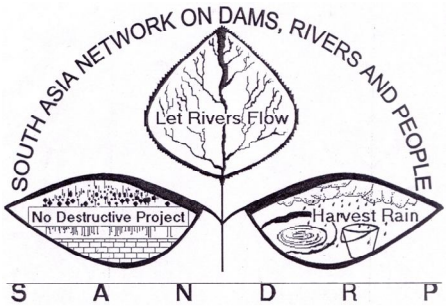
Analysis of MoEF's EAC on River Valley Projects

The Expert *Approval* Committee has zero rejection in six years

April 2007 to December 2012



South Asia Network on Dams, Rivers & People

www.sandrp.in

February 2013

Analysis of MoEF's EAC on River Valley Projects

The Expert *Approval* Committee has zero rejection in six years

Introduction Following the implementation of EIA notification of Sept 2006, the Ministry of Environment & forest (MoEF) has constituted different committees for the appraisal of various developmental projects including River Valley & Hydroelectric projects. The committees are called as Expert Appraisal Committees (EAC). The EAC for River Valley & Hydroelectric projects has had 63 meetings till date from the date of constitution of Committee in April 2007 to the latest meeting in Dec 2012. The committee generally recommends for any River Valley projects, at first stage the Terms of Reference (TOR) for the Environment Impact Assessment (EIA) to be carried out for the proposals along with permission for pre construction activities or works related to survey and investigation.

Model TOR The MoEF has also put up what the Ministry calls "Model TOR for River Valley and Hydroelectric Projects", but when you click on the link[1], it opens into a document that is titled, "Model TOR for Hydropower Projects", it does not even claim to be a model TOR for any other river valley projects. This is a big lacuna, since over 95% of India's large dams are irrigation projects[2], not hydropower projects. Moreover, substantial proportion of the projects coming before the EAC is irrigation projects, including river linking projects. Not having a Model TOR for such projects is a big gap. This does not mean that the Model TOR given on the MoEF website is adequate or comprehensive. Only to illustrate, the Model TOR does not look into the impacts of the various integral components of the hydropower projects like colonies, roads, mining, blasting etc that the hydropower projects invariably have. Model TOR does not look at the social, environmental, economic or cultural services that a river provides. On downstream impacts, the model TOR says under *Impact Prediction*, "Downstream impact on water, land & human environment due to drying up of the river in the stretch between dam site and powerhouse site." This completely negates the impacts that the project would have either on the upstream or in the river downstream from the power site or along the tributaries both upstream and downstream of the projects. Nor does it mean that these grossly inadequate Model TOR is followed by the developers. Even the ministry or the EAC does not bother to check if the EIA submitted to them follows either the specific TOR given to the project or the Model TOR on the MoEF website.

Environment Clearance At the next stage, the EAC considers the projects for the Environment Clearance (EC), at this stage the EIA is supposed to have been conducted as per the approved TOR and the public hearing is also supposed to have been conducted as per the norms set in the EIA notification of Sept 2006. The EIA notification is issued under the Environment Protection Act, 1986. We have tried to analyse the recommendations of the EAC from the minutes of 63 meetings for the period April 2007 to Dec 2012.

The EAC members The reconstituted EAC in April 2007 was headed by Shri P Abraham, former Power Secretary. Over the years, EAC included members like Dr Sanchita Jindal, Dr A R Yousuf, Dr OP Sisodia, Dr Dinesh Kr Alva, Dr. Dulal Goswami, Prof D K Paul, Dr (Mrs) Usha Bhat, Dr Bithin Datta, Dr Pushpam Kumar, Dr. Devendra Pandey (chairman of EAC from Aug 2009 to April 2010, current Chairman took over as chairman during 38th meeting held on June 30, 2010), none of them are members of the EAC for RVP currently. The member representing Central Water Commission in the EAC included R K Khanna, R K Singh, N Mukherjee but has been changing over the years and full list of their names is not available. Shri P Abraham resigned following our letter to the then Union Minister of State for Environment and Forests (Independent Charge) Shri Jairam Ramesh, showing the conflict of interests involved in he being on the

[1] http://environmentclearance.nic.in/writereaddata/Form-1A/HomeLinks/Model.htm
[2] See Central Water Commission's National Register of Large Dams, 2012: http://www.cwc.gov.in/main/webpages/NRLD%20FORMAT%202012.pdf

board of a number of hydropower companies whose projects came up for clearance before the EAC chaired by him.

The current composition of EAC for RVP is as follows (as per MEF website[3] as on Jan 30, 2013):

S.No.	Name & Address	Role in Committee
1	Shri. Rakesh Nath, C-1/29, Bapa Nagar New Delhi-110 003	Chairman
2	Dr. B.P Das, 717 Saheed Nagar Bhubaneswar -751007	Vice-Chairman
3	Dr .A. K. Bhattacharya, Flat No-805,Pocket-3,Akshardham Apt. sec-19 Dwarka New Delhi-110075	Member
4	Chief Engineer(Hydrology), Central Water Commission, Sewa Bhawan, R.K. Puram,New Delhi-110 066	Member
5	Dr. Jyoti Kumar Sharma, Professor School of Environment & Natural Resources 14/15, Old Survey road Dehradun-248 001 Uttrakhand	Member
6	Dr. K.D. Joshi, Principal Scientist and Head Central Inland Fisheries Research Institute Regional Centre Allahabad Uttar Pradesh	Member
7	Dr. Praveen Mathur, Associate Professor & Head Department of Environmental Science P-5, Professor's Colony MDS University Campus Ajmer-305 009 Rajasthan	Member
8	Dr. S Bhowmik, 40 C, Pocket 1, Sector 10, Dwarka, New Delhi	Member
9	Dr. Surendra kumar Mishra, Department of Water Resources, Development & Management, Indian Institute of Technology, Roorkee - 247667	Member
10	Dr. (Mrs.) Maitreyee Choudhary, Professor & Director, Centre for Himalayan Studies, University of North- Bengal, W.B.	Member
11	Prof. (Dr.) Dhananjai Mohan, Wildlife Institute of India, Dehradun, 248 001 Uttarakhand	Member
12	Prof. Arun Kumar, Department of Earth Sciences, Manipur University, Imphal, 795003, Manipur.	Member
13	Prof. S. K. Mazumdar, 242, FF, Sidharth Enclave Ashram Chowk New Delhi-110 014	Member
14	Sh. B B Barman, MOEF, Paryavaran Bhavan, New Delhi	Member Secretary

In addition to the above, Dr P V Subba Rao (Scientist from MoEF) is listed as EAC member in the minutes of the meetings. Interestingly, he, Dr B P Das and Dr A K Bhattacharya seem to be constant members of the EAC throughout the period under study.

Role of MoEF All the comments about the EAC here apply equally to the Union Ministry of Environment and Forests as two officials of the ministry have always been part of the EAC, including the member secretary of the EAC. In fact MoEF has a greater role in selection of the chairman and members of the EAC, deciding what projects should be put on the agenda, what happens after the EAC recommendations, ensuring that all the required information about the projects on the agenda is available and is in public domain, encouraging EAC to invite to EAC meetings individuals and groups who have written to EAC and MoEF on substantial aspects, and otherwise setting the policies and norms for the EAC and projects. The MoEF performance has been pathetic. Even now it's not possible to even know the status of the clearances of the projects from the MoEF website, even though it is statutory requirement for MoEF (under EIA notification 2006) to display the clearance letters on its website. In Feb 2012 Central Information Commission (CIC) directed MoEF under the Right to Information Act 2005 to put all the documents submitted by the project developers for clearance, at least ten days before the projects are considered by the EAC. When this was not followed, SANDRP wrote to CIC and CIC issued notice to MoEF. This is still to be followed by MoEF fully. Now some of the documents are put up on the website before the EAC meetings, this is not the case even for the 63rd and 64th meetings of EAC. The EAC, in spite of repeatedly writing to them on this violation of the CIC directions, did not take steps to ensure that CIC directions are *fully* complied with for the projects that come up before the EAC.

[3] http://environmentclearance.nic.in/report/compositions.aspx?RIV

Even though MoEF may be equally if not more responsible for the various violations listed here, that does not reduce the responsibility of the EAC members. Once someone is selected as EAC member, he or she has the duty to ensure basic norms in functioning of the EAC. Evidence presented here shows if the EAC members have succeeded in achieving even basic norms in governance of EAC.

Results and Analysis

The Union Ministry of Environment and Forests' (MoEF) Expert Appraisal Committee (EAC) on River Valley and Hydroelectric Projects (RVP) has considered a total of 262 hydropower and irrigation projects in close to six years since April 2007 when the new committee was set up to its latest, 63rd meeting in December 2012. It has not rejected any project in this period. Even in case of the two projects that it declined to recommend clearance for the Terms of Reference (TOR) of their Environment Impact Assessment (EIA), it has basically asked the developers to come back with reformulated proposals. It seems the committee is actually an Expert Approval Committee, since it seems to have expertise in approving rather than appraising the projects objectively.

EAC has strong pro project and anti people bias The Committee has shown its strong bias *for* the projects. Many groups from all over India have sent hundreds of submissions to the EAC over these years. The committee has never called any of the groups for the meetings where the specific projects on which groups have sent submissions. The EAC has never even acknowledged any of such submissions in the minutes of the meetings. In case of some of the recent submissions from SANDRP and others, the chairman of the EAC wrote back saying that this will be discussed in the next meeting, but there has been no mention of such submissions in the minutes of the EAC meetings. The EAC has shown its strong bias against people, environment and all those who represent the interests of the local communities and environment. In February 2012 some of us were invited for a discussion with the EAC, but we saw little impact of our discussions on the functioning of the EAC.

The table below gives an overview of the situation of TORC (Terms of Reference Clearance) and EC (Environment Clearance) for the projects cleared by the EAC on RVP between April 2007 (when the then newly constituted EAC met for the first time) to its 63rd meeting as in December 2012. The table shows that the EAC has not rejected any of the projects for EC. As against the 211 projects considered by the EAC for TORC, it (only temporarily) rejected TORC for two projects. Hence its rejection rate for TORC is less than 1%. EAC's rejection rate of environment clearance is nil as it has never rejected any project that has come to it for environment clearance. It seems the EAC for RVP has been basically rubber stamping approval for every project that comes their way. The EAC was expected to do much better than that, as it clear from the reading of EIA notification of Sept 2006, following which the EAC was set up.

Overview of Clearance status across India

Region	Projects for TORC			Projects for EC			Total projects considered
	TORC given	TORC Rejected	Projects considered for TORC	EC given	EC rejected	Projects considered for EC	
North	50	1 (300 MW)	57	31	0	34	72
North East	70	1 (420 MW)	87	17	0	19	99
East	10	0	13	7	0	8	20
West	28	0	39	14	0	17	49
South	7	0	14	6	0	8	22
Total	**165**	**2**	**210**	**75**	**0**	**86**	**262**

Temporary rejections for two TORC Only two projects were rejected TORC. Among these, for the 420 MW Kameng Dam, the EAC rejected the proposal from KSK Ltd, since the submergence area was just 350 m from Pakke Tiger Reserve. The EAC however, said, "The Committee suggested that possibilities of locating a suitable site on Kameng River, upstream of confluence of Bichom & Kameng may be explored."

So the project is likely to come back to EAC. It is surprising, however, that another project in the same basin, namely the 1120 MW Kameng I on Bhareli / Kameng River in East Kameng district in Arunachal Pradesh came before the EAC during its first meeting in April 2007. The minutes of the EAC meeting clearly says about this project, "A part of the submergence area falls under the Pakke Tiger Reserve." And yet the EAC gave TOR clearance to the project! Inconsistency seems to be the first name of the EAC.

Similarly the 200 MW Bara Bangahal HEP in Kangra district in Himachal Pradesh was accorded TOR clearance in 21st meeting of EAC in Dec 2008, even as the minutes recorded, "The project is located within the wildlife sanctuary." Similarly the 76 MW Rambara project on Mandakini River in Rudraprayag district in Uttarakhand, just 6 km from Kedarnath, was given TOR approval in the 19th EAC meeting in Oct 2008 even as the minutes noted, "The whole project is located within Kedarnath Musk Deer Sanctuary."

Similarly while rejecting the TORC for the 300 MW Purthi HEP in Lahaul and Spiti District in Himachal Pradesh, the EAC said, "The Committee concluded that the project proponent and Govt. of Himachal Pradesh may review and revise the proposal in the light of the above observations for reconsideration." So it is clear in this case too that the rejection is temporary. In reality, the EAC has rejected none of the projects that came to it for clearance.

Massive hydropower capacity cleared The EAC for RVP basically considers hydropower projects having installed capacity over 50 MW, projects of 25-50 MW going to the state Environment Impact Assessment Authorities and those below or requiring any environment clearance under EIA notification 2006. The table below shows that in less than 6 years, the EAC has recommended TORC for hydropower projects proposed with installed capacity of 49458 MW, which is about 25% more than what India has installed in about 66 years since independence.

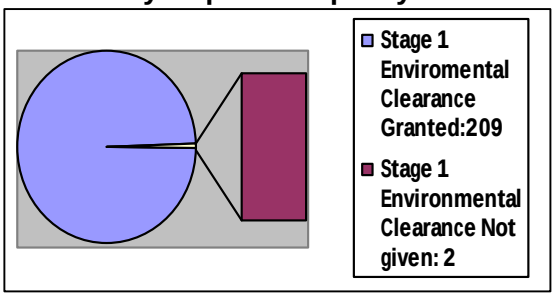


Figure 1: Stage 1 clearance figures across India

Status of clearance for Hydropower Projects

Region	Capacity for which TORC given, MW	Capacity for which EC given, MW	Capacity of projects considered, MW
North	12823	6843.5	18087.5
North East	31541	8258	46658
East	3434	120	3684
West	1320	-	1586
South	340	863	2178
Total	**49458**	**16084.5**	**72193.5**

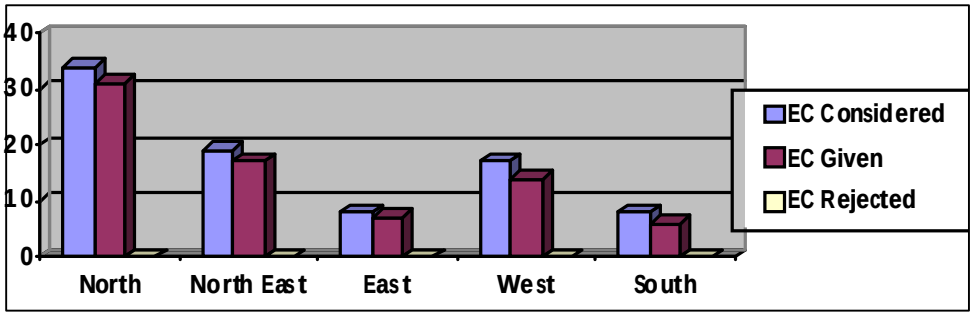


Figure 2: Zone wise status of Environment Clearance

During the period, the EAC has recommended EC for hydropower capacity of 16084.5 MW, which is about three times the hydro capacity of 5544 MW added during the just concluded 11th five year Plan. EAC has recommended all these clearances without giving any consideration to carrying capacity, cumulative impact assessment, democratic decision making, sustainable development criteria, full and proper social and environment impact assessment or desirability of such capacity addition, including from climate change perspective.

It has also not bothered to look at the declining generation performance of the existing projects, evidence of which was sent to the EAC, nor the poor performance of existing hydro projects, as against the promised generation performance. It also never looked at the issues of compliance of even the environmental and social measures by the projects already cleared.

Zero rejection for irrigation projects The EAC for RVP considers irrigation projects with Cultivable Command Area (CCA) above 10 000 Ha. In the table below are the region wise details of the TORC and EC recommended by EAC for the Cultivable Command Area figures of the major and medium irrigation projects.

During the period under study (Apr 2007 to Dec 2012), EAC has given TORC for 3.28 million ha of CCA and EC for 1.59 million Ha of CCA. Here we should note that since 1991-92, there has been no addition to the net area irrigated by major and medium irrigation projects at all India level as per Govt of India figures[4]. In light of that fact and considering the overcapacity already built into a number of basins across India already, such clearances by EAC are highly questionable.

Status of clearance for Irrigation Projects

Region	CCA for which TORC given, L Ha	CCA for which EC given, L Ha	CCA of projects considered, L Ha
North	2.02	3.53	6.17
North East	0	0	4.00
East	11.30	1.20	12.80
West	8.34	4.65	13.01
South	7.70	6.50	22.96
Total	**29.36**	**15.88**	**58.94**

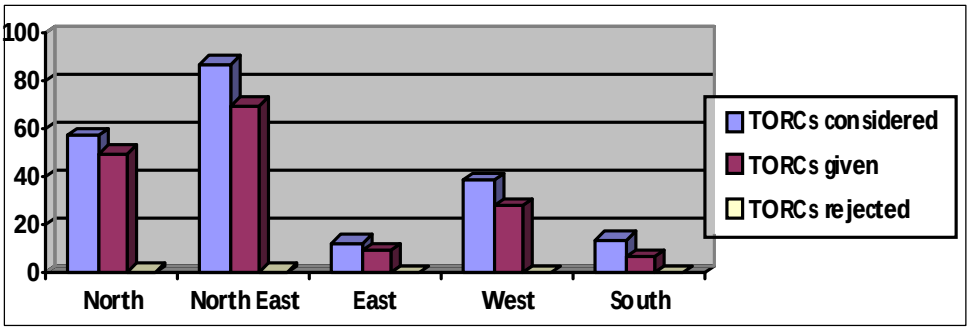


Figure 3: Zone wise status of Stage 1 clearances (TORC)

Land requirement Full details of the land required for the projects are never properly assessed by the EIAs. The EAC minutes reflect only indicative figures of land requirement of some of the projects considered by the EAC as mentioned in the EIAs.

Land required for the projects considered by EAC

Region	No of projects for which land requirement figures are available	Land required for the projects in previous column
North	62	29932.77 Ha
North East	72	76768.27 Ha
East	9	16809.24 Ha
West	15	31858.57 Ha
South	13	57398.82 Ha
Total	**171**	**212767.67** Ha

[4] See for example graph on page12 in this document:
http://sandrp.in/wtrsect/Water_Governance_in_India_Himanshu_Thakkar_IWMI_Tata_Meet_December2012.pdf

Following table gives an over view of land requirement for some of the projects as mentioned in the EAC minutes. Based on available figures, the Highest land requirement in a state is for Andhra Pradesh, at 45913.26 ha the second rank state is Arunachal Pradesh with land requirement of 35485.3 Ha. Arunachal being smaller and hilly state and most of the land being required are forested and close to the rivers, the impact in Arunachal Pradesh would be much greater. Based on above information, for the projected land requirement for the 262 projects considered by the EAC during the period under study would come to over 325995 Ha. However, these land requirement figures are gross under estimates and too much need not be read into them.

The flawed functioning of EAC It has not mattered to the EAC that the EIAs of the projects that come to it are shoddy, dishonest, cut and paste jobs. The Committee has not rejected a single EIA, even through evidence was repeatedly presented to the committee about shoddy nature of the EIAs. It has not mattered to the committee that there has been no credible public consultation process and there have been serious anomalies in public hearing processes. The committee did not order fresh public hearings even when evidence was provided to it about serious violations in public hearing processes.

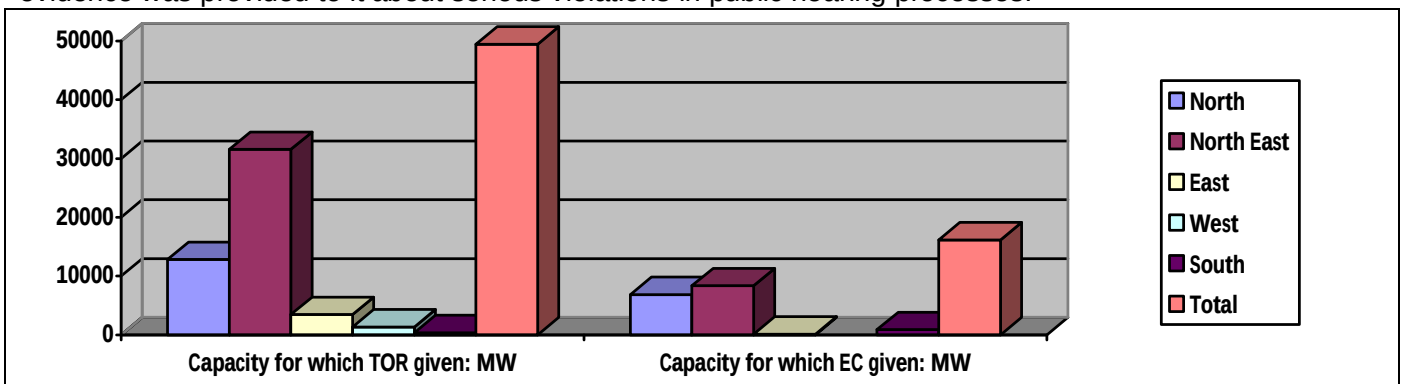


Figure 4: Zone wise figures of TORC and EC given for hydropower installed capacities

Even when the committee asked for fresh studies or significant changes in EIA, it did not ask the project proponent to go back for fresh public hearing. It has not mattered to the committee that EIAs of the projects it cleared did not have full year round ground level surveys, did not have full social impact assessment, did not have downstream impact assessment, did not have options assessment to establish that the proposed project was least cost option, did not have assessment of impacts due to blasting of tens of kilometer long tunnels, did not have proper flora or fauna studies, did not include impact of the project on rivers and the services provided by the river or impact on downstream projects or flood plane use, or had used flawed, false or inconsistent data base.

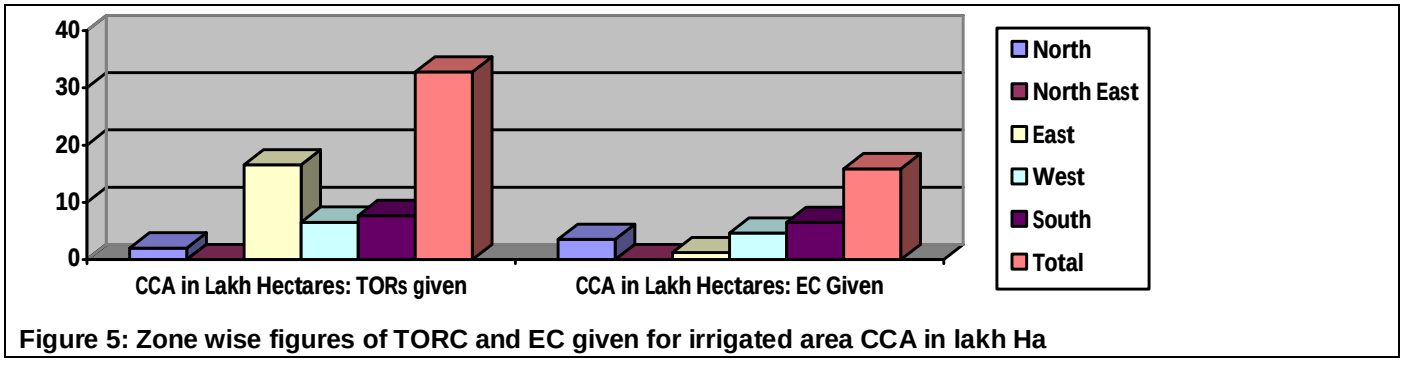


Figure 5: Zone wise figures of TORC and EC given for irrigated area CCA in lakh Ha

SANDRP had put together a detailed submission[5] and mobilized endorsements of large number of concerned groups and individuals, including over ten eminent scientists on World Fisheries Day on Nov 21,

[5] http://sandrp.in/rivers/MoEF_EAC_Submission_Fisheries_Nov2012.pdf

2012 and sent to EAC, raising issues concerning riverine fisheries in functioning of the EAC and suggesting specific measures to improve the same. The chairman of the EAC wrote back to SANDRP that this will be discussed in the next meeting of EAC, but there was no mention of it in the minutes of the EAC, nor any concrete action taken by the EAC after that. Earlier in November 2012, SANDRP had organized a side event on issues related to riverine biodiversity in India at the Hyderabad Conference of Parties of Convention on Biodiversity. Considering the importance of the issue for the functioning of the EAC, we had invited the members, including the Chairman and member secretary for the side event. No one came.

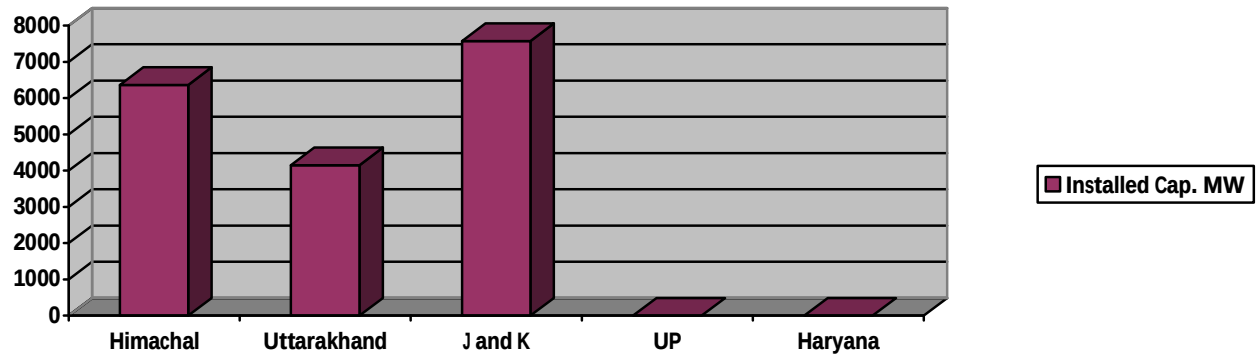


Figure 6 Overview of State-wise installed capacities of HEPs considered by EAC in North India

No appreciation of Cumulative Impacts It has not mattered to the committee that there has been no Cumulative Impact Assessment (CIA) when large number and bumper to bumper hydropower projects are proposed on number rivers including Bhagirathi, Alaknanda, Mandakini, Sutlej, Ravi, Beas, Chenab, Teesta, Lohit, Tawang, Siang, Subansiri, Narmada, to name only a few. It does not matter to them that there is no flowing river between two projects, it has recommended clearance to Luhri HEP most recently with zero flowing river length with both immediately upstream (Rampur HEP) and immediate downstream (Kol dam) projects.

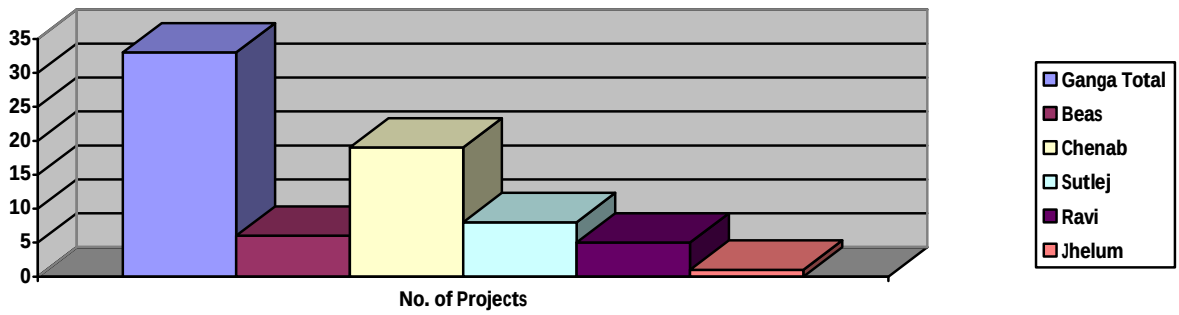


Figure 7 Basin-wise overview of number of Hydro Projects considered by EAC in North India

Even in few cases that the EAC has asked for CIA, it has asked the CIA to be done by an agency like WAPCOS Ltd that has an abysmally poor track record in doing such studies and it has serious issues of conflict of interests since the agency is also involved in feasibility studies and detailed project reports as part of its business model. But EAC has never understood these concerns. Nor has the EAC really bothered to look at the quality of the CIA. Most significantly, the EAC refused to wait for the CIA report of a basin before considering individual projects in such basins, showing its complete lack of understanding of the importance of CIA.

Section 9 of the Form I (the developer is supposed to apply for stage I clearance with this form duly filled in, as per Para 6 of the notification)) prescribed in Annexure 1 of the EIA notification of Sept 2006 is supposed to be about "Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality". Section 9.4 under this reads: "Have cumulative effects due to proximity to other existing or planned projects with similar effects". So even legally the EAC and MoEF are supposed to look at the cumulative impact assessment issues under the EIA notification, both at scoping at appraisal stage, which they are clearly not doing.

Here it may be noted that recommending Environment clearance without first undertaking carrying capacity and cumulative impact assessment is in violation of Supreme Court order in "Karnataka Industrial Areas ... vs Sri C. Kenchappa & Ors on 12 May, 2006" which has said:
A. "The pollution created as a consequence of environment must be commensurate with the carrying capacity of our ecosystem. In any case, in view of the precautionary principle, the environmental measures must anticipate, prevent and attack the causes of environmental degradation."
B. "…the preventive measures have to be taken keeping in view the carrying capacity of the ecosystem operating in the environmental surroundings under consideration."
C. "The pollution created as a consequence of development must not exceed the carrying capacity of ecosystem."

Without knowing carrying capacity of a basin it cannot be ascertained if the proposed project is "commensurate with the carrying capacity of our ecosystem", ecosystem in this context is the river basin.

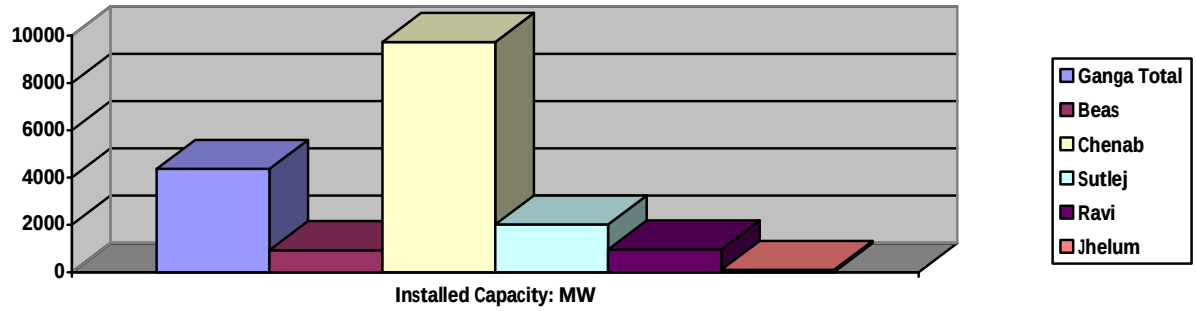


Figure 8 Overview of Basin-wise installed capacity of HEPs that EAC considered in North India

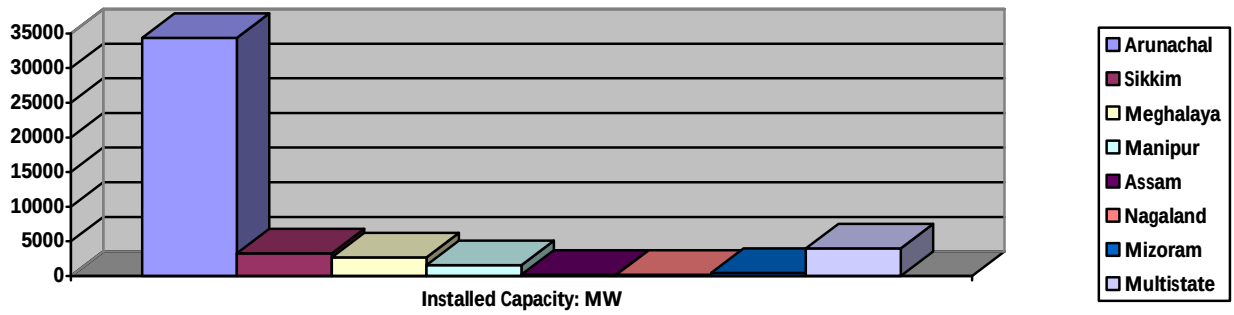


Figure 9 State wise overview of installed capacity of HEPs considered by EAC in North East India

EAC's double standards While EAC itself has not rejected any of the proposals that came to it, few, rare environment friendly recommendations that have been made by other committees have also been rejected by the EAC, without any convincing reasons. To illustrate, when the carrying capacity study of the Teesta basin recommended that no projects should be taken upstream of Chungthang in North Sikkim, the EAC in

its meeting overturned this decision and decided to consider all such projects. Similarly, the recommendations of the Ganga Basin Cumulative Impact Assessment study by the Wildlife Institute of India, suggesting that at least 24 hydro projects proposed in Ganga basin be dropped and much higher environment flows than those directed by EAC should be mandated, were all rejected by the EAC.

The recommendations of the Western Ghats Ecology Panel headed by Prof Madhav Gadgil were also rejected on grounds such as inadequate studies. Overturning the recommendations of the WG Ecology Panel report, the EAC recommended clearance to the controversial Gundia hydropower project in Western Ghats in Karnataka. If the standards applied by the EAC while rejecting the recommendations of all these committees were to be applied to the EIAs and CIAs based on which the EAC approved the projects, than *none* of the projects approved by the EAC would merit clearances. But the EAC has very lax standards for its own work, and for the EIAs and CIAs that favour projects, but different ones for the reports that recommend rejection of projects. This contradiction is highlighted here only for illustration of double standards of the EAC and it does not mean that the EAC decisions in rejecting any recommendations of any of these committees have any merits.

It may be noted that the previous chairman (former power secretary Shri P Abraham who chaired EAC till June 2009) had serious conflict of interest issues with he being on board of several power companies whose projects came up before the committee and the current chairman has had no back ground on environment issues. It has not mattered to the committee whether the Environment Management Plans that accompany the EIAs that it clears are implemented or not, or if there is any credible mechanism and legally empowered process in place to ensure its implementation. The EAC has not even shown concern for legal norms that the TOR clearances are valid only for two years. MoEF has recently issued a notification dated Oct 30, 2012[6] that said that project for which the proponents have not come back with the requested additional information for more than six months should be delisted. Luhri project thus should not have been considered by the MoEF from more than one legal point view. MoEF and EAC have yet to follow such notifications of the ministry.

The minutes of many of the EAC meetings make pathetic reading, if read carefully. One can find contradictions, inconsistencies, plain wrong facts being mentioned in the minutes of the EAC meetings[7], which are all approved by the EAC. Even when such errors are pointed out, the EAC has not even bothered to correct the mistakes or review its decisions.

Cleared by EAC, Rejected by others Many of the projects cleared by the EAC have faced serious road blocks for the shoddy appraisal done by the EAC. For example, the then Union Environment Minister himself decided not to clear the Renuka dam project cleared by the EAC. The Rupsiabagar Khasiabara project cleared by the EAC could not get forest clearance, for many reasons, including the fact that the EIA of the project was found to be so shoddy and wrong, that any other committee would have considered this an insult to its work. The Kotlibhel 1B and Kotlibhel 2 projects, cleared by this committee have been rejected clearances by the Forest Advisory Committee, following recommendation of the Wildlife Institute of India.

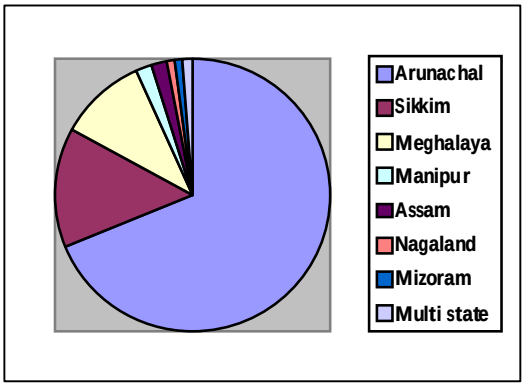


Figure 10 State wise overview of number of projects considered by EAC in North East India

Athirapally hydropower project in Chalakudy basin in Kerala was recommended Environment Clearance by the EAC for the third time (earlier two clearances were quashed by the Kerala High Court) in May 2007, but the project again came back to the EAC in March 2010, following Kerala High Court directions. Earlier on

[6] http://moef.nic.in/assets/ia-30102012.pdf
[7] SANDRP had written to EAC about the glaring errors in the minutes of the 60th and 61st meetings of the EAC, pointing out the errors in capacities, names of places and even names of river in the minutes, but the EAC neither acknowledged the letter or errors, nor bothered to correct them.

January 4, 2010, following directions from the then Union Environment Minister of State Shri Jairam Ramesh, Dr S Bhowmik, than director in MoEF, issued show cause notice under Environment Protection Act, 1986, to the developer agency, Kerala State Electricity Board, to show cause in 15 days as to why the environment clearance granted to the project should not be revoked and why the direction of closure of the project not be issued. It is not clear if the MoEF took the next step hinted in the notice. Its strange that the EAC, in which the same Dr Bhowmik was member secretary, did not mention the issuance of this notice in the EAC meetings when the EAC discussed this project between March and July 2010. There is no mention of the MoEF show cause notice in the minutes of the EAC meetings held during the period.

Several projects cleared by the EAC stand challenged in the National Green Tribunal, some of them (e.g. Renuka dam) have got a Stay Order. The World Bank too finds the EIAs based on which the EAC cleared the projects so poor that it has asked for fresh EIAs for the projects it wants to fund (e.g. Rampur and Vishnugad Pipalkoti hydropower projects).

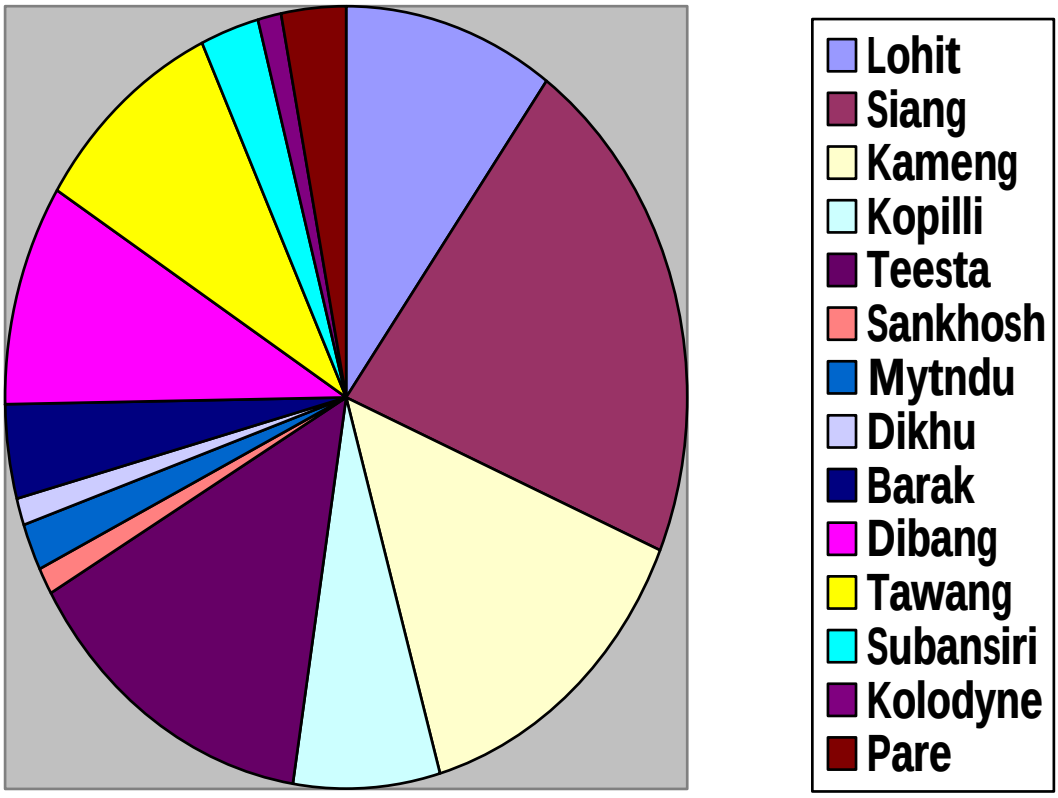


Figure 11 Basin wise overview of number of projects considered by EAC in North East India

Climate Change It is well known that the worst impacts of climate change is going to be felt in terms of impacts on water resources. It is also well known that the natural resources like the biodiversity, forests, rivers, wetlands, fertile flood plains and riverine lands are some of the important resources that would help us adapt to the climate change impacts. Hydropower and dams that the EAC considers adversely affect all of these natural resources. It is well established that large sections of people of India who depend on such natural resources are the poorest and most vulnerable to climate change impacts and when the resources that these vulnerable sections depend on are destroyed by the hydropower projects and dams that the EAC appraises, the committee would be expected to consider the climate change context. Consideration of climate change context is thus important from several angles while appraising the river valley projects. It's also well established now that past is not the best guide while estimating river water flows. Research over the last two decades have also established that reservoirs in a tropical country like India would also be source of methane and CO2 emissions, methane being about 21 times more potent in global warming terms

than CO2. In view of all this, one would have expected elaborate discussion of climate change issues in the functioning of the EAC. One would expect the EAC to mandate the EIAs and CIAs to look at these issues comprehensively.

Unfortunately, we are disappointed on every one of these counts. We find little mention of climate change issues in the work of the EAC. In fact the model Terms of Reference for the hydropower projects put up on the MoEF website[8] does not have the word "climate" in it, leave aside "climate change".

E-flows For Hydroelectric and River valley Projects which dewater and divert rivers entirely or partially and change its natural hydrograph, EAC has now[9] been arbitrarily recommending release of 20% of average lean season flow for lean months, between 20-30% e-flows (short for Environmental flow) for non-lean, non-monsoon months and 30% average monsoon flow for monsoon flows. This standard is entirely arbitrary, without any scientific, ecological or sociological basis, blanket for all rivers from Himalayan to peninsular.

This too has happened not *suo motto*, but after huge pressure from civil society and various other committees. And when the proponent says it cannot release these inadequate flows, EAC is actually ready to negotiate, which is acceptable between the EAC and the proponents (like in the case of 300 MW Alaknanda HEP by GMR Energy). Like any negotiation in a fish or vegetable market. While taking these decisions, EAC has never recommended that a more holistic and participatory method for assessing e-flows needs to be developed. Or that certain rivers needs to be left undammed. Even when other committees like the Wildlife Institute of India have recommended higher e-flows, the EAC or MoEF has refused to follow such recommendations.

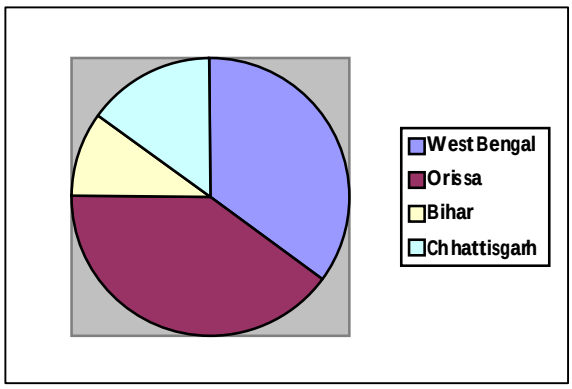


Figure 12 State wise overview of number of Projects considered by EAC in East India

Biodiversity Violating the National Biodiversity Act of 2002, EAC does not ask for Biodiversity Impact Assessment of projects, does not think twice while recommending clearances to projects affecting severely threatened, endemic and endangered biodiversity and RET (Rare Endangered Threatened) species. This has had disastrous impacts for critically endangered fauna like Black Necked Cranes, Red Pandas (780 MW Nyamjangchu HEP), Several endemic species including Gundia Indian Frog (200 MW Gundia HEP), Snow Leopard (Projects in Upper Ganga including 300 MW Alaknanda HEP), Gangetic Dolphin (Upper Ganga and Brahmaputra Projects), Bengal Florican (1750 MW Lower Demwe Project), Fish like Golden Mahseer, Snow Trout (most dams in Himalayas and North East) to name a very few.

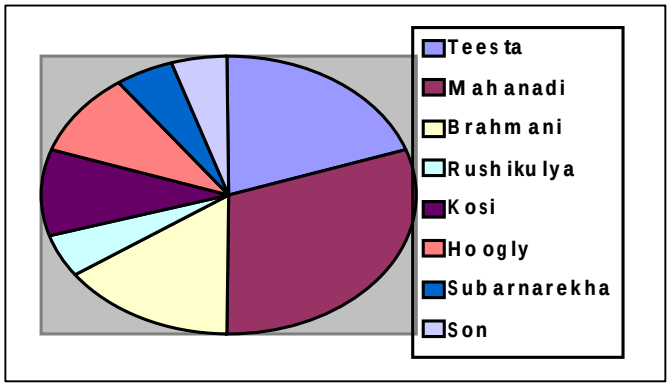


Figure 13 Basin wise overview of number of projects considered by EAC in East India

Even while noting in the 56th meeting of EAC, while discussing the 775 MW Luhri HEP on Sutlej river in Himachal Pradesh, that as per the EIA of the project, "However, 21 species are listed in the Red data book of Indian plants", the EAC does not even bother to enquire about which are these plants and why decide to sacrifice their loss. While discussing Shongtong Karcham hydropower project, the EAC noted in the minutes of the 30th meeting of EAC, "Considering the presence of 51 species of fish in the upper reaches of Sutlej, it is reported (in EIA) that only three species of fish were found in the study area". But amazingly, the EAC

[8] http://environmentclearance.nic.in/writereaddata/Form-1A/HomeLinks/Model.htm

[9] EAC has remained on rather steep learning curve on a number of issues, including on Environmental flows. It first questioned the wisdom or need for e-flows, than graduated to recommending 10% of minimum lean season flow, than 15%, later changing to 20% and now it has a little more detailed norms, still far from asking for actual assessment for each river stretch.

has no qualms in accepting such fundamentally flawed EIA. Two of these species are simply human intervention.

In case of the Rupsiabagar Khasiabara Hydro Power Project in Uttarakhand[10], the EIA report prepared by the WAPCOS to obtain Environment Clearance for the RKHPP reports presence of only 8 bird species. The EAC actually gave clearance to the project without raising any issues of the flawed EIA. The Inspection Report of the Sub-Committee of the Forest Advisory Committee to assess wildlife values and ecological impact of the project, led by Dr Ullas Karanth makes interesting reading.

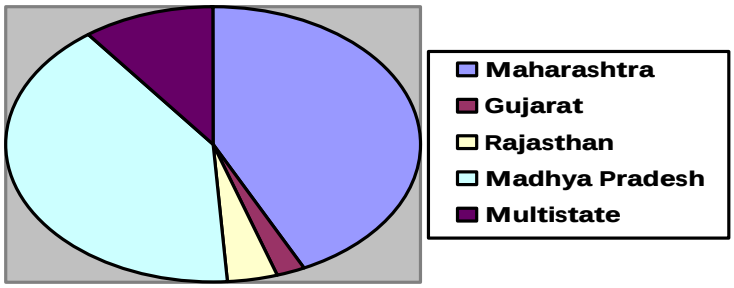


Figure 14 State wise over view of number of projects considered by EAC in West India

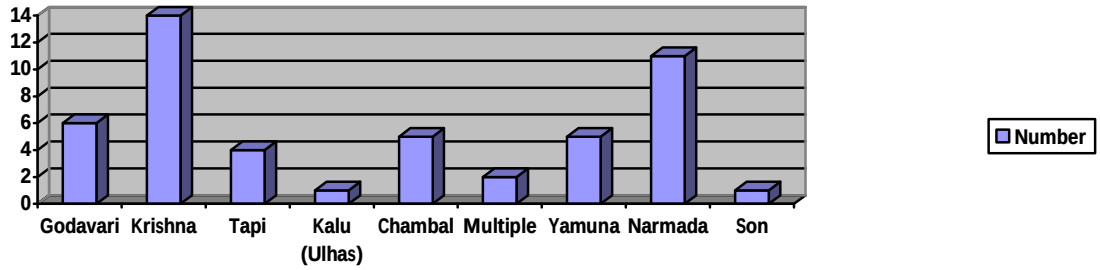


Figure 15 Basin wise overview of number of projects considered by EAC in West India

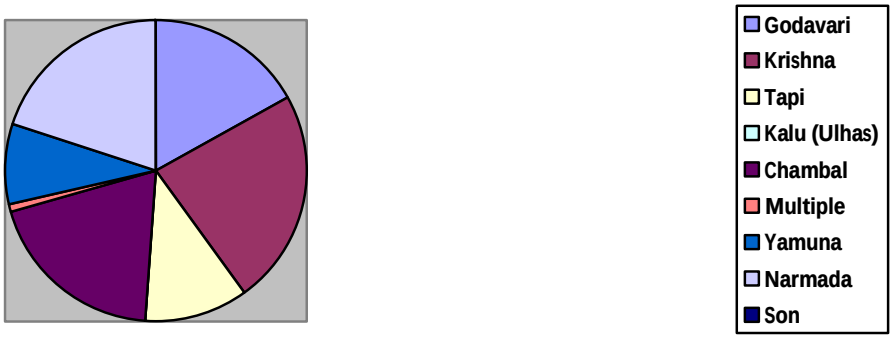


Figure 16 Basin wise overview of CCA of Irrigation Projects considered by EAC in West India

The Inspection Report noted, "However, as per the existing literature a total of 228 bird species in 30 families and 118 genera, representing more than 45% of the breeding bird diversity of the Western

[10] See for details: http://sandrp.in/hydropower/Ruspiabagar_Khasiabara_HEP_Ulhas_Karanth_Com_Report_Extracts_Nov2012.pdf

Himalaya and nearly 55% of breeding bird species of the kumaon Himalaya are recorded in the region. Ten species of pheasants are found in the area, including Himalayan monal, and the Koklass pheasant, and several other altitudinal migrants. This assemblage represents 6 out of seven West Himalayan endemics found in Kumaon." But the EAC did not even note any of these flaws of the EIA and obediently cleared the project. The project currently stands cancelled after the sub committee recommended that the project be rejected forest clearance. All this shows how little significance is of biodiversity for the EAC and MoEF.

Regional and detailed analysis These conclusions are based on analysis of the agenda and minutes of 63 meetings of EAC spread over close to six years from April 2007 to December 2012, done by South Asia Network on Dams, Rivers & People (www.sandrp.in)[11] in light of other related information and experiences. SANDRP has been monitoring the functioning of the EAC over the years, has been writing to the EAC about its concerns and also those of partner organisations about specific projects and general functioning of the EAC. This analysis is based on this experience and we hope it will be useful for all concerned.

In what follows we have given region wise status and analysis of the project wise clearances recommended by the EAC for RVP for the five regions of India, namely: North, North East, East, West and South. The tables for each region give state wise list of projects with some basic features of the projects. An overview of number of projects and their capacities is given in tables that give status wise, state wise and river basin wise figures for the projects that EAC considered in these six years.

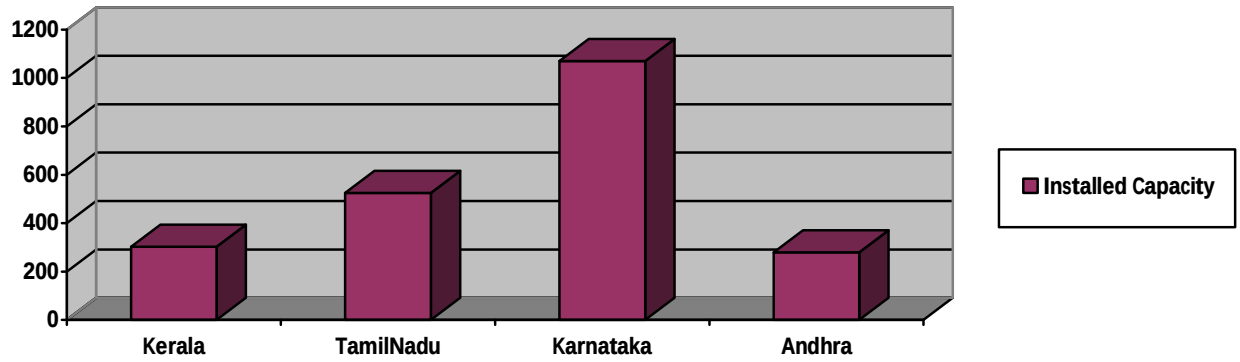


Figure 17 State wise Overview of hydropower installed capacities considered by EAC in South India

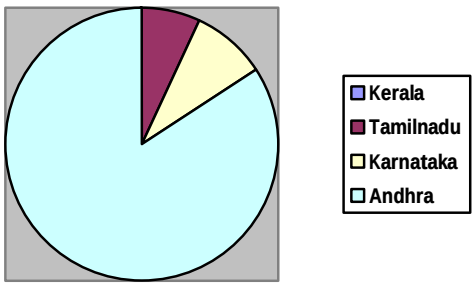


Figure 18 Overview of Irrigation Projects: Culturable Command Area (CCA) of Projects in South India

[11] Both the documents authored by Himanshu Thakkar and Bipin Chandra Chaturvedi, Bipin has done the detailed compilation for the two documents. Thanks a due to Parineeta Dandekar (for all the charts in addition to valuable comments, Dr Latha Anantha, Shripad Dharmadhikary and Neeraj Vagholikar for some very useful comments and suggestions.

In an accompanying document[12], also from SANDRP, we have given more details for each project and date-wise decisions of the EAC for each of the projects on EAC agenda. We are hopeful that these two documents will be helpful in giving clear picture about functioning of the EAC to all concerned.

We should add here that these two documents are only limited to giving a picture about functioning of the Expert Appraisal Committee on River Valley Projects. There are many other equally serious problems plaguing the environmental governance of River Valley Projects in India, they will require separate work.

[12] See: http://sandrp.in/env_governance/EAC_meetings_Decisions_All_India_Apr_2007_to_Dec_2012

NORTH INDIA

TOR & Environment Clearance status in North India

Following table gives project wise information about basic features and clearance status for the projects that came to EAC from North Indian states of Jammu and Kashmir, Haryana, Punjab, Himachal Pradesh, Uttar Pradesh, Delhi and Uttarakhand. The maximum no of projects are (34) from Himachal Pradesh among all states, Uttarakhand coming second with 25 projects. Jammu and Kashmir has less no of projects at 11, but the proposed installed capacity of the J&K projects is highest at 7573 MW. The land requirement is also highest in J&K among North India states at over 10170 Ha. Among all regions, the EAC has given the highest number of environment clearances in North India.

SN	Project	State	Basin	I/H/M	Ins Cap (MW)	CCA (Ha)	TOR	Meeting date	Env Clearance	Meeting date	Total Area Req (Ha)
Haryana											
1	Dadupur - Nalvi Irrigation Project	Haryana	Yamuna	I	-	92532	Approved	16/05/2007	Recommended	16/06/2009	NA
2	Hansi – Butana Link Channel	Haryana	Yamuna	M	-	232024	-		Waiting	19/07/2007	553.21
Himachal Pradesh (HP)											
3	Dhaulasidh HEP	HP	Beas	H	66	-	Approved	22/04/2010	Recommended	23/11/2012	NA
4	Lambadug HEP	HP	Beas	H	25	-	-		Recommended	22/08/2008	9.7914
5	Nakthan HEP	HP	Beas	H	520	-	Approved	20/12/2010	-	-	97.76
6	SAINJ HEP	HP	Beas	H	100	-	Approved	22/06/2007	Recommended	20/03/2009	56.763
7	Thana-Plaun HEP	HP	Beas	H	141	-	Approved	7/9/2012	-	-	497
8	Triveni Mahadev	HP	Beas	H	78	-	Approved	7/9/2012	-	-	482
9	Chhatru HEP	HP	Chenab	H	108	-	Approved	8/5/2008	Waiting	28/04/2012	95.26
10	Dugar HEP	HP	Chenab	H	380	-	Approved	12/10/2012	-	-	NA
11	Gondhala HEP	HP	Chenab	H	144	-	Approved	16/10/2008	-	-	214
12	Gyspa HEP	HP	Chenab	H	300	-	Approved	26/03/2011	-	-	1635
13	Miyar HEP	HP	Chenab	H	120	-	Approved	25/09/2010	Recommended	12/11/2011	69.94
14	Purthi	HP	Chenab	H	300	-	Not approved	23/11/2012	-	-	72
15	Reoli–Dugli HEP	HP	Chenab	H	420	-	Approved	26/12/2012	-	-	182
16	Sach Khas HEP	HP	Chenab	H	267	-	Approved	24/11/2012	-	-	102.48
17	Seli HEP	HP	Chenab	H	400	-	Approved	19/02/2012	Recommended	1/6/2012	292.9654
18	Telling HEP	HP	Chenab	H	94	-	Approved	23/11/2012	-	-	83
19	Bajoli Holi	HP	Ravi	H	180	-	Approved	16/01/2008	Recommended	21/12/2010	85.7
20	Bara Bangahal HEP	HP	Ravi	H	200	-	Approved	16/12/2008	-	-	53.64
21	Chanju-I HEP	HP	Ravi	H	36	-		-	Recommended	26/02/2011	NA
22	Kutehar HEP	HP	Ravi	H	260	-	Approved	7/5/2008	Recommended	21/01/2011	85.36
23	Chango-Yangthang HEP	HP	Sutlej	H	180	-	Approved	8/9/2012	-	-	146
24	Lara Sumta	HP	Sutlej	H	104	-	Approved	12/10/2012	-	-	97.75
25	Luhri HEP	HP	Sutlej	H	775	-	Approved	18/04/2007	Recommended	24/11/2012	380
26	Shongtong-Karcham HEP	HP	Sutlej	H	402	-	Approved	16/08/2007	Recommended	18/02/2010	79.17
27	Sumte Kothang	HP	Sutlej	H	130	-	Approved	12/10/2012	-	-	110
28	Tidong -I	HP	Sutlej	H	100	-		-	Recommended	16/08/2007	46.66
29	Tidong -II	HP	Sutlej	H	60	-	Waiting	29/07/2009	-	-	164.53
30	Yangthang - Khab HEP	HP	Sutlej	H	261	-	Approved	16/06/2009	-	-	1532.6
31	Chirgaon-Majhgaon HEP	HP	Yamuna	H	60	-	Approved	24/11/2012	-	-	31.58

32	Dhamwari Sunda HEP	HP	Yamuna	H	70	-	Approved	28/07/2009	Recommended	15/07/2011	23.3025
33	Renuka Dam Project	HP	Yamuna	M	40	-	Approved	16/08/2007	Recommended	28/07/2009	1532.6
34	Rupin	HP	Yamuna	H	45	-	Approved	24/11/2012	-	-	27
Jammu & Kashmir (JK)											
35	Baglihar stage- II HEP	JK	Chenab	H	450	-	Approved	22/04/2010	Recommended	8/9/2012	NA
36	Bursar HEP	JK	Chenab	H	1500	-	Approved	2/6/2012	-	-	1665
37	Kirthai HEP	JK	Chenab	H	250	-	Approved	8/5/2008	-	-	290
38	Kirthai Stage-II HEP	JK	Chenab	H	990	-	Waiting	31/03/2012	-	-	NA
39	Kiru HEP	JK	Chenab	H	600	-	Approved	22/08/2008	-	-	295
40	Kwar HEP	JK	Chenab	H	520	-	Approved	19/02/2010	-	-	326
41	Pakal Dul HEP	JK	Chenab	H	1000	-		-	Recommended	7/1/2008	1163.898
42	Ratle HEP	JK	Chenab	H	690	-	Approved	27/12/2011	Recommended	21/07/2012	567.22
43	Sawalkote HEP	JK	Chenab	H	1200	-	Approved	3/6/2011	-	-	1099
44	New Ganderbal HEP	JK	Jhelum	M	93	-	Approved	8/5/2008	Recommended	26/12/2012	63.7
45	Ujh Multipurpose Project	JK	Ravi	M	280	32000	Waiting	13/11/2010	-	-	4700
Uttarakhand (UA)											
46	Alaknanda Hydro Power Project	UA	Alaknanda	H	300	-	-	-	Recommended	17/01/2008	83.9
47	Bowala Nand Prayag HEP	UA	Alaknanda	H	300	-	Approved	22/08/2008	-	-	64.069
48	Devsari HEP	UA	Alaknanda	H	252	-	Approved	18/03/2008	Recommended	26/12/2011	223.36
49	Jelam Tamak HEP	UA	Alaknanda	H	128	-	Approved	28/04/2012	-	-	96.27
50	Kotlibhel 1-B	UA	Alaknanda	H	320	-	-	-	Recommended	19/07/2007	550.619
51	Kotlibhel-stage II HEP	UA	Ganga	H	530	-	-	-	Recommended	19/07/2007	676.071
52	Nand Prayag Langasu	UA	Alaknanda	H	100	-	Approved	25/09/2010	-	-	79.8177
53	Phata Byung HEP	UA	Alaknanda	H	76	-	-	-	Recommended	17/01/2008	22.72
54	Rambara HEP	UA	Alaknanda	H	76	-	Waiting	16/10/2008	-	-	17.78
55	Singoli Batwari	UA	Alaknanda	H	99	-	-	-	Recommended	18/07/2007	43
56	Tamak Lata HEP	UA	Alaknanda	H	280	-	Waiting	21/01/2011	-	-	77.26
57	Bhilinagana Project	UA	Bhialangana	H	22.5	-	-	-	Recommended	26/12/2011	NA
58	Bogudiyar-Sirkari Bhyol HEP	UA	Sarda	H	170	-	Approved	14/05/2009	-	-	75
59	Mapang-Bogudiyar HEP	UA	Sarda	H	200	-	Approved	14/05/2009	-	-	70
60	Rupsiabagar Khasiabara HEP	UA	Sarda	H	260	-	-	-	Recommended	17/02/2009	32
61	Sirkari Bhyol Rupsiabagar HEP	UA	Sarda	H	210	-	Approved	29/07/2009	-	-	NA
62	Jamrani Dam Multipurpose Project	UA	Sarda	M	30	150302	-	-	Recommended	18/02/2010	529.57
63	Arakot Tiuni HEP	UA	Yamuna	H	81	-	Approved	21/01/2011	-	-	38
64	Hanol -Tiuni HEP	UA	Yamuna	H	60	-	-	-	Recommended	8/5/2008	48.982
65	Jakhol Sankhri HEP	UA	Yamuna	H	45	-	Approved	15/06/2009	-	-	24
66	Lakhwar HEP	UA	Yamuna	H	300	-	Waiting	12/11/2010	-	-	NA
67	Mori- Hanol HEP	UA	Yamuna	H	63	-	Approved	14/12/2007	-	-	45
68	Naitwar Mori HEP	UA	Yamuna	H	60	-	Approved	22/06/2007	Recommended	27/12/2011	47.05
69	Tiuni Plasu HEP	UA	Yamuna	H	66	-	Approved	17/01/2008	-	-	NA
70	Vyasi HEP	UA	Yamuna	H	120	-	-	-	Recommended	16/09/2007	135.425
Uttar Pradesh (UP)											
71	Badaun Irrigation Scheme	UP	Ganga	I	-	53,054	Approved	16/07/2008	Recommended	30/06/2010	5053
72	Arjun Sahayak Pariyojna	UP	Yamuna	I	-	57000	Approved	18/03/2008	Recommended	19/08/2009	2891

Purpose: H- Hydropower; I- Irrigation; M- Multipurpose.; NA- Not available

State-wise Overview of Projects in North India

	Projects	Ins Cap	Irrigation	Drinking water	Land Req	Land Req Info available for projects
State wise Projects	**Nos**	**MW**	**CCA (Ha)**	**MLD**	**(Ha)**	**Nos**
Total Projects	**72**	**18087.5**	**616912**	**145**	**29932.77**	**62**
HP	32	6366		--	8285.85	29
UA	25	4148.5	150302	145	2979.89	21
J&K	11	7573	32000	--	10169.82	9
UP	2	--	110054	--	7944	2
Haryana	2	--	324556	--	533.21	1

Overview of Status of clearance of projects in North India

TOR & EC Status	**Nos**	**MW**	**CCA**	MLD	**Land Req**	**Land Req Info available for projects**
TOR approved	50	12823	202586	--	21005.36	44
TOR not approved	1	300	0	--	72	1
TOR Waiting	6	1986	32000	--	4959.57	4
TOR approved before this committee	15	2978.5	382326	145	3895.85	13
Env Cl. Recommended	31	6843.5	352888	--	14793.77	27
Env Cl. Waiting	3	171	232024	--	648.47	2
Env Clearance not Recommended	0	0	0	0	0	0

Basin-wise overview of projects in North India

Projects on basins	**Nos**	**MW**	**CCA**	MLD
Bhilangana (Ganga)	1	22.5	--	--
Alaknanda (Ganga)	10	1931	--	--
Sarda (Ganga)	5	870	150302	145
Yamuna (Ganga)	15	1010	381556	--
Ramganga (Ganga)	1	0	53,054	--
Ganga	1	530	--	--
Ganga total	33	4363.5	--	--
Beas	6	930	--	--
Chenab	19	9733	--	--
Sutlej	8	2012	--	--
Ravi	5	956	32000	--
Jhelum	1	93	--	--

From the above tables it is clear that while largest number of projects from North India came from Ganga Basin at 33, the installed capacity of projects proposed in Chenab basin is highest at 9733 MW.

NORTH EAST INDIA

TOR & Environment Clearance status in North-East India

The region comprises of eight states including Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Sikkim, Tripura and Nagaland. The Highest number of projects (99) has come to EAC from the North East region, and the highest number of first stage clearances at 70 have been given by EAC from this region. Within the North East Region, by far the highest number of projects (69) have come to EAC from Arunachal Pradesh. The EAC has the highest approval % in Arunachal Pradesh, every project has been given approval. Only for the 420 MW Kameng HEP of KSK Ltd, the EAC asked the developer to come back with reformulated proposal, rest were all given approval by the EAC. Over 35000 MW of hydropower projects have come to EAC from Arunachal Pradesh alone, by far the highest in the country for any state. Maximum no of projects that came to EAC among all river basins is from Siang basin at 21, though in terms of installed capacity, the highest installed capacity has come from Lohit basin at 10250 MW, among all the sub basins in the region. It was amazing to see the EAC promptly clearing the controversial Tipaimukh project way back in 2008, but the project is yet to get forest clearance and is unlikely to be able to start work in near future.

SN	Project	State	Basin	I/H/M	Ins Cap (MW)	CCA (Ha)	TOR	Meeting date	Env Clearance	Meeting date	Land Req (Ha)
Arunachal Pradesh											
1	Amulin HEP	ARP	Dibang	H	420		Approved	30/06/2010			592.46
2	Dibang	ARP	Dibang	H	3000		Approved	29/07/2009			5827.8
3	Emini HEP	ARP	Dibang	H	500		Approved	21/08/2010			698
4	Mihundon HEP	ARP	Dibang	H	400		Approved	3/4/2011			700.42
5	Sissri HEP	ARP	Dibang	H	222		Approved	20/03/2009			900
6	Ithun-I	ARP	Dibang	H	86		Approved	26/12/2012			76
7	Attunil HEP	ARP	Dibang	H	500		Approved	16/11/2009			1021
8	Emra - II HEP	ARP	Dibang	H	390		Waiting	20/01/2010			1125
9	Etalin HEP	ARP	Dibang	H	3097		Waiting	26/12/2012			1149.85
10	Dibbin HEP	ARP	Kameng	H	130		--		Recommended	26/03/2011	162
11	Badao HEP	ARP	Kameng	H	70		Approved	7/10/2010			37.82
12	Dinchang HEP	ARP	Kameng	H	360		Approved	26/02/2011			82.13
13	Gongri	ARP	Kameng	H	144		Approved	12/04/2008	Recommended	21/07/2012	93
14	Jameri HEP	ARP	Kameng	H	50		Approved	23/11/2012			130
15	Khuitam HEP	ARP	Kameng	H	66		Approved	16/10/2008	Recommended	21/12/2010	66
16	Nafra HEP	ARP	Kameng	H	120		Approved	22/08/2008	Recommended	27/12/2011	78.45
17	Pachuk-I HEP	ARP	Kameng	H	84		Approved	27/12/2011			39.2548
18	Pachuk-II HEP	ARP	Kameng	H	60		Approved	27/12/2011			
19	Para HEP	ARP	Kameng	H	55		Approved	7/10/2010			29.97
20	Saskang Rong HEP	ARP	Kameng	H	36		Approved	8/5/2008			20
21	Talong HEP	ARP	Kameng	H	225		Approved	12/10/2012			
22	Kameng Dam HEP	ARP	Kameng	H	420		Not accepted	28/04/2012			3,764
23	Kameng-I HEP	ARP	Bhareli	H	1120		Approved	18/04/2007			969
24	Anjaw	ARP	Lohit	H	280		Approved	16/07/2011			359.12
25	Demwe HEP	ARP	Lohit	H	3000		Approved	19/07/2007			3600
26	Demwe Lower HEP	ARP	Lohit	H	1750		Approved	17/07/2008	Recommended	16/12/2009	1589.97

27	Demwe upper HEP	ARP	Lohit	H	1080		Approved	26/12/2012			967
28	Hotong HEP	ARP	Lohit	H	1250		Approved	18/07/2007	--		
29	Kalai-I HEP	ARP	Lohit	H	1450	--	Approved	18/07/2007			
30	Kalai-II HEP	ARP	Lohit	H	1200		Approved	22/10/2009			830
31	Tipang HEP	ARP	Lohit	H	45		Approved	20/03/2010			557
32	Gimliang HEP	ARP	Lohit	H	99		Waiting	12/10/2012			NA
33	Raigam HEP	ARP	Lohit	H	96		Waiting	12/10/2012			NA
34	Dardu HEP	ARP	Pare	H	60		Approved	8/9/2012			82.7
35	Par HEP	ARP	Pare	H	60		Approved	8/9/2012			28.25
36	Turu HEP	ARP	Pare	H	66		Approved	8/9/2012			29.49
37	Tato-II	ARP	Siang	H	700		--		Recommended	21/12/2010	371.49
38	Pauk HEP	ARP	Siang	H	145		Approved	17/09/2011			300
39	HEO	ARP	Siang	H	240		Approved	17/09/2011			(Combine
40	Tato-I	ARP	Siang	H	186		Approved	17/09/2011			d fig)
41	Hirit HEP	ARP	Siang	H	28		Approved	21/08/2008			120
42	Hirong HEP	ARP	Siang	H	800		Approved	15/10/2007	Waiting	23/11/2012	
43	Kangtanshiri	ARP	Siang	H	80		Approved	8/9/2012			
44	Lower Siang HEP	ARP	Siang	H	2700		Approved	23/11/2012			
45	Lower Yamne St-I	ARP	Siang	H	88		Approved	11/2/2012			128.25
46	Lower Yamne St- II	ARP	Siang	H	90		Approved	11/2/2012			105.89
47	Naying HEP	ARP	Siang	H	1000	--	Approved	22/06/2007			600
48	Phangchung HEP	ARP	Siang	H	36		Approved	18/06/2008			25.5
49	Rapum HEP	ARP	Siang	H	80		Approved	1/6/2012			40
50	Rego HEP	ARP	Siang	H	70		Approved	16/12/2008			
51	Simang-I HEP	ARP	Siang	H	67		Approved	12/10/2012			
52	Simang-II HEP	ARP	Siang	H	66		Approved	23/03/2010			85
53	Tagurshit HEP	ARP	Siang	H	74		Approved	31/03/2012			41.7
54	Yamne -I HEP	ARP	Siang	H	60		Approved	19/09/2008			400
55	Yamne -II HEP	ARP	Siang	H	96		Approved	23/11/2012			300
56	Jerong	ARP	Siang	H	90		Waiting	8/9/2012			108.35
57	Pema Shelphu	ARP	Siang	H	70		Waiting	29/07/2009			63
58	Nalo HEP	ARP	Subansiri	H	360		Approved	12/11/2011			662.94
59	Subansiri Middle	ARP	Subansiri	H	1600		Approved	12/10/2012			3180
60	Subansiri Upper	ARP	Subansiri	H	2000		Approved	22/01/2011			3155
61	Tawang HEP St-I	ARP	Tawang	H	600		--	--	Recommended	21/01/2011	305.60
62	Tawang HEP St-II	ARP	Tawang	H	800		--	--	Recommended	21/01/2011	452.6
63	Mago Chu HEP	ARP	Tawang	H	96		Approved	20/01/2010			30
64	New Melling HEP	ARP	Tawang	H	96		Approved	20/01/2010			
65	Nyamjang Chhu	ARP	Tawang	H	780		Approved	17/01/2008	Recommended	17/09/2011	254.55
66	Nyukcharong Chu	ARP	Tawang	H	96		Approved	20/01/2010			25
67	Rho HEP	ARP	Tawang	H	141		Approved	7/10/2010			35.39
68	Tsachu-I Lower	ARP	Tawang	H	69		Approved	21/07/2012			19.5

69	Tsachu-II Lower	ARP	Tawang	H	79		Approved	21/07/2012			38.89
Assam											
70	Karbi Langpi Upper St	Assam	Kopili	H	60		Waiting	21/11/2008			
71	Lower Kopili HEP	Assam	Kopili	H	150		Waiting	26/12/2012			1577
Manipur											
72	Loktak Downstream	Manipur	Barak	H	66		--		Recommended	12/10/2012	211.57
73	Tipaimukh (Multipurpose)	Manipur	Barak	H	1500		--		Recommended	19/09/2008	31,950
Meghalaya											
74	Kynshi Stage- I	Meghalaya	Barak	H	300		Approved	21/12/2010			185
75	Kynshi Stage- II	Meghalaya	Barak	H	400		Waiting	31/03/2012			4200
76	Mawhu HEP	Meghalaya	Kopili	H	120		Approved	18/04/2007			65
77	Nongkohlait HEP	Meghalaya	Kopili	H	120		Approved	14/12/2007			400
78	Umduna HEP	Meghalaya	Kopili	H	57		Approved	8/5/2008			
79	Umngi HEP	Meghalaya	Kopili	H	100		Approved	14/12/2007			495
80	Umjaut HEP	Meghalaya	Kopili	H	69		Waiting	8/5/2008			
81	Myntdu HEP	Meghalaya	Myntdu	H	42[13]		--		Recommended	17/07/2008	
82	Myntdu Leshka Stage -II	Meghalaya	Myntdu	H	280		Approved	23/03/2010			
Mizoram											
83	Kolodyne-II HEP	Mizoram	Kolodyne	H	460		Approved	27/12/2011			720
Nagaland											
84	Dikhu HEP	Nagaland	Dikhu	H	186		Approved	26/12/2012			
Sikkim											
85	Dickchu HEP	Sikkim	Teesta	H	96		--		Recommended	21/02/2008	39.07
86	Rangit –II	Sikkim	Teesta	H	66		--		Recommended	14/05/2009	64.93
87	Tashiding HEP	Sikkim	Teesta	H	97		--		Recommended	30/06/2010	17.854
88	Ting Ting	Sikkim	Teesta	H	99		--		Recommended	22/01/2011	25.4924
89	Lethang HEP	Sikkim	Teesta	H	96		Approved	20/01/2010			
90	Suntaley Tar	Sikkim	Teesta	H	40		Approved	8/9/2012			39.02
91	Teesta Stage –I	Sikkim	Teesta	H	280		Approved	18/04/2007			
92	Teesta Stage-II	Sikkim	Teesta	H	150		Waiting	23/11/2012			NA
93	Teesta Stage -III[14]	Sikkim	Teesta	H	1200		--		Recommended	4/8/2006	
94	Teesta Stage -IV	Sikkim	Teesta	H	520		Approved	14/05/2009	Waiting	23/11/2012	324
95	Chakung Chu	Sikkim	Teesta	H	90		Waiting	28/04/2012			
96	Lingza HEP	Sikkim	Teesta	H	120	--	Waiting	20/09/2007	--		
97	Panan HEP	Sikkim	Teesta	H	300		Waiting	31/03/2012			
98	Ralong	Sikkim	Teesta	H	120		Waiting	28/04/2012			
Multistate											
99	Sankosh-Teesta canal	Multistate	Sankhosh	H	4000	400000	Waiting	16/12/2008			

Purpose: H- Hydropower; I- Irrigation; M- Multipurpose.; NA- Not available

[13] Clearance sought for adding the third 42 MW unit to the existing 84 MW project.

[14] The project is listed here since it came back before the EAC in Feb 2010 as it had yet to get NBWL clearance.

State-wise Overview of Projects in North-East India

	Projects	Ins Cap	Irrigation	Land Req	Land requirement info available for projects
State wise Projects	**Nos**	**MW**	**CCA (Ha)**	**(Ha)**	**Nos**
Total Projects	**99**	**46658**	**--**	**76768.27**	**72**
ARP	69	35474	--	36454.34	56
Sikkim	14	3274	--	510.37	6
Meghalaya	9	1488	--	5345	6
Manipur	2	1566	--	32161.57	2
Assam	2	210	--	1577	1
Nagaland	1	186	--	NA	0
Mizoram	1	460	--	720	1
Multi state	1	4000	400000	NA	0

Overview of Status of clearance of projects in North East India

TOR & EC Status	Nos	MW	CCA	Land Req	Land Req Info available for projects
TOR approved	70	31541	--	31180.47	55
TOR not approved	1	420	--	3764	1
TOR Waiting	16	9301	400000	8223.2	6
TOR approved prior to this EAC	12	4940	--	33600.6	10
Env Clearance Recommended	17	8256	--	35682.58	15
Env Clearance Waiting	2	1320	--	324	1
Env Clearance rejected	0	0	0	0	0

Basin-wise overview of projects in North East India

Projects on basins	Nos	MW	CCA
Lohit	10	10250	--
Siang	21	6766	--
Kameng	14	4060	--
Kopili	7	676	--
Teesta	14	3274	--
Sankhosh	1	4000	400000
Myntdu	2	406	--
Dikhu	1	186	--
Barak	4	2266	--
Dibang	9	8615	--
Tawang	9	2757	--
Subansiri	3	3960	--
Kolodyne	1	460	--
Pare	3	186	--

EAST INDIA

TOR & Environment Clearance status in East India

The region comprises of Bihar, W Bengal, Jharkhand, Chhattisgarh and Orissa. Among all regions, the least number of projects came to EAC from Eastern region at 20. Interestingly, not one project from Jharkhand has come to the EAC in this period. However, TOR clearance given for the 16.54 lakh CCA in this region is highest among all states and total proposed CCA among all regions is second highest for the Eastern region. This highest contribution for this large CCA from the Eastern region is coming from the proposed Saptakoshi High Dam at 15 lakh Ha (of which 9.76 lakh ha is supposed to be in India), the project also has the highest proposed installed capacity (3000 MW), but that project is supposed to come up in Nepal and there is little likelihood of the project going ahead in near future.

SN	Project	State	Basin	I/H/M	Ins Cap (MW)	CCA (Ha)	TOR	Meeting date	Env Clearance	Meeting date	Total Area Req (Ha)
Bihar (BH)											
1	Dagmara Hydro Power Project	BH	Kosi	H	130	0	Approved	12/10/2012	Waiting	31/03/2012	NA
2	Saptkoshi High Dam[15]	BH	Kosi	M	3000	1500000	Approved	18/09/2008	-	-	NA
Chhattisgarh (CG)											
3	Arpa Bhaisajhar Barrage project	CG	Mahanadi	I	-	25000	Approved	26/12/2012			NA
4	Kelo Major Irrigation Project	CG	Mahanadi	I	-	22,800	-	-	Recommended	17/07/2008	NA
5	Kanhar HEP	CG	Son	H	50	0	Waiting	23/03/2010	-	-	NA
Orissa (OR)											
6	Khandohota Medium Irrigation Project	OR	Brahmani	I	-	350	Approved	19/06/2008			16.8
7	Rukura Irrigation Project	OR	Brahmani	I	-	5750	-	-	Recommended	16/10/2008	NA
8	Samakoi Irrigation Project	OR	Brahmani	I	-	9990	Approved	20/03/2009	-	-	1064.43
9	Brutang Major Irrigation Project	OR	Mahanadi	I	-	23,300			Recommended	7/9/2012	NA
10	Jeera Irrigation Project	OR	Mahanadi	I	-	4800	Approved	21/08/2010	-	-	831.5
11	Ong Dam project	OR	Mahanadi	I	-	30000			Recommended	15/11/2007	NA
12	Daha Irrigation Project	OR	Rushikulya	I	-	270			Recommended	16/10/2008	NA
13	Sindol 1- Deogaon HEP	OR	Mahanadi	H	100	0	Approved	30/04/2011	-	-	NA
West Bengal (WB)											
14	Dwarkeshwar Irrigation Project	WB	Hoogly	I	-	38,500	-	-	Recommended	17/07/2008	NA
15	Siddheswari-Noonbeel Irrigation Project`	WB	Hoogly	I	-	29,000	Waiting	21/08/2010	-	-	NA
16	Subarnarekha Barrage Project	WB	Subarnrekha	I	-	114,200	Approved	25/09/2009	-	-	5,500
17	Rammam stage-III	WB	Teesta	H	120	0	-	-	Recommended	19/09/2007	72
18	Teesta Intermediate HEP	WB	Teesta	H	144	0	Approved	16/06/2009	-	-	NA
19	Teesta Low Dam-V HEP	WB	Teesta	H	80	-	Waiting	13/10/2012	-	-	157.05
20	TLDP –I & II HEP	WB	Teesta	H	60	0	Approved	16/06/2009	-	-	NA

Purpose: H- Hydropower; I- Irrigation; M- Multipurpose.; NA- Not available

[15] The TOR clearance was only for the irrigation component in India, the main dam, barrage and headwords will all be in Nepal, which is beyond the jurisdiction of EIA notification 2006 of India.

State-wise Overview of Projects in East India

	Projects	Ins Cap	Irrigation	Land Req	Land Req Info available for projects
State wise Projects	**Nos**	**MW**	**CCA (Ha)**	**(Ha)**	**Nos**
Total Projects	**20**	**3684**	**1279960**	**16809.24**	**9**
West Bengal	7	404	181700	5729	3
Orissa	8	100	74460	1912.73	3
Bihar	2	3130	976000	7,595.35	1
Chhattisgarh	3	50	47,800	1572.105	2

Overview of Status of clearance of projects in East India

TOR & EC Status	Nos	MW	CCA	Land Req	Land Req Info available for projects
TOR approved	10	3434	1654340	15810.185	6
TOR not approved	0	0	0	0	0
TOR Waiting	3	130	29000	927.05	2
TOR approved before this committee	7	120	120620	72	1
Env Clearance Recommended	7	120	120620	72	1
Env Clerance Waiting	1	130	0	7595.35	1
Env Clearance not Recommended	0	0	0	72	1

Basin-wise overview of projects in East India

Projects on basins	Nos	MW	CCA
Teesta	4	404	0
Mahanadi	6	100	105900
Brahmani	3	0	16090
Rushikulya	1	0	270
Kosi	2	3130	1500000
Hoogly	2	0	67500
Subernrekha	1	0	114,200
Son	1	50	0

WEST INDIA

TOR & Environment Clearance status in West India

49 projects came to EAC from this region (comprising of states of Gujarat, Maharashtra, Madhya Pradesh, Rajasthan and Goa), most of them were irrigation projects, unlike the situation in North and North East India where most projects that came to EAC during the study period were hydropower projects. Out of these, land availability figures are available only for 14 projects, the least % of the total projects compared to all regions. Land availability figure for none of the 20 projects of MP is mentioned in the EAC minutes. Within the region, highest number of 21 projects came from Maharashtra and close second was Madhya Pradesh. Maharashtra incidentally has the largest number (10) of giant lift irrigation schemes coming for approval before the EAC. Two of the biggest projects came up before the EAC were from Gujarat, the Kalpsar (Gulf of Khambat Development Project) and Par Tapi River Link Project. It was strange to see the EAC clearing the Par Tapi Narmada and the Ken Betwa Phase 1 river link proposals, both for TOR clearance. Both are facing strong opposition. Stranger it is to see the EAC noting in a latter meeting that the MoEF has conveyed to NWDA that the Ken Betwa Phase I link proposal cannot be cleared due to huge submergence it will entail in the Panna Tiger Reserve. Why did the EAC not review its decision regarding the TOR clearance in that case? Parwan irrigation project in Chambal basin in Rajasthan is another project that is facing massive opposition on ground, but the EAC has recommended it for final clearance. Even more shockingly, in its meeting on Nov 20, 2008, EAC opined that the Damanganga Pinjal link (involving several massive dams) does not require any environment clearance since it is a drinking water project. Its clear from these decisions how callous has been the treatment of the EAC to such massive projects.

SN	Project	State	Basin	I/H/M	Ins Cap (MW)	CCA (Ha)	TOR	Meeting date	Env Clearance	Meeting date	Total Area Req (Ha)
Gujarat (GJ)											
1	Gulf of Khambat development project	GJ	Multiple	M	-	NA	Waiting	25/09/2010	-	-	-
Maharashtra (MH)											
2	Ajansara Barrage	MH	Godavari	I	-	30004	Approved	18/03/2008	-	-	NA
3	Dhapewada LIS-II	MH	Godavari	I	-	67,506	Approved	22/08/2008	Recommended	21/12/2010	NA
4	Upper Penganga Project Stage -II	MH	Godavari	I	-	28,600	-	-	Recommended	2/6/2011	NA
5	Upper Pravara Irrigation Project	MH	Godavari	I	-	64260	Waiting	20/09/2007	-	-	3504
6	Kanhan River Project	MH	Godavari	M	-	-	Approved	14/05/2009	Recommended	12/11/2011	1434.54
7	Malshej Ghat Pumped Storage Sch	MH	Kalu	H	600	-	Approved	22/08/2008	-	-	511.06
8	Ekrukh Lift Irrigation Scheme	MH	Krishna	I	-	25,240	Approved	17/07/2010	-	-	NA
9	Expansion of Krishna - Koyna LIS	MH	Krishna	I	-	40219	-	-	Recommended	16/06/2009	NA
10	Janai Shirsai Lift Irrigation Scheme	MH	Krishna	I	-	14080	Waiting	22/08/2008	-	-	NA
11	Jihe Kathapur Lift Irrigation	MH	Krishna	I	-	27500	-	-	Recommended	8/5/2008	218.46
12	Krishna Marathwada Irrigation Prjct	MH	Krishna	I	-	92141	Approved	16/10/2008	-	-	2819.7
13	Purander Lift irrigation	MH	Krishna	I	-	21500	Approved	15/11/2007	-	-	NA
14	Shirapur Lift Irrigation Scheme	MH	Krishna	I	-	10,000	Waiting	26/12/2012	-	-	507.43
15	Thembu Lift Irrigation Project	MH	Krishna	I	-		-	-	Recommended	19/07/2007	NA
16	Wakurde Lift Irrigation Scheme	MH	Krishna	I	-	28,035	-	-	Recommended	17/07/2010	865
17	Humbarli Pumped Storage Scheme	MH	Krishna	H	400	-	Approved	19/08/2009	-	-	NA
18	Augmnetation Project at Bhira	MH	Krishna	H	100	-	Waiting	19/07/2007	-	-	NA

19	Bodwad Parisar Sinchan Yojana	MH	Tapi	I	-	42,420	Approved	17/02/2009	Recommended	19/02/2012	1729.64
20	Kurha Badoda Islampur Upsa	MH	Tapi	I	-	14586	Approved	20/03/2009	-	-	NA
21	Lower Pedhi irrigation project	MH	Tapi	I	-	12230			Recommended	14/12/2007	2532
22	Lower Tapi LIS	MH	Tapi	I	-	54500	Approved	30/06/2010	Waiting	26/12/2012	6913.25
Madhya Pradesh (MP)											
23	Kundaliya Major Irrigation Project	MP	Chambal	M	-	-	Approved	27/12/2011	-	-	NA
24	Mohanpura Major Irrigation Project	MP	Chambal	M	-	65000	Approved	17/12/2011	-	-	NA
25	Punasa Lift Irrigation Scheme	MP	Narmada	I	-	35008	-	-	Recommended	26/05/2007	NA
26	Sip Kolar Medium Irrigation Project	MP	Narmada	I	-	6400	Approved	12/10/2012	-	-	NA
27	Upper Narmada Project	MP	Narmada	I	-	21276	Approved	18/04/2007	Recommended	19/08/2009	NA
28	Halon Irrigation Project	MP	Narmada	I	-	16782	-	-	Recommended	16/11/2009	NA
29	Integrated Raghavpur, Rosara, Basania with Bargi Multipurpose Prjt	MP	Narmada	i	-		Waiting	21/08/2010	-	-	NA
30	Bauras HEP	MP	Narmada	H	55	-	Waiting	17/07/2008	-	-	NA
31	Handia HEP	MP	Narmada	H	51	-	Waiting	15/11/2007	-	-	NA
32	Hoshangabad HEP	MP	Narmada	H	60	-	Waiting	17/07/2008	-	-	NA
33	Lower Goi irrigation project	MP	Narmada	M	-	13760	-	-	Recommended	14/12/2007	NA
34	Morand & Ganjal Complex Irrigation	MP	Narmada	M	-	58,052	Approved	21/07/2012	-	-	NA
35	Chinki Multipurpose Project	MP	Narmada	M	-	73,979	Approved	2/6/2012	-	-	NA
36	Barrage on Gopad River	MP	Son	WS	-		Approved	16/07/2011	-	-	NA
37	Bansujara Dam Project	MP	Yamuna	I	-	49,373	Approved	21/07/2012	-	-	NA
38	Ghogra Minor Irrigation Project	MP	Yamuna	I	-	1650	Approved	21/07/2012	-	-	NA
39	Lower Orr Project[16]	MP	Yamuna	I	-	44791	Waiting	26/12/2012	-	-	NA
40	Ken-Betwa River Linking Project -I	MP	Yamuna	M	-	-	Approved	21/12/2010	-	-	NA
41	Pancham Nagar Multipurpose Prjct	MP	Yamuna	M	-	-	Waiting	17/09/2011	-	-	NA
42	Bina Complex IMultipurpose Project	MP	Yamuna	M	-	-	Approved	8/5/2008	Waiting	11/2/2011	NA
Rajasthan (RJ)											
43	Kalisindh Major irrigation project	RJ	Chambal	I	-	22,000	Approved	24/11/2012	-	-	NA
44	Parwan Major Irrigation-cum-DWS	RJ	Chambal	M	-	1,31,400	-	-	Recommended	21/12/2010	NA
Multi State											
45	Lendi Major Irrigation Project	MH/AP	Godavari	I	-	-	Approved	20/09/2007	Waiting	12/11/2011	2621.42
46	Bandra Nala Project	MH/KN	Krishna	H	-	-	Approved	2/6/2012	-	-	152
47	Bhandora Nala Project	MH/KN	Krishna	H	-	-	Approved	2/6/2012	-	-	286.08
48	Pale Parmar Nalla Project	MH/KN	Krishna	H	320	-	Approved	2/6/2012	-	-	203.99
49	Par-Tapi - Narmada Link Project	MH/GJ	Multiple	M	-	188414	Approved	14/05/2009	-	-	7560

Purpose: H- Hydropower; I- Irrigation; M- Multipurpose.; NA- Not available, LIS: Lift Irrigation Scheme; DWS: Drinking Water Scheme

[16] Part of Ken Beta Link River Link project phase II

State-wise Overview of Projects in West India

	Projects	Ins Cap	Irrigation	Land Req	Land Req Info available for projects
State wise Projects	**Nos**	**MW**	**CCA (Ha)**	**(Ha)**	**Nos**
Total	49	1586	1300706	31858.57	15
MH	21	1100	572821	21035.08	10
GJ	1	--	--	NA	0
RJ	2	0	153400	NA	0
MP	20	166	386071	NA	0
Multi state	5	320	188414	10823.49	5

Overview of Status of clearance of projects in West India

TOR & EC Status	Nos	MW	CCA	Land Req	Land Req Info available for projects
TOR approved	28	1320	834041	24231.68	10
TOR not approved	0	0	0	0	0
TOR Waiting	11	266	133131	4011.43	2
TOR approved before this committee	10	0	333534	3615.46	3
Env Cl. Recommended	14	0	464736	3639.91	3
Env Cl. Waiting	3	0	54500	2594.64	2
Env Clearance not Recommended	0	0	0	0	0

Basin-wise overview of projects in West India

Projects on basins	Nos	MW	CCA
Godavari	6	0	190370
Krishna	14	1120	258715
Tapi	4	0	123736
Kalu	1	600	0
Chambal	5	0	218400
Multiple	2	0	188414
Yamuna	5	0	95814
Narmada	11	166	225257
Son	1	0	0

SOUTH INDIA

TOR & Environment Clearance status in South India

SN	Project	State	Basin	I/H/M	Ins Cap (MW)	CCA (Ha)	TOR	Meeting date	Env Clearance	Meeting date	Land Req (Ha)
Andhra Pradesh (AP)											
1	Pranahitha Chevella Sujala – Srvanthi Project	AP	Godavari	I	-	663700	Approved	16/06/2009	-	-	9810
2	Diversion from Pranahita to Sripada Sagar	AP	Godavari	I	-	548000	Waiting	14/12/2007	-	-	31424
3	Lower Penganga Irrigation Project	AP	Godavari	I	-	19,233	Approved	26/12/2012	-	-	509.261
4	Kanthanapally Sujala Sravanthi	AP	Godavari	H	280	304000	Waiting	26/03/2011	-	-	4170
5	Polavaram[17] Multipurpose Project	AP	Godavari	M	NA	NA			Waiting	17/02/2009	-
6	Dummugundem Nagarjuna Sagar tail pond link canal project	AP	Krishna	I	-	NA	Waiting	22/01/2011	-	-	-
7	Modernisation of Krishna Delta sys	AP	Krishna	I	-	529000	-	-	Recommended	14/05/2009	-
Kerala											
8	Pathrakadavu HEP	Kerala	Bharatpuzha	H	70				Waiting	16/05/2007	
9	Pambar HEP	Kerala	Cauvery	H	40		Approved	16/12/2009			45.034
10	Athirapally HEP[18]	Kerala	Chalakudy	H	163				Recommended	16/05/2007	
11	Achencovil HEP	Kerala	Pamba	H	30		Approved	21/08/2008			
Karnataka (KN)											
12	Shivasamudram Seasonal Power	KN	Cauvery	H	270	-	Approved	29/07/2009	-	-	70
13	Kali Pumped Storage Scheme	KN	Kali	H	600		Waiting	20/03/2009	-	-	
14	Singtalur Lift Irrigation Project	KN	Krishna	I	-	77,198	Approved	26/12/2012	-	-	3171
15	Sri Rameshwara Lift Irrigation Sch	KN	Krishna	I	-	13800	-	-	Recommended	16/06/2009	353.7
16	Upper Bhadra Lift Irrigation Prjct-I	KN	Krishna	I	-	107265	-	-	Recommended	22/10/2009	5245.37
17	Gundia HEP	KN	Netravathi	H	200	-	-	-	Recommended	21/07/2012	1041.64
18	Shiggaon Lift Irrigation Scheme	KN	Varada	I	-	9900	Approved	21/12/2010	-	-	775
19	Dandavathy Reservoir Project	KN	Varada	I	-	6,933	Waiting	19/02/2012	-	-	-
Tamil Nadu (TN)											
20	Moyar Ultimtae Ph-I	TN	Cauvery	H	25		Waiting	22/08/2008			
21	Kundah PPS	TN	Cauvery	H	500				Recommended	18/04/2007	130.5
22	Inter-Linking of Tambiraparani, Karumeniyar and Nambiyar Rivers	TN	Multiple	I	-	17002	Waiting	12/11/2011	-	-	653.317

Purpose: H- Hydropower; I- Irrigation; M- Multipurpose.; NA- Not available

[17] The Polavaram project got Environment Clearance in Oct 2005, however, came back to EAC for clearance of the embankments in Orissa and Chhattisgarh as these were not part of the proposal cleared by EAC. The Ministry of Environment and Forests had asked the project authority to get these components cleared and hence the embankment portion came to EAC for clearance. The EAC noted that there has been no public hearings conducted in Orissa and Chhattisgarh as required under EIA notification and asked project authorities to come back to EAC after conducting the public hearings. The project authorities have yet to comply with this requirement and hence the clearance to the project is yet to be recommended by the EAC.

[18] The Athirapally project, following directions by Kerala High Court to KSEB (the MoEF show cause notice of Jan 4, 2010 could also be a factor, but there is no mention of that in the EAC minutes), came back before EAC in March 2010 and was again discussed in April 2010 and July 2010, till when no conclusion could be reached by EAC and EAC had asked for more information and clarifications. There is no mention of the project in any of the subsequent minutes of meetings.

State-wise Overview of Projects in South India

	Projects	Ins Cap	Irrigation	Land Req	Land Req Info available for projects
State wise Projects	**Nos**	**MW**	**CCA (Ha)**	**(Ha)**	**Nos**
Total	22	2178	2296031	57398.82	13
Kerala	4	303	0	45.031	1
TN	3	525	17002	783.82	2
KN	8	1070	215096	10656.71	6
AP	7	280	2063933	45913.26	4

Overview of Status of clearance of projects in South India

TOR & EC Status	Nos	MW	CCA	Land Req	Land Req Info available for projects
TOR approved	7	340	770031	14380.30	6
TOR not approved	0	0	0	0	0
TOR Waiting	7	905	875935	36247..32	3
TOR approved before this committee	8	933	650065	6771.21	4
Env Cl. Recommended	6	863	650065	6771.21	4
Env Cl. Waiting	2	70	0	NA	0
Env Clearance not Recommended	0	0	0	0	0

Basin-wise overview of projects in South India

Projects on basins	Nos	MW	CCA
Bharatpuzha	1	70	0
Cauvery	4	835	0
Chalakudy	1	163	0
Godavari	5	280	1534933
Kali	1	600	0
Krishna	5	0	727263
Multiple	1	0	17002
Netravathi	1	200	0
Pamba	1	30	0
Varada	2	0	16833