In a most significant event, some 85 river and dam activists from 40 countries and all continents gathered in Tbilisi, Georgia (on border between Asia and Europe, between Black and Caspian Sea) during March 27-31, 2017 to share experiences about their efforts to protect the world’s rivers and join their struggles against destructive hydropower projects. The meeting was organized by CEE BankWatch Network (active in 12 countries in Eastern and Central Europe) and International Rivers.
Eight persons from South Asia, including those from India, Pakistan, Nepal and Bangladesh joined the meeting to share experiences from the region. Indian participant included SANDRP coordinator (who was also in steering committee of the meeting) and Associate Coordinator Parineeta Dandekar. A number of participants from neighboring and nearby countries like China, Myanmar, Thailand, Cambodia, Mongolia and Russia also participated. Issues related to trans-boundary rivers, small hydropower projects and multiple projects on the same rivers, decommissioning of the dams, how to achieve free flowing rivers and importance of rivers in changing climate were some of the key issues discussed at the meeting.

Some of the media reports about the meeting can be seen here:

- OpenDemocracy
- Civil Society in Tbilisi Discussing Protection of Rivers from Hydropower
- For our rivers, for our lives – activists from across the globe meet in Tbilisi, Georgia

Some of the key messages that were discussed at the meeting included:

- HYDRO IS NOT RIVER FRIENDLY
- HYDRO IS NOT POOR FRIENDLY
- HYDRO IS NOT CLIMATE FRIENDLY
- HYDRO IS NOT CLEAN, GREEN OR CHEAP
- CLIMATE FINANCE IS NOT JUSTIFIED FOR HYDRO

The meeting discussed a number of success stories, including how the World Commission on Dams was constituted and what its report said and how it is relevant even today. The attempts by hydro industry to push WCD report in the background need to be strongly opposed. The meeting ended with strategies to work together on issues of common interest in focused way in coming years. Necessary mechanisms were discussed to make this possible.
The meeting becomes important for India, as Indian government has huge hydropower agenda, even though large number of hydropower projects remain stalled and stranded as India's Power Minister recently informed the Parliament. With India being power surplus, net power exporter and with trend of plunging power load factors, huge capacity addition from solar and wind, increasing energy efficiencies and low growth in electricity demand, there is no case of river and environment destroying Hydro. This is increasingly likely to be the situation across the world, as is also apparent in China, among other countries.

It is hoped that this meeting will lead to better future for the world’s rivers and those who depend on these rivers.

HYDRO POWER

**Himachal Pradesh** Govt lacks mechanism to assess environmental impacts As per the latest CAG report, neither the EIA Authority nor the PCB has been regularly monitoring compliance with conditions of the environment clearances of the projects. It further revealed that environment protection measures like development of green belt in the project areas, compensatory afforestation, catchment area treatment plan and disposal of muck generated with the construction were not carried out by the project authorities despite funds were allocated. Findings of CAG report only confirm known realities.

**Sikkim** Teesta hydro project may hit endangered snow trout fish The comptroller & auditor general has expressed concern on the issue since the development of the 1200MW Teesta Stage-III hydel power project in Chungthang. In its report for 2015-16, the audit said the absence of a fish ladder at the project dam could hamper the migratory pattern of snow trout and pointed out lack of adequate repopulation measures from project developers. As per report, snow trout, an endangered species of fish found in Himalayan rivers are on the verge of vanishing from Sikkim rivers following construction of several hydro power projects in ecologically fragile north Sikkim. Good to see that CAG should note this, but they could have done so much more.

**Madhya Pradesh** PFC-led lenders, PE firm seize control of Kasliwal’s 400 Mw Hydel Project Lenders led by Power Finance Corporation (PFC) and private equity firm Guggenheim Partners have seized control of Mukul Kasliwal’s 400 MW Shree Maheshwar Hydel Power Project on the Narmada river after the company defaulted on its loans. Will this help revive the controversial, destructive, unnecessary project? Hope not. Also see, AAP PR महेवर परियोजना शुरू कर जनता के 42 हजार करोड़ रूपए डुबाने की तैयारी This is important about Maheshwar Hydropower project, even if coming from AAP in MP.

DAMS

**Maharashtra** Undue favours given to contractors involved in Gosikhurd project The Maharashtra Legislative Committee has found that even the officers who were indicted by the official committees not only were not punished,
but kept getting promotions and had full opportunity to doctor the documents to make them scot free of even the enquiry committee charges. **This reflects SUCH DEEP corruption in the system. The Maharashtra political opposition, civil society, media and judiciary has also clearly FAILED when there was so much evidence.**

**Evaporation at Jayakwadi touches three years high** As per officials, in 2015 and 2016, evaporation losses in March were 12.61 million cubic meters (mcum) and 22 mcum, respectively. However, in March 2017, the dam has witnessed 36.01 mcum loss of water to evaporation. **This seems very high evaporation losses.**

**Punjab Vital inspection of Bhakra may be junked** Experts in the field said the dam’s low-level inspection, last carried out in 1979, is a must because the 53-year-old structure had remained under water for nearly half a century and an evaluation of its deterioration would have helped in taking timely action in case it required repairs. Sources claimed the exercise could be put off because the BBMB’s technical committee, which is responsible for deciding on such matters, did not discuss the controlled depletion of water from the reservoir of the dam for the inspection, in its monthly meetings. **Low level inspection of Bhakra dam to be postponed to next year, and BBMB does not even have a chairman.**

**Telangana Kaleshwaram project gets clearance** EAC has granted clearance to the Kaleshwaram irrigation project with riders that include Central Water Commission’s nod. Amid rising criticism on the State Govt’s alleged coercive land acquisition for projects with inadequate compensation by attempting to enact its own land acquisition rules, the EAC has insisted that Telangana govt compensate land owners as per the laws of the land. **This report has many inaccuracies; the most important one is that EAC has not recommended EC as the report seems to give impression, but only TOR clearance.**

**IRRIGATION**

**Study Developmental trajectory linked to the spread of Malaria** A study has found that conditions conducive to the spread of malaria are created when projects that cause land-use change and labour migration are kicked off. **This shows how irrigation projects taken up without any attention to drainage and health impacts lead to mosquitoes, malaria and other impacts.**

**INTERLINKING OF RIVERS**

**Ken-Betwa link FAC disagrees with forest land allocation, wants canal re-aligned** The Forest Advisory Committee (FAC) minutes of the March 30 meeting show that it has refrained from explicitly giving its opinion either way and only seconded an earlier sub-committee’s report that had cleared the project subject to strict caveats.

**MoWR response:** A Water Ministry official told The Hindu that these measures are “impossible to comply with”. He said that senior water ministry officials were already preparing a rebuttal to “contest” the FAC’s recommendations. “The FAC has ventured into areas far beyond its mandate and we have frequently explained to the body why these conditions cannot be met. The same points repeatedly surface,” the same official added.

**RIVERS AS NATIONAL WATERWAYS**

**Jharkhand Foundation stone of terminal on River Ganga laid** On April 06, 2017, PM Modi has laid the foundation stone of a multi-modal terminal on River Ganga at Sahibganj. The terminal will have a cargo handling capacity of 2.24 Million Tons Per Annum (MTPA) on completion in 2019. The contract for the construction of the
terminal has been awarded to M/s L&T Infrastructure Ltd at an estimated cost of Rs 280 crore. The Roll-on Roll-off (Ro-Ro) terminal will provide critical connectivity with Bihar at Manihari. About 100 trucks have already started using the facility at Sahibganj. The crossing of trucks through Ro-Ro facility would save a lot of time, cost and fuel in road transport.

**RIVERS**

**SANDRP Blog Haryana Rivers Profile** Rivers in Haryana fall mainly within Indus and Ganga basins. River Ghaggar sub basin and its tributaries in the west of the state caters to the Indus basin, while river Yamuna and its tributaries in the east make up the portion of the Ganga basin.

**SANDRP Blog Uttarakhand River Profile** The water quality of Uttarakhand's rivers is basically good, especially in the upper reaches. Downstream of some large settlements and in the lower reaches in the Himalayan foot hills the water quality suffers due to the release of untreated sewage and industrial effluents. But the state's ambitious programme to build 450 hydro power projects threatens the survival of the river ecosystems and the lives and livelihoods of people who live in these river valleys.

**SANDRP Blog Himachal Pradesh Rivers Profile** Himachal has 5 major river basins Satluj, Ravi, Beas, Chenab and Yamuna. Yamuna crosses only the south-eastern border of the state, and but its tributaries originating in Himachal include Giri and Tons which form a part of the Ganga river basin flowing westward. The other four rivers are major tributaries of the eastward flowing Indus River, the longest in the world (2000 miles or 3200 kilometres) with a flow twice the size of the Nile. The Indus becomes a much larger river once it is joined by what are known as the ‘Punjab’ (literally meaning 5 rivers – Satluj, Ravi, Beas, Chenab and Jhelum).

**SANDRP Report From Goddess to legal person** All rivers in India, not just Ganga and Yamuna, need protection. They need representation not from indifferent bureaucracy, but by people who love them and are linked to them.
Rivers need their natural flow, a right constantly denied to them. A living ecosystem is much more than a person, it nurtures and protects life processes much beyond the anthropocentric view and timescale. Their protection needs to be at par with a status higher than “legal persons.”

**Gujarat** 45 villages use toxic water for irrigation A recent study conducted by IIPH-Gandhinagar and the Centre for Development Research of the University of Bonn, involving 652 households in villages located on the banks of the Sabarmati river, has found high levels of Escherichia coli, the bacteria that has contaminated even the drinking water of these households. **Good to see this study about what was expected impact of SABARMATI RIVERFRONT DEVELOPMENT PROJECT, for villages along the river downstream from Vasna barrage, downstream of Ahmedabad.**

**Chhattisgarh** Sheonath River: A river in corporate custody Even as river has been granted “human rights” with its declaration as “living entity” by the Uttarakhand court of law, Sheonath River in Chhattisgarh has been in “captivity” of a corporate house for the last two decades. The erstwhile undivided Madhya Pradesh government in October 1998 inked a deal and sold a 23-km stretch of the Sheonath River to Radius Water Limited (RWL). This was country’s first experiment with privatisation of rivers that was widely criticised for its ecological and social damages. According to the deal, RWL was given a concession to build a barrage across Sheonath for supplying up to 40 million litres (mld) of water per day to the Borai industrial estate in Durg district. The contract has been for a period of 22 years. **A reminder about the story of Sheonath River of Chhattisgarh. The state govt is paying to the Radius Company each year since there is no demand for water as per the agreement.**

**NARMADA** Riverbed dries up, Dahej stare at crisis The salinity ingress in dry Narmada River this year as surfaced even before April starts, when this happened only in May last year. Salinity ingress has already reached 40 km inland, upto Kabirvad, affecting the borewells that industries and Bharuch use to get 75 MGD water. The SSP claims that 600 cusecs of water is being released, but it does not reach the sea. The minimum requirement to save the borewell from ingress is 1000 cusecs, this report says, but that is no based on any study. Building of Bhadbhut barrage is certainly not a solution, as fisherfolks have been saying for so long.

38% of Narmada canal network yet to be completed: Govt The state govt said that according to the revised estimate of the Sardar Sarovar Narmada project canal project cost in 2014-15, Rs 12,915.89 crore worth of construction work on canals remains to be completed. The govt admitted that some 38% of the canal network is yet to be completed in the state.

**Several revelations here:** * 47% of sub minors remain to be completed. Of the total network of 48,329.93km of sub-minor canals, work on 22,632.21km remains to be completed.
38% of Canal network remains incomplete. Work on 27,414km of the canal network is still to be completed.

The excuse given that delay is due to lack of (local) permissions is totally wrong. It only shows lack of seriousness.

According to the 2014-15 estimate, the state would need to spend Rs 44,426.20 crore on the canal network. Of this, till November 2016, the state has already spent Rs 31,510.31 crore.

The govt reply claimed between 2011-12 and 2015-16, the state has received Rs 3,434.89 crore from the Centre for the project. The government said that in 2016-17, it received Rs 1,055.53 crore.

Farmers use force to get water from Narmada Farmers of Vaniyadri village in Chhota Udepur forcefully opened the gates of the main Narmada canal after the irrigation canal that supplies water to nearly 200 villages ran dry. The supply of Narmada water to these villages had been stopped since March 30. According to the farmers, the corn yield, which is the major crop in this region, is on the verge of being destroyed due to lack of water supply for the past one week. *Sardar Sarovar Project water keeps getting diverted for unjustified uses, for which there had been no allocation in the first place, while farmers, for whom the project was mean, do not get it. So farmers have no options left but to fight for it.*

Assam Namami Brahmaputra: a disservice to people of valley For the people of Assam, the Brahmaputra is a source of both happiness and sorrow. Namami Brahmaputra takes the Brahmaputra away from the material and elevates it to the religio-spiritual realm instead. Are we to assume that with this newly acquired “holy” status, the Brahmaputra will henceforth beseech only veneration and not any act of resistance on its banks? The govt seems to suggest us so. *It's a thought provoking article. Also see, “Namami Brahmaputra” and its symbols of Hindutva Important Message:* The image and symbols invoked in the promotional songs of the festival seems to have not gone down well with many communities living in the state. An umbrella organization called the Tribal Sangha, has criticized the songs for failing to represent the Assamese society by not showing any of the ethnic communities in the songs.

GANGA SANDRP Guest Blog Varanasi Gods Own Land by Nandani Oza he change that seems to be happening in Varanasi is large scale construction works much of which seems unplanned. This is likely to not only change the culture of Varanasi but is also adversely affecting the small and marginal traders, vendors, boat people, fisher people and so also the environment and rivers. There did not seem any fundamental change under Swatch Bharat Abhiyan or Namami Gange Mission. What is worrying is the planning of water ways in all the rivers of Varanasi and how this is going to affect the people, environment, the historical and religious city of Varanasi as well as its rivers including the holy Ganga itself. However the encouraging point is that the civil society of Varanasi has taken upon them to raise all these issues collectively along with the small vendors, boat people and the marginalised.

Op-Ed All rivers require special status by Ritwick Dutta The fact is that the present legal and policy framework does not consider the river as either a ‘breathing’ or ‘living entity.’ On the contrary, it is viewed as ‘natural resource’ whose ‘potential’ has to be realised. It requires to be ‘tapped,’ ‘tamed,’ ‘harnessed,’ ‘dammed,’ ‘dredged’ or ‘linked’ in order to realise its full ‘potential.

A river which is not subjected to any of the above processes and allowed to flow into the sea/ocean is viewed as a national waste. The Supreme Court’s controversial decision in the Narmada Bachao Andolan, Tehri and the River Linking cases is a reflection of the mindset which emphasises on the need to tap this potential of rivers to attain sustainable development.

In a way, the HC decision marks a fundamental departure from the ecologically myopic views held by the courts till date. If rivers are considered as living beings, we must recognise that in India today, rivers that are living and breathing are an endangered species. They require special status and proactive conservation efforts. *Ritwick Dutta at his sharpest best (though one may not agree with everything he says here).*

Op-Ed Can the Ganga have human rights? By Ashish Kothari & Shrishtee Bajpai There are two more
fundamental questions to ask of the High Court judgment. First, recognition of the rivers’ rights is based on its value for “socio-political-scientific development”, and due to the spiritual significance of the Ganga and Yamuna, especially for Hindus. Also, could the logic of this order be extended to all rivers, and beyond that, to all of nature? These rivers are sacred to Hindus; other rivers, lakes and forests are sacred to other communities. Also see, Can making Ganga a person save it? This BBC report fails to provide any clarity beyond what is already known.

MATU PR गंगा यमुना क्या अब बंधने से बचनी? 20 मार्च व बाद के आदेश में भी कई बंधों के बारे में अदालत ने साफ लौग्य पर बुधा नहीं कहा है | जबकि सरकार को बंधों के स्वाति पर बच निकलने का रास्ता देता है | साथ ही नदी से जुड़ते हुए लोगों के अधिकारों के बारे में भी आदेश नीति है | यह हमारी धर्म का विषय है | यह तो सिद्ध ही है कि बंधों से बहती नदी, वेदंग, झरनों, झील-झरनों, घास के मैदानों व जंगलों आदि पर बुधा असर होता ही है | यदि किसी भी नदी को बाध दिया जाता है तो निचले हिस्से में पानी नहीं रहता जिससे नदी में बचा हुआ पानी भी गंदा हो जाता है | निर्माण नदी के लिये अविरल नदी का होना वास्तव में पहली शर्त है | अदालत के आदेश के बाद अब सरकार पर ये जिम्मेदार साफ लौग्य पर आ गई है |

Report Namami Gange project in shambles A 2018 deadline to clean the river is “impossible”, one NMCG official said. About 4,800 million liters of sewage from 118 towns and cities flow into the Ganga every day. The functioning capacity to treat sewage is 1,017 MLD. According to official data, administration has cleared the construction of plants to treat an additional 933 MLD, and the rehabilitation of existing plants with a capacity to clean an additional 1,091 MLD. Of these, plants treating less than 160 MLD have been completed, but it is unclear if they have started operations. This provides some figures about how bad is the state of business as usual projects, in which any case are not likely to help the cause of the river.

Uttar Pradesh CM ordered a probe into Gomti Riverfront project During a review meeting of the project, the CM was apprised that of the Rs 1,513 crore earmarked for the project, almost 95 per cent -Rs 1,435 crore had been spent but the work completed was only 60 per cent. Officials presented a revised estimate of Rs 2,448 crore to the Chief Minister, after which he directed them to rethink on various works under the project, remove the unnecessary ones and complete the project at the earliest. Welcome move, provided there is truly independent probe and in the meantime the project work is stopped and there is public consultation, based on impact assessment before going forward.

Report Institute to focus on research on fast disappearing Hilsa fish A new centre set up in West Bengal by a Kochi-based national fisheries institute will focus on research on fish varieties, including the famous Hilsa fish, which is disappearing fast from coastal Bengal due to over fishing and climate change. The Kochi-based Central Marine Fisheries Research Institute said its new regional research centre in Digha, West Bengal, will fulfill the research and development needs for marine fisheries in West Bengal and Odisha. This is the 11th regional research centre of the CMFRI, a fisheries research institute under the Indian Council of Agricultural Research (ICAR). CMFRI to set up 11th regional centre in Digha (W Bengal) to research on Hilsa and also for W Bengal and Odisha. Also see, Govt extends bans on Hilsa catch to protect fries Bengalis are fanatics for many things, HILSA is only one of them, the demand going up 20 times on Bong new year on April 14, but that need not be the case.

Op-Ed The Farakka effect: If honeybees migrate, why not people? Informative piece on Farakka by Ashok Swain: Even after the signing of the Ganga Water Treaty, the Farakka Barrage continues to create environmental problems on the Bangladeshi side and that does not help to stop the population displacement and subsequent migration to India. Since many of the migrants are Muslims moving to a Hindu-majority country, this migration has led to a number of communal conflicts in India. Assam, which received a large proportion of these migrants, was the first to experience this conflict. It has now spread to West Bengal and to other parts of India. In West Bengal, Hindu and Muslim migrants from Bangladesh are also up in arms against each other. The BJP regularly uses the Muslim migration issue for political purposes.

SAND MINING

Video Dark secrets of booming construction industry India’s building boom has spawned a “sand mafia” that is plundering the environment and even killing those who get in its way. But as Samantha Hawley
reports, some people refuse to be intimidated.

WATER OPTIONS

**Telangana Abundant water brings cheer to villagers** Spread over 100 acres, the Pedda cheruvu tank was overflowing after many years as a result of Mission Kakatiya. However, due to decades of neglect and non release of water from SRSP, silt accumulated and feeder canals got filled up with weeds and thorny bushes. Things changed in the present regime, the State government allocated Rs. 50 lakh under Mission Kakatiya programme and got the silt removed. Special funds were allocated to clean up all the canals. Further, water was released from the SRSP and some 18 tanks in Narasampet constituency are full after more than six years. Good to see such stories in April.

**Centre RWH system In Indian Railways** As per Minister of State for Railways Rajen Gohain written reply in Lok Sabha on 07 Dec. 2016, presently, 1885 numbers of Rain Water Harvesting systems (RWHS) have been installed at different locations which also include Railway Stations on Indian Railways in various Zones; the Zone-wise position is as under:

<table>
<thead>
<tr>
<th>Zonal Railway</th>
<th>Number of RWHS installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>148</td>
</tr>
<tr>
<td>Eastern</td>
<td>2</td>
</tr>
<tr>
<td>East Central</td>
<td>6</td>
</tr>
<tr>
<td>East Coast</td>
<td>28</td>
</tr>
<tr>
<td>Northern</td>
<td>416</td>
</tr>
<tr>
<td>North Central</td>
<td>35</td>
</tr>
<tr>
<td>North Eastern</td>
<td>14</td>
</tr>
</tbody>
</table>
Northeast Frontier 1
North Western 53
Southern 228
South Central 468
South Eastern 71
South East Central 112
South Western 205
Western 24
West Central 74
Total 1885

Railway Dept. is also setting up Water Recycling Plants. So far, 37 numbers of Water Recycling Plants have been set up in different locations and works have been sanctioned for setting up of Water Recycling Plants at 37 more locations costing about Rs. 48 Crore.

WATER

Center Pricing of water This is link for March 2017 publication from CWC titled Pricing of water in public system in India.

DROUGHT 2017

Maharashtra Drought prone Marathwada needs to look beyond monsoon Drought in many ways is manmade; it is caused by mismanagement. Marathwada accounts for 49 of the 170 cooperative sugar mills in the state but some of them have been shut for the past couple of years owing to a shortage in supply of sugarcane. According to Skymet the monsoon in Marathwada may not be as good as 2016 but not as bad as 2015 either. This is a detailed piece about drought situation in Marathwada in this year.

Gale tandava over a swathe of wilted hope The hailstorms that hit Latur, Parbhani, Beed and Osmanabad moved in one belt, bringing down everything along its path. Authorities estimate damage to 79,000 hectares of land. This, after signs of positivity: the region had received surplus rainfall after a four-year drought—it led farmers to bet big on the windfall of the 2016 monsoon. Today, amid uncertainties, landowners and labourers are edgy, nervous and desolate. Marathwada faces another tragedy.
Karnataka Long wait for pot The southwest monsoon in Karnataka was lower by 18 per cent in 2016 (the deficiency was as high as 29 per cent and 21 per cent in the Malnad and coastal regions respectively). The northeast monsoon brought 54 millimetres of rain as against the normal 188 mm, an alarming deficit of 71 per cent. As much as 66 per cent of the cultivated area in Karnataka is rain-fed, making it one of the largest arid regions after Rajasthan. During the kharif season in 2016-17, as many as 139 taluks (out of 177) were declared drought-hit. That number rose to 160 in the rabi season. The 2016-17 food grain production is expected to decline to 91.54 lakh tonnes vis-à-vis 96.44 lakh tonnes in 2015-16, according to the state’s economic survey. Karnataka had sought Rs 4,702 crore towards kharif crop losses from the Centre, which, in January, approved Rs 1,782 crore, much to the state’s disappointment.

AGRICULTURE

Punjab Scientist looking for less water consuming paddy seed Sounds interesting but why still no push for SRI:

Punjab Agricultural University (PAU) has released a paddy variety PR-126 that gives an average of 30 quintals per acre. This is only marginally below the 30.5 quintals from PR-121 and PR-124 or the 32 quintals of the other popular variety Pusa-44.

But the real difference is in the duration, from the time of sowing seeds in the paddy nursery to harvesting of the ripened grain. This ranges from 135 days for PR-124 and 140 days for PR-121 to 160 days in the case of Pusa-44. PR-126 matures in just 123-125 days, including 30 days of nursery raising and 93-95 days after transplantation of seedlings.

The average yield per day from the new variety, at about 24 kg per acre, is more than the 20 kg of Pusa-44 or 22 kg for PR-121 and PR-124. The shorter duration also means less water consumption. If farmers have to give, say, 26 irrigations for Pusa-44, this would be only 21-22 in PR-121/PR-124 and 17-18 in PR-126,” claims G S Mangat, head of PAU’s rice improvement program.
PR-121 has, within a span of three years, become Punjab’s most widely-cultivated paddy variety. Last year, it covered over 7.7 lakh hectares (lh) or 30.7 per cent of the state’s total non-basmati paddy area, with PR-124 accounting for another 9.8 per cent. In the process, Pusa-44’s share, which was 39 per cent in 2012, fell to 20.3 per cent.

Underground water being overdrawn has been attributed to paddy cultivation area in the state rising from under 3 lh to over 30 lh between 1965 and 2016. It has led to the enactment of the Punjab Preservation of Subsoil Water Act in 2009, barring any nursery sowing and transplanting of paddy before May 15 and June 15, respectively.

ENERGY OPTIONS

Study Railways could draw 25% of electric power through renewables The Council on Energy, Environment and Water study, funded by UNDP identifies key policy and regulatory challenges that developers face while supporting the Railways’ renewable energy push. A potential 5GW target provides a unique opportunity for solar developers, with an estimated 1.1GW coming from rooftop and 3.9GW from utility scale projects. Indeed Railways have such a huge potential, let us see where their ambition is.

SOUTH ASIA

Research Warning of big earthquake anytime around Bangladesh! A giant fault in the earth’s crust covers by millions of tonnes of sediment in one of the world’s most densely populated areas could kill tens of millions of people, scientists have claimed. Researchers placed hundreds of highly accurate GPS receivers in locations across India, Bangladesh and Myanmar and monitored them over a ten year period. Now the scientists fear the location is home to a megathrust fault which could unleash a 9.0 magnitude earthquake at any minute. More than 140 million people live within a 60 mile area of the potential disaster zone in Bangladesh. The scientists, led by Dr Michael Steckler from Columbia University published their findings in the journal Nature. SCARY findings of research.
**Teesta treaty Apart from Teesta, CM moots plan with 3 other rivers** In a bid to find a solution to the logjam over sharing the Teesta’s waters, the Mamata Banerjee govt is learnt to have made a counter-proposal to the Centre: why focus on the Teesta system alone, “water could be obtained from other river systems”, too. On April 08, 2017, a source close the Mamata told The Sunday Express that the CM had “made a suggestion that instead of being focused on the Teesta river, the two governments could look at the possibility of sharing water from other river systems in Bengal, which are also close to the border”. The three river systems that Mamata suggested be studied as possible alternative to the Teesta were the Torsa, the Sankosh and the Raidak systems. *This is so seriously problematic. Mamata Banerjee equates Water with rivers and moots plans to destroy more rivers.*

**India cannot ignore our right of Teesta water** There are some misconceptions here about non involvement of W Bengal in Teesta treaty. But strangely no mention of environment, biodiversity, climate change or silt in the river. According to another detailed report, both the countries are pushing the deal.

**MoU for fairway development on Kushiyara and Jamuna river signed** On April 05, 2017, the Union Cabinet chaired by the PM Modi has approved MoU between India and Bangladesh for fairway development of Ashuganj-Zakiganj stretch of Kushiyara river and Sirajganj-Daikhawa stretch of Jamuna river in the Indo-Bangladesh protocol route by undertaking necessary dredging jointly by the two countries. The MoU will considerably reduce the logistics cost of cargo movement to North Eastern India.

**Nepal 6 indicted in Nalsing Gad Hydropower consultant hiring scam** News about Corruption in Nepal Hydropower by SMEC and USA companies.

**IWT A game changer in India Pak relations** Both the official and public circles in J&K State have been pleading for a review of this Treaty, so that the legitimate water requirements of J&K State for hydel power generation, deepening of rivers for navigation purposes, erecting protective bunds for floods and building adequate water reserves for irrigation are fulfilled. Besides its one-sided nature, there are many good reasons why India must announce its exit from the treaty. *This plea to scrap the Indus Treaty has no real force of logic or facts.*

**Report Common platform of Ganga-Brahmaputra-Meghna river basins** The first Regional Consultation Workshop on a CSO Vision for Cooperative Trans-boundary Water Resource Management in the Ganges-Brahmaputra-Meghna River Basins was organised in Kathmandu last week to draft the regional platform. Participants from the premises of three trans-boundary rivers from five countries Nepal, India, Bangladesh, Bhutan and China had agreed to form regional platform for sharing common issues as well as working on future plans and programs. *Interesting, but its credibility will depend on who are the members of the network and what is their track record. At the moment hardly any names are in this report.*

**THE REST OF WORLD**
Australia Probe into Queensland dam  YET ANOTHER INSTANCE OF DAM FLOODS IN AUSTRALIA? This time it is Kinchant Dam in Queensland, and it is accused of allowing water level to rise to 103% before starting releases only a day before the floods arrived, worsening the downstream floods. In downstream areas, the internet and text messages were not reaching people, leading to dramatic rescues and avoidable damages. Good part is that immediate probe has been announced.

US Dam Busters In 1680, the town of Andover, Massachusetts, offered free timber and real estate to any citizen who would put up a sawmill, gristmill, or fulling mill (for preparing cloth) on the Shawsheen River. And to put a particularly ironic point on it, many of these early dams were thrown across rivers to create ice ponds to service the burgeoning seafood industry—and in the process killed off the very seafood for which all that ice was needed.

And this how decommissioning happened. The process to free the Jeremy River began in the fall of 2011. Harold negotiated the complicated government funding mechanisms—programs to restore the health of waterways or mitigate storm damages—to raise the nearly half a million dollars required to take down the Norton Mill dam. For the past 15 years, Harold and Gephard have worked together on numerous projects and have removed five dams from Connecticut waterways. Harold says they have a wish list of dozens more dams in the state that they’d like to see come down. But apart from raising necessary funds, which can range from tens of thousands to millions of dollars for the removal of a single dam, Harold and Gephard spend most of their time meeting with owners whose ties to their dams can go back centuries. This provides some insight about how American rivers got killed by unplanned and ill conceived dams hundreds of years ago.

Report Falling groundwater About 30% of the world’s freshwater comes from aquifers, yet a third of the 37 largest aquifers studied by the University of California between 2003-13 were severely depleted, receiving little or no replenishment from rainfall. Some of the most stressed aquifers are in the world’s driest regions such as Asia, up to 88% of which is water-stressed. This report provides some general picture of groundwater. Its description of GW as World’s reserve water tank is apt.

CLIMATE CHANGE

Global Large hydropower dams have no place in the GCF  The GCF is poised to consider financing its first large hydropower investments at its board meeting. Large hydro is a non-innovative, last-century technology with no place at the GCF, whose mandate is to promote a paradigm shift toward low-emission and climate-resilient sustainable
development. Not only does large hydro – a fully mature technology – lack any potential to transfer new technologies, it’s also a bad bet for reducing greenhouse-gas emissions or helping countries adapt to a warming world. **Indeed, Large Hydro have no place in GCF funds. The meeting now happening in South Korea will consider three of them, including the 216 MW Trishuli HEP of Nepal.**

**Overlooked rainfall and cooling effects of forests** The conventional wisdom has been that forests and trees were seen mostly as carbon stocks and carbon sinks, absorbing carbon dioxide in the environment emitted mostly from fossil fuel. Forests function like the lungs of the human body — they purify the air and exchange carbon for oxygen. **The cooling effect of trees and forests is now being realised by the scientists.**

![Estimated Net Migration for the Drylands](image)

**India Climate change refugee problem** In India, global climate change is the stark new reality, and a root cause of human mass migration into the CO2-belching cities. The reasons for migration are familiar—climate change, loss of livelihood due to disasters like cyclones, drought, ingress of the sea, and lack of fresh water for agriculture. Roughly 37 million people from India, 22 million from China and 21 million from Indonesia will be at risk from sea levels rising by 2050.

Also see, **India-UK announce Green Growth Equity Fund** At the bilateral meeting between Arun Jaitley, Minister of Finance and Rt Hon Philip Hammond, Chancellor of the Exchequer on April 05, 2017, both Govts have announced the launch of joint UK-India Fund, namely a Green Growth Equity Fund which aims to leverage private sector investment to invest in green infrastructure projects in India. Details are available on [http://www.niifindia.in/images/Blueprint%20GGEF.PDF](http://www.niifindia.in/images/Blueprint%20GGEF.PDF)

**First GCF Project to be implemented in Odisha** The first Green Climate Fund Project from India “Ground water recharge and solar micro irrigation to ensure food security and enhance resilience in vulnerable tribal areas of...
Odisha" have been approved by GCF board. **The first Green Climate Fund project in India to be implemented in 15 districts in Odisha over the next 6 years, for which a fund of Rs 34 Million has been approved as per this report.**

**NGT issues notices on Climate Change petition** A Petition raising the issue of impacts of Climate Change and inaction of the Govt was filed on 22.03.2017 before NGT by nine year old girl, Ridhima Pandey. She is part of a class that amongst all Indians is most vulnerable to changes in climate in India yet are not part of the decision making process. The government has failed to take any effective science-based measure, and there is a huge gap in implementation of the environmental legislations. **This is indeed a broad issue, not just limited to air pollution: Climate Change affects all resources, all people and all areas.**

**ENVIRONMENT**

**Centre PMO suggests further relaxation in green clearance** After series of steps to expedite green clearances, PMO now wants the environment ministry to further relax norms for forest clearances. Based on suggestions by central ministries, it has asked the ministry to look into delinking of compensatory afforestation with Stage II of forest clearance to further expedite project clearance processes. **Most shocking, saying that compensatory forest land can be identified post clearance! Among others.**

**Report Pollution changing countries rainfall acidic** Analysis of rainwater samples from Nagpur, Mohanbari (Assam), Allahabad, Visakhapatnam and Kodaikanal in the decade 2001-2012 showed a pH level varying from 4.77 to 5.32, indicating that these places have been receiving `acid rain’. Rainwater with pH below 5.65 is considered acidic. **This will have far reaching consequences.**

![Photo Report The endless search for grazing grounds](image)

*Photo Report The endless search for grazing grounds* A Wonderful photo article on life of Jat Pastoralist of Kachchh and Kharai Camels by Ritayan Mukherjee.

You may also like to see **DRP News Bulletin 03 April 2017** & **DRP News Bulletin 27 March 2017**