
(iii) Investment Clearance of KBLP
(iv) Funding Clearance of KBLP
(v) Public Investment Board of KBLP
(vi) Environmental Clearance of Lower Orr Project
(vii) Forest Land Diversion Clearance of Lower Orr Project
(viii) MoTA Clearance of Lower Orr Project
(ix) Environment Clearance of Kotha Barrage
2.3 The Critical Issues which need to be resolved

I. Stage-I Forest Land Diversion Clearance

The Stage-I Forest Land Diversion Clearance was accorded by MoEF&CC vide letter dated 25.07.2017 subject to certain conditions including the transfer of equal revenue land (6017 ha) and its mutation in favour of the State Forest Department. Accordingly, a team of NWDA officers has visited the eastern and western parts of the Panna Tiger Reserve and identified 4206 ha non-forest land for Compensatory Afforestation works. Hence, it is proposed that the 4206 ha of the identified revenue land and double the remaining 1811 ha, i.e. 3622 ha will be provided from the degraded forest land in Chhattarpur district in lieu of 6017 ha of revenue land. The proposal is under examination with the MoEF&CC.

II. Wildlife Clearance

Standing Committee of NBWL of the MoEF&CC chaired by Hon’ble Minister (MoEF&CC) recommended the project for accord of Wildlife Clearance in its 39th meeting held on 23.08.2016, with certain conditions. Subsequently, the MoEF&CC issued wildlife Clearance for the K-B Link vide letter dated 21.09.2016 with conditions that (i) the Daudhan reservoir area shall be retained as core area of the PTR and the landscape plan for the area will be finalized with NTCA in lead assisted by WII, State forest departments and project proponents and (ii) the efforts to integrate the Nauradehi WLS, Rani Durgawati WLS and Ranipur WLS within the PTR will be undertaken simultaneously.

Accordingly, the Task of Landscape Management Plan (LMP) in the PTR has been entrusted to WII, Dehradun and the work is in progress.

Meanwhile on the direction of the Hon’ble Supreme Court order dated 14.08.2018, the Central Empowered Committee (CEC), with a view to examine the proposal for Wildlife Clearance in respect of KBLP from the point of adequacy of mitigative measures against the adverse impacts of the project on the ecological integrity of Panna Tiger Reserve and particularly the relevant riverine ecosystem documents obtained from the MoEF&CC.

In the meantime, the CEC received Application No. 1409 of 2017 filed by Sh. Randhir Bittu Sahgel and Manoj Misra and Application No. 1433 of 2017 filed by the Conservation Action Trust, raising concerns with regard to the approval of Wildlife Clearance. Further, the Applicant Mr. Manoj Misra in Application No. 1409 of 2017 approached the Hon’ble Supreme Court through IA Nos. 26893 of 2018 and 27160 of 2018 seeking orders directing the CEC to hear the Application No. 1409 dated 23.02.2017 on urgent basis. The Hon’ble Court by order dated 14.08.2018 directed the CEC to file its Report.

In compliance of the Hon’ble Supreme Court order dated 14.08.2018, the Central Empowered Committee (CEC) also examined the Wildlife Clearance in consultation with NWDA, MoEF&CC, Governments of MP & UP and submitted its report on 30.08.2019 recommending therein studies for examining (a) whether the mitigative measures now proposed effectively offset the adverse impact of the KBLP on the unique ecosystem of Panna National Park and Panna Tiger Reserve and (b) the alternatives to meet the objectives of the KBLP i.e to meet the irrigational need of the command area proposed under the project to alleviate poverty are examined through specialised agencies for consideration of Hon’ble Supreme Court.
III. Water Sharing in Non-Monsoon Season

The overall yearly water sharing as per the MoU dated 25.08.2005 to UP (1700 MCM) is adhered by both States. The issue of water sharing between the States of MP and UP during non-monsoon is under discussions.

Plate-I

INDEX MAP OF KEN-BETWA LINK PROJECT
### Technical Digest

1. **Studies Completed by NWDA**

   Here the works and studies, which were completed and are in progress by the end of the reporting period, i.e., on 31st March 2020 are briefed below:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Particulars</th>
<th>Peninsular Component</th>
<th>Himalayan Component</th>
<th>Intra-State Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Water balance studies of basins/sub-basins</td>
<td>137</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Water balance studies of diversion points</td>
<td>52</td>
<td>19</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Toposheet and storage capacity studies of reservoirs</td>
<td>58</td>
<td>16</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Toposheet studies of link alignments</td>
<td>18</td>
<td>19</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>PFRs of link projects</td>
<td>18</td>
<td>14</td>
<td>36*</td>
</tr>
<tr>
<td>6</td>
<td>Surveys and Investigations and preparation of FRs of link projects</td>
<td>14</td>
<td>2 (Indian portion) + 8 (Draft form)</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Preparations of DPRs of link projects</td>
<td>1. Ken-Betwa Phase-I</td>
<td>-</td>
<td>1. Kosi-Mechi Link of Bihar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Ken-Betwa Phase-II</td>
<td></td>
<td>2. Burhi Gandak-Noon-Baya-Ganga Link of Bihar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Par-Tapi-Narmada</td>
<td></td>
<td>3. Ponniyar-Palar Link of TamilNadu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Godavari (Janampet) - Cauvery (Grand Anicut)</td>
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</table>

*(Out of the total proposals of 47 nos received from 9 State Governments)*

2.0 Progress of Works

2.1 Preparation/Revision of PWBS

   In the 17th meeting of the Technical Advisory Committee (TAC) of the NWDA, it was decided that water balance studies may be updated after a period of 10 years when additional data become available. Accordingly during the reporting period, 36 water balance studies, which have been taken up for revisions are at various levels of progress.

2.2 Preparation of Pre-Feasibility Report

   Preparation of modified PFR of Parbati-Kalisindh-Chambal link project of the NPP and Sone-Falgu Intra-State link of Bihar are in progress while the PFR of Nagavali-Vamsadhara-Rushikuliya Intra-State link of Odisha is under scrutiny.

2.3 Preparation of Feasibility Report

   Out of the 16 identified projects under the Peninsular Rivers Development Component of the NPP, FRs of the 14 links have been completed except two minor links, namely 1. Nethravati-Hemavati link project (for which concurrence by the Government of
Karnataka is not provided) and 2. Bedti-Varda link project, whose EIA studies are under progress.

Out of the 14 links identified under the Himalayan Rivers Development Component, FRs of 1. Sarda-Yamuna and 2. Ghagha-Yamuna pertaining to the Indian portion & 8 draft FRs of Yamuna-Rajasthan; Manas-Sankosh-Tista-Ganga; Farakka-Sunderbans; Ganga (Farakka)-Damodar-Subarnarekha; Subarnarekha-Mahanadi; Chunar-Sone Barrage; Rajasthan-Sabarmati; and Gandak-Ganga have been completed while Survey and Investigation (S&I) works for Kosi-Ghagha (Indian portion) and Sone Dam-Southern Tributarites of Ganga (S-T-G) have been completed and the remaining 2 links 1. Kosi-Mechi link project has not been taken up as it entirely lies in Nepal and 2. Jogighopa-Tista-Farakka (JTF) link project— an alternative to M-S-T-G has been dropped.

By the end of the reporting period on 31st March 2020, the draft FRs of the alternate alignment of Pennar-Palar-Cauvery link parallel canal from Araniar Reservoir to Vellar River and M-S-T-G (forest free) link have been completed and are in scrutiny.

2.4 Preparation of Detailed Project Reports

2.4.1 Under National Perspective Plan

After obtaining consensus through negotiations and arriving at mutual agreements between concerned states, the DPRs of the links coming under the Peninsular Components of the NPP namely of Ken-Betwa (K-B) [Phase-I] and K-B (Phase-II), Par-Tapi-Narmada (P-T-N), Damanganga-Pinjal (D-P) and Godavari (Janampet) -Cauvery (Grand Anicut) link Projects have been completed.

During the reporting period preparation of the DPR of Bedti-Varda link has been commenced as per the consensus received from the Government of Karnataka.

2.4.2 Alternate Studies under NPP

i. The DPR of Godavari (Janampet)-Krishna (Nagarjunsagar)-Cauvery (Grand Anicut) remained under progress.

ii. Alternate Study for connecting Peninsular Component with the Himalayan Component is taken up and is in progress.

2.4.3 Intra-State Links

47 Intra-State Proposals have been received from the nine State Governments of Maharashtra (20), Gujarat (1), Odisha (3), Jharkhand (3), Bihar (10), Rajasthan (2), Tamil Nadu (1), Karnataka (6) and Chhattisgarh (1). Out of which PFR studies for 36 proposals have been completed by NWDA. The DPRs of Kosi-Mechi and Burhi-Gandak-Noon-Baya-Ganga link projects have been completed as demanded by the concerned State Government of Bihar.

For preparation of the DPRs of Damanganga-Vaitarna-Godavari & Damanganga (Ekdare)-Godavari Intra-State link projects of Maharashtra, administrative approval and release of advance amount have been received from the State Government of Maharashtra.

Preparation of the DPRs of alternate alignment of Godavari-Cauvery link projects as proposed by the Government of Telangana; and Yamshadharasa-Rushikuliya (Nandini Nala) link project of Odisha are in progress.

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Here, the ILR issues raised and were discussed in both the houses of Parliament during the Winter session and the reporting period starting from 01\textsuperscript{st} January to 31\textsuperscript{st} March, 2020 and projected on the Parliament of India website (Lok Sabha and Rajya Sabha) are incorporated here for information to our readers/stakeholders.

A. Lok Sabha

1.1 Whether the Government proposes to inter-link the rivers and is committed to clean the rivers merging with river Ganga and if so, the details thereof and the time by which the river Ganga is likely to be cleaned

Government of India has taken up the ILR programme on a consultative manner and accorded high priority. Under the NPP, the NWDA has identified 30 links (16 under Peninsular Component and 14 under Himalayan Component) for preparation of FRs.

Under the NPP, four priority links have been identified for preparation of DPR under the Peninsular Rivers Component viz; Ken-Betwa link project (KBLP), Damanganga-Pinjal link project (DPLLP), Par-Tapi-Narmada link project (PTNLP) and Godavari-Cauvery link project (GCLP). The DPRs of KBLP, DPLP and PTNLP have been sent to the concerned States. Draft MoAs for implementation of these three projects have also been sent to the party States. Draft DPR of GCLP, consisting of three links viz; Godavari (Inchampalli/Janampet) – Krishna (Nagarjunasagar), Krishna (Nagarjunasagar) – Pennar (Somasila), and Pennar (Somasila)-Cauvery (Grand Anicut) link projects, has been completed and circulated to party States in March 2019.

The implementation of these link projects will be taken up on signing of MoU among party states and accord of statutory clearances by the respective Ministries/Departments. The feasibility report studies related to remaining links are in varying stages of completion.

Cleaning of rivers is a continuous process and the Government of India is supplementing the efforts of State Governments in addressing the challenges of pollution of river Ganga and its tributaries by providing financial and technical assistance. In May 2015, the Government of India launched Namami Gange Programme which is an integrated umbrella programme to ensure effective abatement of pollution and conservation of river Ganga by adopting a river basin approach for comprehensive planning and management. Under Namami Gange Programme, diverse set of interventions like pollution abatement activities including Sewage, Industrial Effluent, Solid Waste Management etc., River Front Management, Aviral Dhara, Rural Sanitation, Afforestation, Biodiversity Conservation, Public Participation etc, have been taken up for cleaning and rejuvenation of river Ganga.

As far as small rivers/tributaries are concerned, based upon the pollution priority and need of pollution abatement, 39 projects have been taken up in 27 tributary towns located along river Yamuna, Kali, Ramganga, Saryu, Gomti, Damodar, Banka, Rispana, Kharkai, Kosi and Burhi Gandak to make them pollution free.

So far, Under Namami Gange programme, till December 2019, a total of 310 projects have been sanctioned, out of which 114 projects have been completed.
B. Rajya Sabha

1.1 Whether Government is concerned about the decreasing ground water level in the country; if so, the steps taken to ensure rain water harvesting in the country; the status of river linking projects in the country; whether some State Governments have objected to the river linking projects; and if so, the details thereof

Ground water levels in various parts of the Country are declining because of continuous withdrawal due to reasons such as increased demand of fresh water for various uses, vagaries of rainfall, increased population, industrialization & urbanization etc.

Water being a State subject, initiatives on water management including conservation and water harvesting in the Country is primarily States’ responsibility. However, the important measures taken by the Central Government for conservation, management of ground water and effective implementation of rain water harvesting in the country are at the following URL:


A number of States have done notable work in the field of water conservation/harvesting. Of these, mention can be made of ‘Mukhyamantri Jal Swavlamban Abhiyan’ in Rajasthan, ‘Jalyukt Shibar’ in Maharashtra, ‘Sujalam Sufalam Abhiyan’ in Gujarat, ‘Mission Kakatiya’ in Telangana, Neeru Chettu’ in Andhra Pradesh, Jal Jeevan Hariyali in Bihar among others.

The Government of India launched Jal Shakti Abhiyan which is a time bound campaign with a mission mode approach intended to improve water availability including ground water conditions in the water stressed blocks of 256 districts in India. In this regard, teams of officers from Central Government along-with technical officers from MoJS were deputed to visit water stressed districts and to work in close collaboration with district level officials to undertake suitable interventions.

The Government of India has approved Atal Bhujal Yojana (Atal Jal), a Rs.6000 Crore Central Sector Scheme, for sustainable management of ground water resources with community participation in water stressed blocks of Gujarat, Haryana, Karnataka, Madhya Pradesh (MP) , Maharashtra, Rajasthan and Uttar Pradesh (UP).

Central Government supports construction of water harvesting and conservation works primarily through Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and Pradhan Mantri Krishi Sinchayee Yojana – Watershed Development Component (PMKSY-WDC).

Government of India is actively considering the ILR programme as one of the interventions for sustainable management of water resources in the country. The details of river linking projects and present status are given at Annex-I.

‘Special Committee on Interlinking of Rivers’ (SCILR) is expediting the objectives of the interlinking of rivers through consensus/deliberations between the concerned States, however, views/observations of some of the States are given at Annex-II.
## Present status of IBWT Links and its FRs/DPRs

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of Link Project</th>
<th>Rivers</th>
<th>States Concerned</th>
<th>Present Status</th>
<th>Status of Clearances</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Himalayan Component</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Kosi-Mechi link</td>
<td>Kosi &amp; Mechi</td>
<td>Bihar, West Bengal (WB) &amp; Nepal</td>
<td>PFR Completed</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Entirely lies in Nepal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Kosi-Ghaghra link</td>
<td>Kosi &amp; Ghaghra</td>
<td>Bihar, UP &amp; Nepal</td>
<td>PFR Completed</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>Gandak-Ganga link</td>
<td>Gandak &amp; Ganga</td>
<td>-do-</td>
<td>Draft FR Completed</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Indian portion)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Ghaghra-Yamuna link</td>
<td>Ghaghra &amp; Yamuna</td>
<td>-do-</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Indian portion)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Sarda-Yamuna link</td>
<td>Sarda &amp; Yamuna</td>
<td>Bihar, UP, Haryana, Rajasthan, Uttarakhand &amp; Nepal</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>Yamuna-Rajasthan link</td>
<td>Yamuna &amp; Sukri</td>
<td>UP, Gujarat, Haryana &amp; Rajasthan</td>
<td>Draft FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>7.</td>
<td>Rajasthan-Sabarmati link</td>
<td>Sabarmati</td>
<td>-do-</td>
<td>Draft FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>8.</td>
<td>Chunar-Sone Barrage link</td>
<td>Ganga &amp; Sone</td>
<td>Bi &amp; UP</td>
<td>Draft FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>9.</td>
<td>Sone Dam – Southern Tributaries of Ganga link</td>
<td>Sone &amp; Badua</td>
<td>Bi &amp; Jharkhand</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>10.</td>
<td>Manas-Sankosh-Tista-Ganga (M-S-T-G) link</td>
<td>Manas-Sankosh-Tista-Ganga</td>
<td>Assam, WB, Bihar &amp; Bhutan</td>
<td>PFR Completed</td>
<td>-</td>
</tr>
<tr>
<td>11.</td>
<td>Jogighopa-Tista-Farakka link (Alternative to M-S-T-G Link)</td>
<td>Manas, Tista &amp; Ganga</td>
<td>-do-</td>
<td>(Alternative to M-S-T-G Link) dropped</td>
<td>-</td>
</tr>
<tr>
<td>12.</td>
<td>Ganga (Farakka)-Sunderbans link</td>
<td>Ganga &amp; Ichhamati</td>
<td>WB</td>
<td>Draft FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>13.</td>
<td>Ganga(Farakka)-Damodar-Subernarekha link</td>
<td>Ganga, Damodar &amp; Subernarekha</td>
<td>WB, Odisha &amp; Jharkhand</td>
<td>Draft FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>14.</td>
<td>Subernarekha-Mahanadi link</td>
<td>Subernarekha &amp; Mahanadi</td>
<td>WB &amp; Odisha</td>
<td>Draft FR Completed</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td><strong>Peninsular Component</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Mahanadi (Manibhadra) - Godawari (Dowlaiswaram) link</td>
<td>Mahanadi &amp; Godavari</td>
<td>Odisha, Maharashtra, AP, Karnataka, &amp; Chattisgarh</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>16.</td>
<td>Godawari (Inchampalli) - Krishna (Nagarjunasagar) link</td>
<td>Godavari &amp; Krishna</td>
<td>Odisha, Maharashtra, MP, AP, Karnataka &amp; Chattisgarh</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>17.</td>
<td>Godawari (Inchampalli) - Krishna (Pulichintala) link</td>
<td>Godavari &amp; Krishna</td>
<td>-do-</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>Sl. No</td>
<td>Name of Link Project</td>
<td>Rivers</td>
<td>States Concerned</td>
<td>Present Status</td>
<td>Status of Clearances</td>
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<tr>
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<tr>
<td>18</td>
<td>Godavari (Polavaram) - Krishna (Vijayawada) link</td>
<td>Godavari &amp; Krishna</td>
<td>Odisha, Maharashtra, AP, Karnataka, &amp; Chattisgarh</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>19</td>
<td>Krishna (Almatti) – Pennar link</td>
<td>Krishna &amp; Pennar</td>
<td>-do-</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>20</td>
<td>Krishna (Srisailam) – Pennar link</td>
<td>Krishna &amp; Pennar</td>
<td>-do-</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>21</td>
<td>Krishna (Nagarjunasagar) - Pennar (Somasila ) link</td>
<td>Krishna &amp; Pennar</td>
<td>Maharashtra, AP &amp; Karnataka,</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>22</td>
<td>Pennar (Somasila) – Palar-Cauvery (Grand Anicut) link</td>
<td>Pennar &amp; Cauvery</td>
<td>AP, Karnataka, Tamil Nadu, Kerala &amp; Puducherry</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>23</td>
<td>Cauvery (Kattalai)- Vaigai -Gundar link</td>
<td>Cauvery, Vaigai &amp; Gundar</td>
<td>Karnataka, Tamil Nadu, Kerala &amp; Puducherry</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>24</td>
<td>Ken-Betwa link</td>
<td>Ken &amp; Betwa</td>
<td>UP &amp; MP</td>
<td>FR &amp; DPR (Phase-I&amp;II) Completed Comprehensive DPR sent to Govt. of MP &amp; UP</td>
<td>Phase-I All statutory clearances (except Stage-II forest clearance and clearance from CEC of Hon’ble Supreme Court) and Techno-economic clearance (July 2016) completed for Phase-I components. Phase-II Stage-I Forest clearance, MoTA clearance for Lower Orr dam, Environmental &amp; Forest clearances for Bina complex projects accorded.</td>
</tr>
<tr>
<td>25</td>
<td>Parbati -Kalisindh-Chambal link</td>
<td>Parbati, Kalisindh &amp; Chambal</td>
<td>MP, Rajasthan &amp; UP (UP requested to be consulted</td>
<td>FR Completed</td>
<td>-</td>
</tr>
<tr>
<td>Sl. No</td>
<td>Name of Link Project</td>
<td>Rivers</td>
<td>States Concerned</td>
<td>Present Status</td>
<td>Status of Clearances</td>
</tr>
<tr>
<td>--------</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>during consensus building)</td>
</tr>
<tr>
<td>26</td>
<td>Par-Tapi-Narmada link</td>
<td>Par, Tapi &amp; Narmada</td>
<td>Maharashtra &amp; Gujarat</td>
<td>FR &amp; DPR Completed</td>
<td>Technical appraisal is under progress in CWC.</td>
</tr>
<tr>
<td>27</td>
<td>Damanganga - Pinjal link</td>
<td>Damanganga &amp; Pinjal</td>
<td>Maharashtra &amp; Gujarat</td>
<td>FR &amp; DPR Completed</td>
<td>Techno-economic clearance accorded. (July 2016)</td>
</tr>
<tr>
<td>28</td>
<td>Bedti - Varda link</td>
<td>Bedti &amp; Varda</td>
<td>Maharashtra, AP &amp; Karnataka</td>
<td>PFR Completed</td>
<td>-</td>
</tr>
<tr>
<td>29</td>
<td>Netravati – Hemavati link</td>
<td>Netravati &amp; Hemavati</td>
<td>Karnataka, Tamil Nadu &amp; Kerala</td>
<td>PFR Completed</td>
<td>-</td>
</tr>
<tr>
<td>30</td>
<td>Pamba - Achankovil - Vaippar link</td>
<td>Pamba, Achankovil &amp; Vaippar</td>
<td>Kerala &amp; Tamil Nadu</td>
<td>FR Completed</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: NWDA has completed the draft DPR of alternate study of Godavari Inchampalli/Janampet)-Cauvery (Grand Anicut) link project, which consists of Godavari (Inchampalli/Janampet)-Krishna(Nagarjunasagar); Krishna (Nagarjunasagar)-Pennar (Somasila); and Pennar (Somasila)-Cauvery (Grand Anicut) link projects.

Annexure-II

**Link wise Details of points raised by various State Governments**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Link Project</th>
<th>Concerned States</th>
<th>Views/Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pamba - Achankovil - Vaippar link</td>
<td>Tamil Nadu &amp; Kerala</td>
<td>Kerala Assembly has passed a resolution against taking up of the Link Project (2003)</td>
</tr>
<tr>
<td>2</td>
<td>Parbati – Kalisindh – Chambal link (PKC)</td>
<td>MP &amp; Rajasthan</td>
<td>Government of MP has taken up Mohanpura Multipurpose Project and Kundaliya dam as a major irrigation project (important components of Parbati-Kalisindh-Chambal link) as per their own requirement and as such not in favour of PKC link as proposed by NWDA.</td>
</tr>
<tr>
<td>3</td>
<td>Mahanadi (Manibhadra) – Godavari link</td>
<td>Odisha, Maharashtra, AP, Karnataka, &amp; Chattisgarh,</td>
<td>Government of Odisha is not agreeable to this link Project due to large submergence of Manibhadra dam/reservoir and to the water balance and quantum of water to be diverted.</td>
</tr>
<tr>
<td>4</td>
<td>Godavari (Inchampalli) -Krishna link Projects</td>
<td>Odisha, MP, AP, Maharashtra, Telangana, Karnataka, &amp; Chattisgarh,</td>
<td>Government of Telangana is not agreeable to the water balance at Inchampalli dam site in Godavari basin.</td>
</tr>
<tr>
<td>5</td>
<td>Netravati – Hemavati link</td>
<td>Karnataka, Tamil Nadu &amp; Kerala</td>
<td>Government of Karnataka intends to utilize Netravati water as per its own plan.</td>
</tr>
</tbody>
</table>
1.2 Whether Government has started Godavari-Kaveri River ILR Project; if so, the present status of the project and the details thereof; whether Government has any policy to allocate necessary funds for the already announced Godavari-Kaveri River ILR Project in the budget for the year 2020-21; if so, the details thereof; whether Tamil Nadu Government had approached the Central Government for the immediate kick-starting of Godavari-Kaveri River ILR project; and if so, the details thereof

The draft DPR of Godavari(Inchampalli / Janampet) – Cauvery (Grand Anicut) link project consisting of 3 links viz., Godavari (Inchampalli/Janampet) - Krishna (Nagarjunasagar), Krishna (Nagarjunasagar) - Pennar (Somasila) and Pennar (Somasila) – Cauvery (Grand Anicut) link projects has been completed by NWDA and sent to party States in March 2019.

As per the draft DPR, this link project will benefit about 9.38 lakh ha of area in Telangana, AP and Tamil Nadu States. Out of ten States concerned, four States have furnished suggestions/comments on the draft DPR.

The stage of implementation of a project would be reached after its DPR is prepared with the consensus of concerned States and the requisite statutory clearances are obtained. No Inter-linking of Rivers project has reached the implementation stage.

Hon’ble Chief Minister of Tamil Nadu has requested the Central Government to prepare DPR for Godavari–Cauvery link project expeditiously.

1.3 Whether a request from the Chief Minister of Andhra Pradesh has been received in the Ministry for diverting Godavari river water to Srisailam and Nagarjuna Sagar, which will help drought-prone districts of Rayalaseema in AP; whether it is a fact that the Chief Minister has requested for financial assistance for this project since the State is reeling under severe financial crisis; and if so, action taken by Government on the above request

Government of India received a request from the Hon’ble Chief Minister, Andhra Pradesh in August 2019 for exploring ways to divert water from Godavari Basin to Krishna Basin to help drought affected Rayalaseema, Prakasham and Nellore Districts and support for the Godavari - Krishna linkage.

The NWDA has prepared a draft DPR envisaging transfer of water from Godavari to Krishna, Krishna to Pennar and Pennar to Cauvery and circulated to all the concerned States in March 2019 for furnishing their views. Godavari-Cauvery link (comprising of 3 links namely Godavari (Inchampalli/Janampet) - Krishna (Nagarjunasagar), Krishna (Nagarjunasagar) – Pennar (Somasila) & Pennar (Somasila) – Cauvery (Grand Anicut) link projects envisages diversion of 7000 MCM (247 TMC) of unutilised water in Indravati sub basin of Godavari basin to meet the enroute requirement between Godavari and Cauvery. The link project will provide annual irrigation varying from 3.45 to 5.04 lakh ha in Prakasam, Nellore, Krishna, Guntur and Chittoor districts of Andhra Pradesh including stabilisation of existing command areas under Nagarjunasagar Left and Right Bank Canals.

1.4 Whether it is a fact that Government is planning to connect Godavari river with Kaveri via Nagarjuna Sagar; whether it is also a fact that through the proposed link, Government wants to divert 247 tmc of water to Kaveri; if so, the details thereof; the estimated cost of the link projected by NWDA; and from where Government is planning to pool the resources
The draft DPR of Godavari(Inchampalli / Janampet) – Cauvery (Grand Anicut) link project consisting of 3 links viz., Godavari (Inchampalli/Janampet) - Krishna (Nagarjunasagar), Krishna (Nagarjunasagar) - Pennar (Somasila) and Pennar (Somasila) – Cauvery (Grand Anicut) link projects has been completed by NWDA and sent to party States in March 2019.

As per the draft DPR, about 247 TMC can be diverted from Godavari river to Nagarjunsagar dam(through lifting) and further south for meeting the demands of Krishna, Pennar and Cauvery basins.

As per the draft DPR, the cost of the project has been estimated as Rs. 60361 Crore at 2018-19 price level by NWDA. Pooling of resources is decided after completion of final DPR.

1.5 The details of and current status of framework of the Ken-Betwa river interlinking project in UP and MP; whether it is a fact that the project for ILR was chalked out, but only minimal work in this regard has been carried out so far; and whether Government would consider speeding up the inter-linking of rivers keeping the interests of the farmers of Bundelkhand in mind and what is the current status thereof

The KBLP consists of the following components viz: i) Daudhan dam complex and its appurtenances like Low Level Tunnel, High Level Tunnel, Ken-Betwa link canal, Power houses, etc.(under Phase-I), ii) Lower Orr dam iii) Bina complex project and iv) Kotha barrage(under Phase-II). The DPR of KBLP (Phase-I, Phase-II and Comprehensive) has been completed.

As per the comprehensive DPR, the total command area for irrigation under the KBLP is 9.04 lakh ha out of which 6.53 lakh ha lies in Chhattarpur, Tikamgarh, Panna, Damoh, Vidhisha, Datia, Sagar, Raisen and shivpuri districts of MP and 2.51 lakh ha lies in Jhansi, Mahoba and Banda districts of UP. Most of the command areas lie in Bundelkhand region of UP and MP. The project also envisages to provide domestic water supply to about 63 lakh population in the region.

All the clearances viz., Environment, MoTA, Stage-I forest, Wildlife clearances have been accorded for Phase-I components except Stage-II forest clearance and CEC clearance of Hon’ble Supreme Court of India. Most of the clearances for Phase-II projects have also been accorded/obtained from concerned Ministries/Departments. The DPRs of Lower Orr dam, Kotha barrage and Bina complex projects are under technical appraisal in CWC.

The ILR programme has been taken up on high priority. The Government is pursuing the ILR program in a consultative manner. A “Special Committee on Interlinking of Rivers” has been constituted in September, 2014 for the expeditious implementation of ILR programme. Seventeen meetings of the Special Committee have been held so far. Further, a Task Force for Interlinking of Rivers has been constituted by MoWR, RD & GR (now MoJS) in April, 2015 and eleven meetings of the Task Force have been held so far. Efforts have been made for building consensus among the concerned States and also setting out road maps for implementation of the projects.

In respect of KBLP, meetings have been convened by Central Government at the level of Chief Ministers as well as at the level of Chief Secretaries of the party States to expedite the implementation of the project. The draft Memorandum of Agreement (MoA)
for implementation of KBLP has been sent to Uttar Pradesh and Madhya Pradesh for concurrence. Secretary (DoWR, RD&GR) convened a meeting on 20.07.2019 with Chief Secretaries of UP and MP for finalisation of MoA for implementation/water sharing. The Task force also held a meeting of Secretaries of Water Resources Department of MP & UP on 26.02.2020 to sort out the issues between both the States.

1.6 Whether Government has, so far, shared any Feasibility Report of river interlinking project to transfer water from Himalayan river to Mahanadi river with Odisha Government; if so, the details thereof, if not, the reasons therefor; and the quantity of water Government has planned to transfer from Himalayan rivers to Mahanadi river

Under the Himalayan component of the NPP, the following three link projects in series viz.,

i) Manas-Sankosh-Teesta-Ganga (MSTG) link project;
ii) Ganga(Farakka)-Damodar-Subernarekha (GDS) link project and
iii) Subernarekha-Mahanadi (SM) link project,

The three links have been planned to transfer waters from the Brahmaputra and its tributaries to Mahanadi. The PFRs of these link projects were prepared and circulated to TAC members of NWDA which is represented by Odisha State also. The revised FR of MSTG link project avoiding forest areas is presently under finalization. The draft FRs of GDS and SM link projects prepared earlier by NWDA will undergo further modifications based on the final FR of MSTG link project and will be circulated to the party States for their views/comments.

Out of the 43208 MCM of waters proposed to be diverted through MSTG link, a quantum of 13,965 MCM of water will be brought to Mahanadi basin for further diversion to south through the nine link system proposed under the Peninsular Component of the NPP.

1.7 The estimated cost of the ILR projects along with the names of rivers

The estimated cost* of the four prioritised inter-linking of rivers projects

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the link project</th>
<th>Estimated cost (Rs. in Crore)</th>
<th>Price level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ken-Betwa Link Project (as per Comprehensive DPR)</td>
<td>35111.24</td>
<td>2017-18</td>
</tr>
<tr>
<td>2</td>
<td>Damanganga-Pinjal Link Project (as per DPR)</td>
<td>3008.49</td>
<td>2015-16</td>
</tr>
<tr>
<td>3</td>
<td>Par-Tapi-Narmada Link Project (as per DPR)</td>
<td>10211.24</td>
<td>2014-15</td>
</tr>
<tr>
<td>4</td>
<td>Godavari (Inchampalli/Janampet)-Cauvery (Grand Anicut) Link Project (as per draft DPR)</td>
<td>60361.00</td>
<td>2018-19</td>
</tr>
</tbody>
</table>

*The cost of the remaining link projects will be known after preparation of the DPRs of respective link projects.
KCR, Jagan reach water sharing deal

SPECIAL CORRESPONDENT
HYDERABAD

A six-hour meeting between Telangana Chief Minister K. Chandrasekhar Rao and his Andhra Pradesh counterpart Y.S. Jaganmohan Reddy on Monday ended in both of them reaching an understanding to divert water from Godavari river to ayacut in Krishna basin for optimal utilisation of river waters in the two riparian States.

It was decided that they will look in detail at the next meeting on the point from where Godavari will be diverted and places where the water will reach. How the water will be utilised and the model for the purpose will also be discussed, a release after the meeting said.

Mr. Rao and Mr. Reddy met at the former’s camp office here and decided to adopt a give and take approach in all administrative matters. They asked the Chief Secretaries over phone from the meeting hall to meet shortly to resolve pending issues of bifurcation of institutions listed under Schedules 9 and 10 of the Andhra Pradesh Reorganisation Act.
‘Ice stupas’ could help irrigate Ladakh fields

Times of India Dated: January 17, 2020

New Delhi: In its search for an answer to the problem of acute water shortages in Ladakh, particularly in regions which grow a single crop, the government is now looking to assess the impact of “ice stupas” set up under the guidance of the Students Educational and Cultural Movement of Ladakh (SECMOL) and explore if these can be scaled up as solutions to help create more livelihood options.

These stupas store large reserves of water as ice through the winter and carry the potential to provide for irrigation and drinking water in summers. SECMOL will be executing an on-ground experiment over two years across 40 villages and will present to the ministry of tribal affairs a detailed report on the impact of ice stupas and how this model can be broad-based for mass utilisation.

The action research, which will be financially supported by the government, aims at supporting research by reputed institutions that are working in the field of tribal development and research. Remanujan, another nature and education reformist from Ladakh, is one of the founders of SECMOL and has been steering the ice-stupa project on-ground.

SECMOL will work on building ice stupas and work on reintroducing the rehabilitation of abandoned villages. The only source of water in Ladakh is glaciers, which melt and water goes into the Indus river through water channels.

SECMOL is learnt to have shared that if the existing water streams were channelised and brought to the villages, this will be nothing short of a revolution as it will not only make water available but also generate livelihood. The organisation proposed three interlinked projects. For instance, each ice stupa has scope for storing millions of litres of water which will melt and provide drinking water and water for agriculture and forestation and result in rejuvenating the economy of the village.

It was also pointed out that due to the water shortage, the villages had become uninhabitable. So, some of the houses can be used as farmstays.

Rising CO2 levels may double floods, storms

Could be catastrophic for India: experts

JACOB KONYE
NEW DELHI

The risk of extreme floods or storms could double every 13 years at the rate carbon-dioxide concentrations are building up in the atmosphere. This could spell a “catastrophe” for India, scientists have warned in a study.

The number of intense “hydro-meteorological” disasters could increase by 5.4% annually for an “average” country facing annually nearly one “extreme disaster” (defined as one that causes 100 or more fatalities and/or affects 1,000 or more people).

India faces 5-10 times as many extreme events as the average country, the authors say. “One more extreme event in India [such as the Kerala floods of 2018 that killed at least 400] would strain the ability of the country to cope; a doubling of the numbers in 13 years, using the above estimation, would be catastrophic,” authors Ramon E. Lopez, Vinod Thomas and Pablo A. Troncoso write in a note accompanying the study. The report, Impacts of Carbon Dioxide Emissions on Global Intense Hydro-meteorological Disasters, appears in the January issue of Climate, Disaster and Development Journal.

The authors relied on econometric modelling which, they say, complements the traditional approach of climate modelling to explore the factors that have contributed to the increase in the frequency of flood and storm events.
Committee to study Ulsoor lake pollution
National Green Tribunal orders analysis of samples from the waterbody, neighbouring areas

K.K. Mohite

The Southern Bench of the National Green Tribunal (NGT) has ordered the constitution of an joint committee to take water samples from Bengaluru’s Ulsoor lake and neighbouring areas to ascertain whether the lake is being polluted owing to illegal activity. It also tasked the panel with carrying out an analysis of the water in the lake.

H C, comprising Justice K Kavianathan and expert member Subal Dasgupta, made the a suo moto direction based on a report in The Hindu in 2016 after schools of fish in the lake were found dead.

A file photo of Ulsoor lake in Bengaluru. DH Photo

“The water analysis should include not only Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) limit, but also the Total Coliforms and Fae-
cal Coliforms and also the presence of any heavy metals like Arsenic, Phospho-
rus, etc., which are likely to affect the human health and, if such things are found, rest the remedial measures required to restore the water quality in that area,” the Bench ruled.

‘Illegal activities’

The Bench said The Hindu report indicated that the water quality had come down owing to illegal activities being carried out while discharging untreated sewage, effluents and the dumping of garbage into the waterbody, affecting the quality of the water and the ecology and aquatic life, much required for ecological sustenance.

“If the quality of the water in the lake is affected, it will automatically reflect in the groundwater quality, which in turn affects the health of the people who are likely to consume the poor quality of water, which is not in conformity with the norms provided for drinking purpose,” it observed.

The committee will comprise the Deputy Commissioner of Bengaluru (Urban), a senior scientist from the regional office of the Central Pollution Control Board, the Karnataka State Pollution Control Board and the Commissioner, Brutha Bengaluru Mahanagar Palike.

The committee has been directed to inspect the area, find out the source of pollution and take action against those responsible. The panel has also been asked to suggest remedial measures.

Nine Delhi districts had contaminated groundwater in 2019: Jal Shakti Minister

Data presented by Gajendra Singh Shekhawat in Rajya Sabha

SPECIAL CORRESPONDENT

Nine districts in Delhi had contaminated groundwater in 2019, and the capital had the highest level of arsenic in the country, a Jal Shakti Minister had informed the Rajya Sabha on Monday.

In the National Capital Region, which includes parts of Haryana, Rajasthan and Uttar Pradesh apart from Delhi, at least 30 districts had some forms of pollutants in their groundwater, including arsenic, iron, heavy metals such as lead, calcium and chromium, fluoride, nitrate and salinity, the data showed.

The data was presented by Jal Shakti Minister Gajendra Singh Shekhawat in a written response to a starred question asked by D P Yad, a RJD MP, and referred it in the LS.

He had asked whether the government was aware of “increasing groundwater pollution” in Delhi-NCR and what action was being taken to prevent over-exploitation of groundwater in these areas.

In response, the Jal Shakti Minister said that the Central Pollution Control Board’s National Water Quality Monitoring Programme did not show any increasing or decreasing trends in Delhi’s groundwater pollution levels in 2018 and 2019.

However, the Central Ground Water Board’s quality monitoring data for 2019 showed that some districts were partially affected by groundwa-
tour contaminants present at higher levels than declared permissible by the Bureau of Indian Standards, the minister’s response showed.

Salinity issues

In Delhi, seven districts had salinity issues, with electrical conductivity levels above the prescribed limit of 3,000 micromhos/cm, as well as fluoride and nitrate levels above the limits of 1.5 and 45 mg/l respectively.

Arsenic above the safe level of 0.01 mg/l was found in the groundwater of east and northeast Delhi. Iron was not a contaminant in Delhi, but lead was found along the Najafgarh drain in the North, West and South-West districts. Cadmium was found in south-west, while chromium was found in the north-west, South, East and New Delhi districts.

Taking into account the data for all of NGRI, 30 districts had high nitrate levels, while 22 districts had high fluoride levels.
Centre working on exclusive body for river-linking projects

National Interlinking of Rivers Authority will also generate funds

The Central government is working on the establishment of an exclusive body to implement projects for linking rivers.

To be called the National Interlinking of Rivers Authority (NIRA), the proposed body is expected to take up both inter-State and intra-State projects. It will also make arrangements for generating funds, internally and externally.

An official of the National Water Development Agency (NWDA), which is responsible for the formulation of proposals of the linking of rivers, said an updated draft cabinet note has been circulated to other Ministries in the Central government. On receipt of comments, the note will be finalised by the Ministry of Jal Shakti and sent to the Union Cabinet for approval.

‘No specific timeline’

The proposal for an apex body on river linking has been under discussion for the past 18 months. However, the official said that as of now, no specific timeline has been determined for the constitution of the Authority. Also, the earlier idea of framing a Bill, envisaging the creation of the NIRA, is not being pursued now.

The subject of establishment of the Authority was discussed at the last meeting of the Special Committee on Inter-Linking of Rivers (ILR) last week in New Delhi. Headed by Union Minister of Jal Shakti Gajendra Singh Shekhawat, the panel includes Irrigation or Water Resources Ministers and Secretaries of States. Since its formation, the Committee has held 17 meetings.

It is being assisted by a Task Force for ILR, which is a committee of experts essentially drawn from the Jal Shakti Ministry, Central Water Commission and the NWDA.

A Tamil Nadu government official said the Centre has not yet shared with States details regarding the new body though it has conveyed to them that it is planning to have an implementation agency for ILR projects.

Apex body on river linking in pipeline

Once approved, the projects will be pursed as national projects, wherein the Centre will absorb 90% of the cost and the States concerned the rest.

As of now, six ILR projects – the Ken-Betwa, Damanga-Pinjal, Par-Tapi-Narmada, Manas-Sankosh-Teesta-Ganga, Mahanadi-Godavari and Godavari-Cauvery (Grand Anicut) – have been under examination of the authorities.

With regard to the peninsular rivers, the Centre has chosen to focus on the Godavari-Cauvery link than the earlier proposal to link the Mahanadi-Godavari-Krishna-Pennar-Cauvery rivers.

The latter has eluded consensus given reservations from Odisha, officials said.

Tamil Nadu situation

In view of Tamil Nadu’s not-so-happy experience with its neighbours in getting its due share of water, it has been particular that either the Centre or any of its agencies execute the Godavari-Cauvery link project and look after operation.
**T.N.'s outreach to neighbours raises river-linking expectations**

CM keen on clinching consensus with A.P., Telangana

**T. RAMAKRISHNAN**  

Tamil Nadu Chief Minister Edappadi K. Palaniswami's outreach to his Andhra Pradesh and Telangana counterparts over the linking of Cauvery and Godavari Rivers has raised expectations of the project taking off soon.

Speaking at an event in Salem on Wednesday, Mr. Palaniswami said he was keen on arriving at a consensus with Andhra Pradesh Chief Minister Y.S. Jagan Mohan Reddy and Telangana CM K. Chandrashekhar Rao on the details regarding the sharing of water resources at the earliest. His task may turn out to be easy, given the fact that Mr. Reddy and Mr. Rao had, during a six-hour-long meeting in Hyderabad in mid-January, already arrived at an understanding on the diversion of Godavari water to Krishna river, according to an official of the National Water Development Agency (NWDA), a central government organisation entrusted with the task of preparing proposals for linking rivers.

As per NWDA's draft detailed project report (DPR), Tamil Nadu will get 83 thousand million cubic feet (tmc ft) at its border with Andhra Pradesh. The quantum will be 57 tmc ft at the Grand Anicut – a major regulator on the Cauvery. The State government would prefer the Kattai barrage in Mayanur to the Grand Anicut, as it feels it can optimise the benefit of water transfer.

The NWDA's draft report talks of diverting, through a canal-cum-pipeline, the surplus water of the Godavari, either from the Inchampalli barrage or the Janampet barrage, from where water will be conveyed to the Nagarjunasagar on the Krishna and then to the Somasalabim dam on the Pennar. The proposed alignment will also pass through Swarnamukhi, Araniar, Palar and Pennaiyar rivers before terminating at the Grand Anicut on the Cauvery.

Initially, a total of 247 tmc ft will be drawn from the Godavari. If the drawal point is near Inchampalli, Andhra Pradesh will get 81 tmc ft, Telangana 66 tmc ft and Tamil Nadu 83 tmc ft. If it is Janampet, the three States will get 108 tmc ft, 30 tmc ft and 83 tmc ft, respectively.

Four other States - Karnataka, Odisha, Madhya Pradesh and Chhattisgarh - are also involved in the river-linking project.

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**DDA told to form special purpose vehicle for Yamuna rejuvenation**

NGT asks Delhi, Haryana, Uttar Pradesh to take action

**STAFF REPORTER**

The National Green Tribunal (NGT) on Thursday directed the Delhi Development Authority (DDA) to constitute within two weeks a special purpose vehicle for rejuvenation of the Yamuna.

The functions of the body will include ecological restoration of the floodplain zones, setting up of biodiversity parks, artificial wetlands, phytoremediation of drains at the river mouth locations, maintaining the vigil and undertaking flow measurement, creating ecologival services, removing encroachments and random mining, putting into custody, including river front development,” an NGT bench said.

It may also take steps to attract and educate the citizens and nature enthusiasts for activities, including building environmental temple amongst citizens, without in any manner causing damage to the floodplains,” it said.

The bench also directed the State governments of Delhi, Haryana and U.P. to take expeditious action pertaining to sewage management, industrial pollutants and solid waste that get discharged into the river.

The CPCB was directed to issue notice to entities that were responsible to pay compensation. In cases of non-compliance, the pollution monitoring body was asked to move the NGT.

The green panel also directed the Delhi government to set up an Integrated Drainage Management Cell, to be headed by the Chief Secretary, for remediation and management of all drains in the city.
Glimpses of NWDA

Meetings of Special Committee for ILR

The Hon’ble Supreme Court in the matter of Writ Petition (Civil) No. 512 of 2002 “Networking of Rivers” alongwith Writ Petition (Civil) No. 668 of 2002 delivered a judgment dated 27.02.2012. The Hon’ble Supreme Court directed the Union of India and particularly the then Ministry of Water Resources (MoWR) now Ministry of Jal Shakti (MoJS) to constitute a Committee under the chairmanship of Hon’ble Union Minister of Water Resources (now MoJS, DoWR, RD&GR) for the implementation of Interlinking of Rivers (ILR) Programme. In compliance, the MoWR, RD and GR (now MoJS, DoWR, RD&GR) has constituted a committee called Special Committee on Interlinking of Rivers (SCILR) vide Gazette Notification dated 23.09.2014.

In the first meeting of the SCILR held on 17.10.2014, it was decided to constitute four specific sub-committees as shown below:

- Sub-Committee (i) for Comprehensive Evaluation of Various Studies/Reports
- Sub-Committee (ii) for System Studies for Identifications of Most Appropriate Alternate Plan
- Sub-Committee (iii) for Restructuring of NWDA
- Sub-Committee (iv) for Consensus building through Negotiations and Arriving at Agreement between Concerned States.

During the reporting period, 14th meeting of the Sub-Committee (ii) constituted for System Studies for Identifications of Most Appropriate Alternate Plan and 17th meeting of the SCILR had been convened as briefed:

1. 14th Meeting of the Sub-Committee for System Studies

The 14th Meeting of the "Sub-Committee on System Studies for Identification of Most Appropriate Alternative Plan” was held on 18.02.2020 at Palika Bhawan Committee Room, NWDA, New Delhi under the Chairmanship of Prof. P.B.S. Sarma (Retired), Civil Engineering Department, IIT Delhi.

In the meeting Prof. Kamta Prasad, Institute for Resource Management and Economic Development (IRMED) and Member of the Sub-Committee indicated that the Hon’ble Supreme Court has appointed Special Committee for ILR to expedite ILR projects and mentioned that so far the Sub-Committee has been concentrating only to the system study of Mahanadi-Godavari link canal system and suggested for taking up similar studies of few more ILR projects simultaneously to expedite the ILR projects and its progress. While, Dr. S K Jain, Director, NIH Roorkee and Member of the Sub-Committee informed that the NPP was conceptualized in the year 1980 and since then many technological advancement and new issues like climate change etc took place and hence a Brainstorming Session should be organized wherein the NPP can be discussed in details.

Director General, NWDA mentioned that to analyse various scenarios in details alongwith various demand/supply patterns, System study is necessary and NWDA is working towards setting up a dedicated cell for system studies within NWDA. He requested NIH to provide the technical support to this cell during the System studies of Mahanadi-Godavari Link to develop the capability within NWDA to analyse and generate scenarios of link projects. He was of the opinion that System studies of few more link projects should be simultaneously taken up by NWDA and suggested to consider Godavari-
Cauvery link and Manas-Sankosh-Teesta-Ganga-Damodar-Subarnarekha links for the study, which was agreed by the Sub-Committee.

2. **17th Meeting of Special Committee for ILR**

The Seventeenth meeting of the SCILR was held on 26.02.2020 at New Delhi under Chairmanship of Shri Rattan Lal Kataria, Hon’ble Minister of State for Jal Shakti.

At the outset, Shri U P Singh, Secretary, DoWR, RD&GR, Ministry of Jal Shakti welcomed Shri Rattan Lal Kataria, Hon’ble Minister of State for Jal Shakti, and Members/ Representatives from various Central Government and State Government Organisations who attended the meeting. The Hon’ble Minister of State for Jal Shakti mentioned that the ILR projects are facing many challenges, namely water sharing among the States, International issues of Himalayan Components, Rehabilitation and Resettlement of project affected families and their Socio-economic reservations, which are to be addressed in details for making ILR project a reality.

Subsequently, the Hon’ble Minister appealed all the stakeholders to come forward to complete ILR projects in National interest and for ensuring the water security of the country.

Director General, NWDA after welcoming the Hon’ble Minister of State for Jal Shakti and Chairman of the meeting; Secretary, DoWR, RD & GR, Ministry of Jal Shakti; Members; Special Invitees, Experts and other Participants of the meeting took up the agenda items, especially related with DPRs of ILRs and their progress for discussions. The Secretary, DoWR, RD&GR, Ministry of Jal Shakti indicated when taken up the KBLP for deliberations informed that apart from water sharing issues between the two States of MP and UP, there are many other challenges such as statutory clearance from the MoEF&CC and Hon’ble Supreme Court, funding pattern etc. The challenges of Statutory Clearances lying in National Green Tribunal (NGT) and Hon’ble Supreme Court are being followed-up by the Ministry. Funding Pattern of 90 (Centre) : 10 (State) as insisted by both the States for the project against existing 60 (Centre) : 40 (State) has been taken up. He further requested both the states to resolve all issues amicably considering Co-operative federalism. For more details of the meeting, log on to the link:

Here emphasize has been made to create awareness on water sector related events that were or to be happened in the National and International arena during the reporting period starting from 1\textsuperscript{st} January to 31\textsuperscript{st} March-2020. Accordingly the event happened which is of most interest and influence for sustainable planning and development of water resources was found to be World Water Day (WWD), and that usually celebrate worldwide each year on March-22.

As cited above World Water Day Celebrations are held annually around 22 March as a means of focusing attention on the importance of freshwater and advocating for the sustainable management of freshwater resources. This Day is an opportunity to learn more about water related issues, be inspired to tell others and take action to make a difference. Water is an essential building block of life. It is more than just essential to quench thirst or protect health; water is vital for creating jobs and supporting economic, social, and human development.

The United Nations General Assembly adopted resolution off 22 December 1992 by which 22 March of each year was declared World Day for Water, to be observed starting in 1993, in conformity with the recommendations of the United Nations Conference on Environment and Development (UNCED) and States were invited to devote the Day, as appropriate in the national context, to concrete activities such as the promotion of public awareness through the publication and diffusion of documentaries and the organization of conferences, round tables, seminars and expositions related to the conservation and development of water resources.

A new World Water Development Report (WWDR) is released each year on or near World Water Day, to provide decision-makers with tools to formulate and implement sustainable water policies. This report is coordinated by UNESCO’s World Water Development Programme (WWAP) on behalf of UN-Water. The annual theme for World Water Day is aligned with the focus of the Report. The 2020 edition of the World Water Development Report (WWDR 2020) entitled, "Water and Climate Change" aims at helping the water community to tackle the challenges of climate change and informing the climate change community about the opportunities that improved water management offers in terms of adaptation and mitigation through improving water management. The Director-General of UNESCO, Audrey Azoulay, stresses “that water does not need to be a problem – it can be part of the solution. Water can support efforts to both mitigate and adapt to climate change.”

In the light of the global spread of Corona virus and following instructions from national authorities and guidance from the World Health Organization, the World Water Day observances and the events were scheduled to take place in Geneva, Rome, Paris, New York and elsewhere including in India have been postponed or cancelled. The decisions were taken to ensure the safety of delegates and staff and help prevent possible spread of Covid-19. The WWDR 2020 could be downloaded from the link:

NWDA Woman Employees and Relevance of International Women's Day

The International Women's Day (IWD) is celebrated annually on 8th March, i.e., during the reporting period of this Jal Vikas Issue. It is desired that this issue onwards inclusion of services being rendered or completed by NWDA Woman Employee(s) is/are to be highlighted through the quarterly magazine. Being this objective in background, let us see when onwards the IWD celebrations worldwide have been received its momentum and if so, what was/is its main objectives.

On search, it could be seen that in 1910 an International Conference of Working Women was held in Copenhagen, Denmark. A woman named Clara Zetkin (Leader of the 'Women's Office' for the Social Democratic Party in Germany) tabled the idea of an International Women's Day. She proposed that every year in every country there should be a celebration on the same day - a Women's Day - to press for women demands and gender parity. The conference of over 100 women from 17 countries, representing unions, socialist parties, working women's clubs including the first three women elected to the Finnish parliament, greeted Zetkin's suggestion with unanimous approval for the IWD celebrations. The first IWD gathering happened in 1911 on this account and marked as a global day for celebrating the social, economic, cultural and political achievements of women. The day also marked as a call to action for accelerating gender parity. At that time no one government, NGO, charity, corporation, academic institution, women's network or media hub was solely responsible for IWD. After various deliberations and conferences and celebrations as a part of IWD, in 2001, a platform, "internationalwomensday.com" was launched, which provides useful guidance and resources to adopt an annual campaign theme that is globally relevant for groups and organizations as well as the call to action for gender parity. Subsequently, the world has witnessed a significant change and attitudinal shift in both women’s and society's thoughts about women’s equality and emancipation.

Development Goals (SDGs) adopted by world leaders in 2015, embody a roadmap for achieving gender equality and women’s empowerment and is made an integral to each of the goals undertaken under the SDGs. Only by ensuring the rights of women and girls across, all the goals of IWD celebrations will get to justice and inclusion of economies that work for all. Small actions can have big impacts in making this vision a reality. So, let us take this opportunity to realize and appreciate the contributions made by NWDA Women Employees, starting with Smt. Asha Oberoi and Smt. Jayanthi:

**Smt. Asha Oberoi (Date of Birth - 20-03-1960)** had been appointed in NWDA, New Delhi on 19-04-1983 as LDC and promoted subsequently to the posts of Steno (Grade-III); Steno (Grade-II); Steno (Grade-I); Personal Secretary; and Senior Personal Secretary respectively on 16-10-1984; 15-03-1990; 16-06-2001; 18-04-2012 and 02-06-2016.

**Smt. Jayanthi (Date of Birth - 06-03-1960)** had been appointed in NWDA on 23-09-1983 as LDC in IC, Hyderabad and promoted subsequently to the posts of UDC and Head Clerk respectively on 31-05-1989; and 16-06-2004 and transferred to NWDA(HQ),Saket, New Delhi. On 03-02-2020 got promotion to the post of Superintendent (Grade-II).

Both retired from NWDA(HQ), Saket, New Delhi on 31-03-2020 after rendering more than 35 years of service in NWDA. We sincerely appreciate your gracious and efficient service, the level of detailing and accountability you have shown, demonstrated and practised whenever we approached you .All our best wishes and we say you are the best............
Activities of NWDA at a Glance

The activities shown below were pertained to the reporting period starting from 1st January to 31st March 2020.

12th meeting of Committee to Monitor & Review the EIA study of PTN and DP river link at Gandhinagar in the presence of CE(EMO)- CWC, CE(S)& SE, Valsad, NWDA, WAPCOS, NGO, EIA consultant, Officers of Gujarat Govt. & Maharashtra Govt. held on 03.01.2020

NWDA Participating in Pride of India Exhibition of the 107th Indian Science Congress held on 04.01.2020 at Bengaluru
**Pledge on National Voter's Day on 24-1-2020, NWDA(HQ), Saket, New Delhi**

**Pledging on National Voter's Day on 24-1-2020**

**Celebration of Republic Day on 26.01.2020**

**In Chief Engineer (South) Organisation, NWDA at Hyderabad**

**Alignment inspection for Bedti Varda river link by CE(south), NWDA with Officers of NWDA after discussing the link details with MD, KNNL held on 30.01.2020**
Keynote talk on Water Resources Management through Strategic Solutions delivered by Dr R N Sankhua, Chief Engineer(South), NWDA at Karnataka Smart Cities Investment Summit held on 06.02.2020 at Bengaluru

A talk on "Status of Peninsular River Systems" delivered by Dr R N Sankhua, Chief Engineer(South), NWDA at Indian Institute of Science, Bangalore held on 11.02.2020

A meeting was held by CE(south)&officers of NWDA on 12th Feb regarding the inter linking proposals of Karnataka State with Additional Chief Secretary, Shri Rakesh Singh (WR) and Shri Laxman Rao Peshve, Secretary, WR, Govt of Karnataka
Honorable Minister of State for Jal Shakti Chairing the 17th meeting of Special Committee for Interlinking of Rivers at New Delhi

Honorable Minister of State for Jal Shakti in the 17th meeting of Special Committee for Interlinking of Rivers held on 26th February, 2020 at New Delhi

Signing of MoU by NWDA and NIH for system studies of Mahanadi - Godavari link project on 17th March, 2020
### Appointments, Promotions and Retirements

**Appointments on the basis of Direct Recruitment/Deputation**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name &amp; Designation</th>
<th>Deputation/Direct</th>
<th>Place of Posting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shri Ashar O.A, Lower Division Clerk</td>
<td>Direct w.e.f. 01.01.2020 (FN)</td>
<td>NWDA (HQs), New Delhi</td>
</tr>
<tr>
<td>2</td>
<td>Shri Bhopal Singh, Director General</td>
<td>Deputation w.e.f. 27.01.2020</td>
<td>NWDA (HQs), New Delhi</td>
</tr>
<tr>
<td>3</td>
<td>Shri Ashu Soni, Lower Division Clerk</td>
<td>Direct w.e.f. 15.01.2020 (AN)</td>
<td>IC, NWDA, Gwalior</td>
</tr>
<tr>
<td>4</td>
<td>Shri Shubhamm Gupta, Junior Engineer</td>
<td>Direct w.e.f. 23.01.2020 (AN)</td>
<td>ID, NWDA, Valsad</td>
</tr>
<tr>
<td>5</td>
<td>Shri Amit Tiwari, Junior Engineer</td>
<td>Direct w.e.f. 31.01.2020 (AN)</td>
<td>ID, NWDA, Jhansi</td>
</tr>
<tr>
<td>6</td>
<td>Shri Kathula Yamahi, Lower Division Clerk</td>
<td>Direct w.e.f. 01.02.2020 (AN)</td>
<td>ID, NWDA, Hyderabad</td>
</tr>
<tr>
<td>7</td>
<td>Shri Nikhl V.J., Junior Engineer</td>
<td>Direct w.e.f. 10.02.2020 (AN)</td>
<td>NWDA (HQs), New Delhi</td>
</tr>
<tr>
<td>8</td>
<td>Md. Nabeel Aslam Ansari, Junior Accountant</td>
<td>Direct w.e.f. 17.02.2020</td>
<td>ID, NWDA, Vadodara</td>
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**Promotions**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name &amp; Designation</th>
<th>Post and Date of Promotion</th>
<th>Place of Posting on Promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Smt. N. Jayanthi, Head Clerk</td>
<td>Superintendent-II w.e.f. 03.02.2020 (FN)</td>
<td>NWDA (HQs), New Delhi</td>
</tr>
</tbody>
</table>

**Retirements**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name &amp; Designation</th>
<th>Date of Retirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shri Nemi Chandra Jain, CE (North), NWDA, Lucknow</td>
<td>31.01.2020</td>
</tr>
<tr>
<td>2</td>
<td>Shri C.P.S. Sengar, SE, IC, NWDA, Patna</td>
<td>31.01.2020</td>
</tr>
<tr>
<td>3</td>
<td>Smt. A.R. Rekha Singh, Superintendent, ID, NWDA, Bangalore</td>
<td>31.01.2020</td>
</tr>
<tr>
<td>4</td>
<td>Shri Rakesh Latawa, JAO, NWDA (HQs), New Delhi</td>
<td>31.01.2020</td>
</tr>
<tr>
<td>5</td>
<td>Smt. Dipika Bimal Kumar Shah, Head Clerk, ID, NWDA, Vadodara</td>
<td>31.01.2020</td>
</tr>
<tr>
<td>6</td>
<td>Shri B.C. Barik, Head Clerk, IC, NWDA, Bhubaneswar</td>
<td>31.01.2020</td>
</tr>
<tr>
<td>7</td>
<td>Shri Shivendra Nath Tiwari, JAO, ID, NWDA, Lucknow</td>
<td>31.01.2020</td>
</tr>
<tr>
<td>8</td>
<td>Shri M. Pratap, MTS, IC, NWDA, Hyderabad</td>
<td>31.01.2020</td>
</tr>
<tr>
<td>9</td>
<td>Shri M. Suresh, MTS, ID, NWDA, Hyderabad</td>
<td>31.01.2020</td>
</tr>
<tr>
<td>10</td>
<td>Shri K. Ramaingeswara Rao, D’man Gr. II, ISD, NWDA, Rajamundry</td>
<td>29.02.2020</td>
</tr>
<tr>
<td>11</td>
<td>Shri Ramanjanlyu, UDC, ID, NWDA, Nagpur</td>
<td>29.02.2020</td>
</tr>
<tr>
<td>12</td>
<td>Smt. Valsala Kumari, LDC, ID, NWDA, Bhopal</td>
<td>29.02.2020</td>
</tr>
<tr>
<td>13</td>
<td>Shri Akhil Das, LDC, ID, NWDA, Kolkata</td>
<td>29.02.2020</td>
</tr>
<tr>
<td>14</td>
<td>Shri G.C. Taral, Driver Gr II, ISD, NWDA, Ranchi</td>
<td>29.02.2020</td>
</tr>
<tr>
<td>15</td>
<td>Shri S. Mohan Rao, MTS, NWDA, IC, Bhubaneswar</td>
<td>29.02.2020</td>
</tr>
<tr>
<td>16</td>
<td>Shri B.K. Patra, Superintendent-II, NWDA (HQs), New Delhi</td>
<td>31.03.2020</td>
</tr>
<tr>
<td>17</td>
<td>Smt. N. Jayanthi, Superintendent-II, NWDA (HQs), New Delhi</td>
<td>31.03.2020</td>
</tr>
</tbody>
</table>
Participation of NWDA Officials in Trainings/ Seminars/ Conferences and Workshops

Number of NWDA Officials who have attended various trainings / seminars/ workshops etc. during the reporting period starting from 1\(^{st}\) January 2020 to 31\(^{st}\) March 2020 was 17 and their participations were in the Trainings, Seminars and Workshops as listed below:

**List of Trainings, Seminars and Workshops:**

1. Two days Stakeholders and Experts Consultation Workshop on “Development of Landscape Management Plan and Monitoring with reference to Ken – Betwa River Link Project”, in Panna Tiger Reserve, Madhya Pradesh.


6. Conference on Water Resources of Peninsular India (CWRPI – 2020),” IISc, Bengaluru.


9. 107\(^{th}\) Indian Science Congress (ISC) - Pride of India Expo (PoI) 2020, Bengaluru,

10. Workshop on Transparency Audit software developed by CIC, NWA, Pune.
रोग का स्वस्थ तथा उसके अनुरूप उसके नियम के लिये तीन भाग हैं:

अ. उचित आहार b. नियमित योगाय्यस स. जीवन पद्धति

अ. उचित आहार– रोग का स्वस्थ तथा रोगी की स्थिति के अनुरूप आहार का निर्धारण ही उचित आहार है। मुख्य बात यह है कि आहार संतुलित होने के साथ दैनिक जीवन से उन चीजों को बाहर निकालना भी है जो रोग विशेष के लिये हैं। इसके अलावा वैसा भी याद रहेगा कि अत: संतुलित आहार प्रणाली करना तथा दूसरी के लिये आवश्यक है। भोजन में निम्न चार चीजों से संतुलित भोजन बनता है।

1. सलाद– जिन्हें कच्चा ही खाया जाता है। इसकी मात्रा चाय की प्लास्टरी के बराबर दिन और रात के भोजन के आर्थम में ली जा सकती है।
2. ताज़ा सब्जिया– जिन्हें सालिक ढंग से पकाया हो, निश्चित मात्रा में अवश्य खायें।
3. ताज़ा फल– अच्छे स्वास्थ्य के लिये नियमित रूप से फल खायें। एक यथिक के लिये एक सेब, एक केला या एक संतरा पर्याप्त है।
4. नूतना– इसमें काजू पिस्ता, बादाम तथा अखरोट हैं। इसमें हर सदी के दिनों में एक इम्याला लेना पर्याप्त है। गर्मी में इसे कम कर दें। यह खाने उपर भोजन का स्तर में उछलता है।

दूसरे शब्दों में खाना को दिन की तरह जिन्हीं मात्रा में आवश्यक है खायें, आवश्यकता से अधिक भोजन लेने पर दिन के भोजन की तरह खाना पड़ सकता है।

भोजन विषयक कुछ मूलपूर्ण सिद्धांत है–
धीरे–धीरे खाना, भारी का 85 प्रतिशत खाना, रात को साने से दो घंटे पूर्व भोजन लेना, खाना खाने के समय व आधे घंटे तक पानी न पीना, असमय न खाना, दस से बारह राजस पानी पीना, गर्म मसालेदार तथा भूरी चीजों अधिक न खाना, तमाम कू तथा मदान का सेवन न करिए दिन में एक या दो कप से अधिक चाय या काफी का सेवन न करिए।

प्रय: जीव की लोपपतिता के कारण लोग पोषणआहार, मसालेदार, चटपटे, मीठे पेय असमय अधिक मात्रा में सेवन कर नींद व आलस्य से घरे रहते हैं। पाचन शक्ति से अधिक पेट में फुल ने अन्तर्गतांतर की अवस्था होती है।

b. नियमित योगाय्यस– शरीर से जितना किया जा सके तरह ही योगाय्यस करने से शक्ति लाभ होता है।

*Nipunika Shrivastava, M.D.S (First Year), Daughter of Shri K.K. Shrivastava, Deputy Director ( MDU), NWDA (HQ), New Delhi-110017
योगाम्यास प्रातः काल खाली पेट करना सावधान होता है, यद्यपि यह किसी समय भी किया जा सकता है। मौजून के 3–4 घंटे बाद एवं चाय, पानी के आधा घंटे बाद योगाम्यास कर सकते हैं।

- स्थानः स्थान साफः सुधार हवादार हो, जमीन पर दरी या चटाई बिगार लें।
- मौनधारणः योगाम्यास के समय मौन रहना चाहिये। शाक्ति की रक्षा तथा अम्लाक्ष के समय एकाग्रता के लिये मौनधारण से सहायता मिलती है।
- विश्रामः-वास्तवक अम्लाकाल का एक चौथाई समय विश्राम में लगायें। शाक्तासन या बूम्मि पर लेटकर आँखें बंद कर शारीर को ढीला छोड़ कर आराम करें।
- योगाम्यास की मात्राः सर्दियों में योग की एक दिन में अधिकतम समय सीमा 45 मिनट व गर्मी में यह समय सीमा 30 मिनट हो। विश्राम के लिये दिया गया समय इसके अतिरिक्त है। अच्छे स्वास्थ्य के लिये नूतनतम 15 मिनट का समय देना होगा।

योग का अर्थ है जोड़ना। स्वयं का उद्दाहरण व्यक्ति के विकास एवं चरित्र निर्माण। बुद्धि को प्रशिक्षित कर मन को उखित दिशा में ले जाना, उखित आहार, नियमित योगाम्यास, उखित जीवन पद्धति आदि पर निर्माण करता है।

स. जीवन पद्धति:-यदि बुद्धि प्रशिक्षित, मन व इंद्रियाँ नियंत्रित हैं तो ऐसा व्यक्ति निद्रा से दुखी नहीं होता व प्रशंसा से प्रभृतिल्लित नहीं होता। मानसिक और शारीरिक स्वास्थ्य में गहरा संबंध है। मन के विकास ग्रस्त होने से शारीर भी रोगी हो जाता है और शारीर के रोगी होने से मन भी प्रभावित होता है। श्रेष्ठ व्यक्तित्व बेहतर चरित्र निर्माण व रोग मुक्त जीवन हेतु आवश्यक है।

1. संयमः- वाणी व खान धार पर नियंत्रण।
2. सतः- असत्य बड़ा दुरुपयोग है यह शारीर के तेज को नष्ट करता है।
3. अभिमान-अहंकारः मन की जितनी विकृतियाँ हैं उनके मूल में अहंकार है। अभिमानी व्यक्ति सदैव बायु, पिता व कफ जनित रोगों से प्रभृतिल्लित रहता है।
4. क्रोधः- क्रोध मन का ऐसा विकास है जो उसे जला डालता है। क्रोध से मनुष्य के मस्तिष्क पर अत्याधिक बल पड़ता है। यह जीवन शक्ति को नष्ट करता है।
5. ईश्वरः- ऐसा व्यक्ति दूरस्थरों के गुण देखकर जलता, ईश्वर करता है। मनुष्य की प्रगति में सबसे बड़ा वापस यह अवयव व्यक्ति को अनेक शारीरिक विकार दे जाता है।
6. स्वास्थ्यः- महापुरुषों की जीवनी पढ़ें, सकारात्मक सुविचार से मन को पूर्ण रखें, कर्मयोगी बनें, खुद को नकारात्मक विचारों से दूर रखें। हमारा जीवन सार्थक, रोगमुक्त हो तो हमें इस वायक्य पर ध्यान देना चाहिएः-

तू करता यो है, जो तू आहता है।
पर होता वह है, जो वह आहता है।
इसलिये तू वह कर, जो वह आहता है।
फिर वहीं होगा जो तू आहता है।
2. COVID-19 and its Effects, Frontline Warriors and Precautions

Here the drawings prepared by Children of NWDA Fraternity are displayed for enlightening and encouraging the minds of our young generations on COVID-19 effects, frontline warriors and precautionary measures as captured by them through the media coverages and Government initiatives.

As we know that India reported its first confirmed corona virus case in Kerala on January 30 of the year 2020. The epidemic has claimed 47 lives and as many as 1403 people have tested positive in India as of March 31 according to the data released from Health Ministry and concerned State Governments. The spread of the novel corona virus has not only created panic in India but also in various countries worldwide and a Global confirmed cases of 693,224 and deaths of 33,106 have also been reported (as of 30 March 2020).

Presently India is under lockdown for a week now with effect from midnight of 24th March 2020. In fact, more than three billion people around the world were living under lockdown for the past few days as governments stepped up their efforts against the corona virus pandemic. The Centre has termed Covid-19 situation as “especially serious”. Even as India stepped up efforts to fight the pandemic, a stocktaking exercise showed that the country has at least 3 million medical professionals and roughly 8 million others who can be drafted for disease containment works such as contact tracing and as frontline warriors.

Drawn by Kumari Vanshika, Class-VII, Daughter of Shri Lalit Siyaniya, JE, New Delhi, NWDA

Drawn by Kumar Aryan, Class-VIII, Son of Shri Lalit Siyaniya, JE, New Delhi, NWDA
Worldwide Leaders while agreeing for lockdown- in order to contain and maintain Covid-19, it is indicated that ensuring free movement of essential goods and health products is vital for saving lives and curbing the social and economic impacts of the pandemic. A working paper by a team of researchers at the Indian Institute of Science (IISc) and Tata Institute of Fundamental Research (TIFR) suggests that there will be a second wave of Covid-19 infection, unless new cases are aggressively traced, localised and isolated. So, let us strictly follow the precautionary measures and lockdown guidelines issued by concerned governments and departments and support the frontline warriors of COVID-19 as illustrated by young minds of our NWDA fraternity as indicated:

Drawn by Kumari Shreya, Class-4, Daughter of Smt. Radha, LDC, New Delhi, NWDA

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कविता

मानव भूल का अहसास कराने आया कोरोना

ललित कुमार स्थानियों,
कबिता अभिवंता

आज मुझे रास्ते में कोरोना मिल गया।
देखते ही उसका मैं जोर से हिल गया।
मैं बोला कोरोना, तुम मुझे दूर ही रहना।
अपने शिकार में तुम मुझे न जजब लेना।
मौत का खौफ लेकर तुम क्यों आये हो।
इंसान घर में बंद है, क्यों इतना डराये हो।
किस बात की गलती की सजा दे रहे हो।
डर से हमें सिसकता देख, खुब मजे ले रहे हो।
उस छोटे से विषाणु ने जोर से अटटाहास किया।
मैंने नहीं तुमने, अपने सुख-चैन का नाश किया।
स्वच्छंद होकर प्रकृति के साथ खिलवाड़ कर रहे थे।
अपने सामर्थ्यवान होने का तुम बहुत दम भर रहे थे।
विज्ञान की सल्वत का दुम्हें था बहुत अंधकार।
अध्यात्म से अनमिझ़ थे, परंतु सत्ता नहीं थी स्वीकार।
खान-पान, रहन-सहन का कोई संयम नहीं था।
संतुलित जीवन जीने का तो कोई नियम नहीं था।
मस्क लगाओ, सोशल डिस्टेंसिंग रखो, तुम्हें छोड़ दूंगा।
तुम्हें गलतियों का अहसास हो जाये, तो अपना रास्ता मोड़ लूंगा।

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Jal Vikas can also be accessed at www.nwda.gov.in