Energie/Grand Inga : les travaux pourraient débuter en octobre 2015

Jeudi 23 mai 2013

http://www.lobservateur.cd/index.php?option=com_content&view=article&id=11399:energie grand-inga-les-travaux-pourraient-debuter-en-octobre-2015&catid=45:economie&Itemid=65

Coût total : 80 milliards de dollars, tandis que le coût d'Inga 3 et lignes associées est évalué à 14 milliards dollars américains"

La RDC a annoncé, dimanche 19 mai à Paris (France), pour 2015 le début de la construction de la plus grande centrale hydroélectrique du monde sur le fleuve Congo à Inga au Bas-Congo. Baptisé Grand Inga, ce barrage sera construit en partenariat avec l'Afrique du Sud.

Bailleurs, ministres et constructeurs étaient réunis à Paris les 17 et 18 mai pour signer le projet du plus grand barrage au monde, deux fois plus grand que celui des Trois Gorges en Chine. Un accord vient d'être signé à Paris entre l'Afrique du Sud et la République démocratique du Congo (RDC) pour lancer la construction du plus grand barrage du monde. Le Grand Inga s'ajoutera aux deux barrages Inga existants et prendra place lui aussi sur le fleuve Congo. Ce gigantesque ouvrage pourrait fournir 40% de l'électricité en Afrique.

Grand Inga aura une capacité de production de 40 000 mégawatts, capable de desservir en électricité presque la moitié de l'Afrique.

Capacité de production de 40 000 Mégawatts

D'une capacité de production de 40 000 mégawatts et d'un coût total estimé à 80 milliards de dollars, le projet Grand Inga sera d'une taille presque deux fois supérieure au barrage des Trois Gorges situé sur le fleuve Yangtsé en République

populaire de Chine et qui reste, à ce jour, le plus grand ouvrage hydroélectrique actuellement en service dans le monde.

Pour sa construction, un consortium géant réunit la RDC, l'Afrique du Sud, l'Espagne et la Chine pour le projet, sous l'égide de la Banque mondiale, la Banque africaine de développement (BAD), la Banque européenne d'investissement (BEI). L'ingénierie du projet sera assurée par EDF et GDF Suez.

Le chantier de la plus grande centrale hydroélectrique du monde. La construction d'Inga 3 pourrait débuter en octobre 2015.

La réunion était placée sous l'égide de Bruno Kapandji Kalala, ministre congolais des Ressources hydrauliques et Électricité. Celui-ci s'est réjoui que les échanges parisiens aient " permis de lever des options pour que puisse démarrer activement le développement d'Inga 3 Basse Chute. "

Des représentants de la Banque africaine de développement (BAD), de la Banque mondiale, de l'Agence française de développement (AFD) étaient présents ainsi que des dirigeants des trois groupements candidats pour le développement du projet : les chinois Sinohydro et Three Gorges Corporation, exploitants du barrage chinois des Trois Gorges, actuellement le plus important au monde ; les espagnols Actividades de Construccion y Servicios (ACS), Eurofinsa et AEE ; et les coréo-canadiens Daewoo, Posco et SNC-Lavalin.

Première phase de Grand Inga, Inga 3 Basse Chute fournira 4 800 MW. L'abandon, en février 2012, par BHP Billiton de son projet de raffinerie d'aluminium, qui devait être le principal client et partenaire financier d'Inga 3, avait influé négativement sur le projet.

Il a fallu attendre l'engagement de l'Afrique du Sud, qui prendrait 2 500 MW des 4 800 MW de la puissance de la future centrale Inga 3 Basse Chute, pour voir le projet être relancé. Un projet de traité historique avait été paraphé le 7 mars dernier entre la RDC et l'Afrique du Sud, à Lubumbashi.

Selon un communiqué de la RDC diffusé le 18 mai, le chef de cabinet au ministère de l'énergie de la République sud-africaine, Garrith Bezuidenhoudt, a déclaré que

l'Afrique du Sud avait concrétisé son engagement en provisionnant d'ores et déjà ce poste d'achat à son programme budgétaire.

Le coût de construction estimé pour Inga 3 est de 8,5 milliards de dollars. Le besoin de financement total incluant l'inflation et les frais financiers est d'environ 12 milliards. " La problématique de financement est une donnée majeure du processus de sélection. Ce sont les solutions de financement en partenariat public-privé qui vont être déterminantes pour la réalisation du projet ", a expliqué Héla Cheikhrouhou, directeur du département Energie, Environnement et Changement climatique de la BAD, dans le même communiqué.

Si la date probable du début des travaux est fixée en 2015, celle de leur fin n'a pas été précisée. Tout compte fait, il y a d'espérer que la construction du Grand Inga permettra au gouvernement congolais de desservir une grande partie de la population en courant électrique et, par ricochet, sinon de réduire les intempestifs délestages, du moins de mettre fin à ce phénomène.

Kléber Kungu

Deforestation dries up dams threatening hydropower

María Elena Hurtado

22 May 2013 | EN | ES

http://www.scidev.net/en/agriculture-and-environment/deforestation/news/deforestation-dries-up-dams-threatening-hydropower.html

[SANTIAGO] Deforestation may lead to electricity shortages in tropical rainforest regions that rely heavily on hydropower, as fewer trees mean less rainfall for hydropower generation, a study shows.

For example, if deforestation continues, one of the world's largest dam projects in Brazil will deliver around a third less energy than is currently estimated, according to the research, published in *Proceedings of the National Academy of Sciences* (*PNAS*) last week (13 May).

Researchers had presumed that cutting down trees near dams increases the flow of water and hence energy production. This is because crops and pastures that replace trees take less water from the ground and lose less moisture by evaporation.

But trees also release water vapour into the atmosphere, which turns into rain and feeds hydroelectric

power stations, and this new research suggests that wider deforestation can reduce overall rainfall and therefore energy production. This should be taken into account when planning hydropower developments in tropical regions, say the authors.

Lead author Claudia Stickler and colleagues looked at the link between trees and power generation at Brazil's Belo Monte hydropower complex, which is being built on the Xingu River, a tributary of the Amazon. It is set to be the third largest hydropower project in the world when it is completed in 2015 and is expected to supply 40 per cent of Brazil's energy needs by 2020.

They found that because of current levels of deforestation in the Amazon region, rainfall is already six to seven per cent lower than it would be with full forest cover.

"If forest loss doubles by 2050 — that is, if 40 per cent of the Amazon or Xingu river watershed has been deforested by that date — rainfall loss will reduce Belo Monte's energy production by one third over that projected," Stickler, a researcher at the Amazon Environmental Research Institute's International Program in the United States, tells *SciDev.Net.*

She says that such a degree of deforestation is plausible based on government infrastructure plans in the region.

The researchers used computer models simulating land cover, climate and the river system to examine how different deforestation scenarios would affect the regional climate and, ultimately, water flow into the Belo Monte complex. They then calculated the effect on the production of energy.

In accordance with previous studies, the researchers found that cutting down trees within the Xingu river basin increased water discharge and energy generation. But this water gain was heavily outweighed by the reduced flow of water caused by less rainfall across the entire Amazon basin.

"If deforestation continues to 40 per cent of the total Amazon River basin, even forest conservation or reforestation in the Xingu River basin will not be enough to compensate for the loss," Stickler says.

The study says the amount of rainfall in the Amazon, in Central Africa and in South-East Asia depends on regional forest cover, and that deforestation could affect the hydropower expansion plans of countries in these regions.

But Wilson Cabral de Souza Junior, an environmental economist at the Technological Institute of Aeronautics, Brazil, tells *SciDev.Net* that other regions should use the results with care, as they are based on specific data from the Amazon and Xingu basins.

Link to the full paper in *PNA*

Engineers give Missouri's infrastructure a C-

- THE ASSOCIATED PRESS
- First Posted: May 22, 2013 - 8:48 am

KANSAS CITY, Missouri — Civil engineers say Missouri's infrastructure gets only a C minus.

The regional chapters of the American Society of Civil Engineers released the letter grade Wednesday. It is part of a report card that evaluated the state's aviation, bridges, dams, drinking water, energy, inland waterways, levees, railroads, roads, schools and wastewater. Each sub-category also received a grade.

The engineers found the most faults with the state's dams and energy, giving them both D-minus grades. The report says Missouri regulates only a portion of the dams that could cause significant damage if they failed. The engineers also said more investment is needed to help shift from coal toward sustainable energy.

The state's roads earned a C. Lawmakers ended their session without approving a 1 cent state sales tax for transportation projects.

Two major dams near completion

De Hoop Dam in Limpopo is close to completion and water is now flowing into the impoundment, says Water Affairs Minister Edna Molewa.

- http://news.howzit.msn.com/two-major-dams-near-completion
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The De Hoop Dam in Limpopo is close to completion and water is now flowing into the impoundment, Water Affairs Minister Edna Molewa said on Tuesday.

"The dam is currently 17 percent full, with approximately 58.6 million cubic metres of water stored," she told reporters at Parliament, ahead of debate in the National Assembly on her department's 2013/14 budget.

The De Hoop Dam, part of the Olifants River Water Resources Development Project, will supply water mainly to the mining industry in the Steelpoort area.

Molewa said work on the first pipeline connecting the water treatment works at Steelpoort to the dam had started, "and is expected to be complete by September next year".

By July this year, certain areas around the town of Jane Furse would start to receive water from the dam.

"The pipeline to Sekuruwe in the Waterberg, and Pruissen in the Capricorn area, is also planned to start this year."

The project, which had cost government more than R4.5 billion, would benefit more than two million people in the Sekhukhune, Capricorn, and Waterberg areas, she said.

Significant progress had also been made on the Spring Grove Dam in KwaZulu-Natal.

"The first water storage... commenced in March this year," Molewa said.

Responding to a question, she said work on raising the wall of the Clanwilliam Dam in the Western Cape, which was delayed for a year, would start in August.

"We are on course; construction will start some time around August this year," she said, adding that work on changing the course of the N7 national road was currently underway.

A half century of dam building

http://thestar.com.my/news/story.asp?file=/2013/5/29/sarawak/13168983

ONE of the most provocative lessons that I learned in university was that often people and ideas at extreme opposing ends tended to strive towards similar goals.

This was because of the example my lecturer used at the time. He compared communism with Nazism, saying that both strove for equality but through different means.

On the left, communists imposed strict orderliness upon everyone, thereby creating sameness; at the far-right, Nazis condoned the mass-killing of those deemed different, again, with the objective of sameness.

I was 19 when the lecturer said this and that single half-hour lesson remains one among the most important of many in my life so far. It has taught me to look at and understand situations from opposing sides, and while solutions need not always be compromised, the method matters just as much.

The “means” and the “ends” should be judged separately, so to speak.

I bring this up because, in a developing country like Malaysia, everybody wants development. The question is: How do we achieve equitable progress?

The International Hydropower Association World Congress in Kuching last week was among the most high-profile conferences Sarawak has ever hosted. Some 400 of the world's key decision makers in hydropower attended the event, which took place at the futuristic Borneo Convention Centre Kuching (BCCK).

Inside the air-conditioned, floor-to-ceiling, circular glass walls, delegates spoke of the important role that hydropower has played in the world's development. Much was said about how the energy source was pivotal in launching the development of countries like Canada and Norway — countries that rank high in terms of quality of life even above that of the UK and US, which have energy mixes that rely more on fossil fuels.

The Canadian Hydropower Association made a glaringly good case of a more global hydropower development.

Its president Jacob Irving summarised: "Hydropower should be seen as a champion in the fight against energy poverty, not just in the fight against climate change.

"Wherever there is a dam, electricity cost is lower. For instance, all the cities located in hydropower regions in North America enjoy the lowest prices.

"New technologies like electric vehicles will be even more beneficial when electricity is generated from renewables like hydropower."

But outside the BCCK, the anti-dam sentiment was just as strong. Standing in the heat since the start of the week, SAVE Rivers Sarawak and a host of other non-governmental organisations (NGOs) lashed out criticisms at the Sarawak government's plans to build more dams in the state.

SAVE Rivers Sarawak's chairman is the charismatic activist Peter Kallang, whose fiery aura can be seen throughout whether he's putting on his traditional gear or donning a sharp suit with a tie.

Peter's work has led him on international headlines, often portrayed as the man who champions the rights of the voiceless minority.

"If the Government is honestly interested in providing infrastructure including roads, schools, water and electricity (to the people), then it could have done so years ago through funding from revenues of oil and gas, palm oil and timber industries, right?" Peter told me at the end of the congress, which he participated in and raised objections several times during different talks.

"It is clear the construction of dams is mainly to supply power for energy intensive industries like aluminium smelters. Rural folk who are against the building of more dams have the right to choose their way of life and the type of development they want," he added.

Peter also vowed that there would be more protests.

"I will not apologise for the protests. People feel they have no choice because they have no voice," he told the delegates on Thursday.

Yet the activist is not at all anti-development. He proudly champions helping settled communities to have better access to education.

He is not even supportive of large one-off payments as requested by some in resettled communities.

Instead of large pay-offs, he said authorities should have long-term guidance programmes at these resettlements, and he called for effective grievance mechanisms to act upon feedback.

Peter and those of his ilk were at loggerheads with perhaps, all the speakers at the congress with whom they found little common ground. When given the chance to speak, these anti-dam activists were vehemently against the very life work of the congress organisers and participants.

I was left conflicted.

In Sarawak, the schism between what state planners have in mind and those whom they claim will benefit from the relocation is far too large.

A reporter from Singapore, who visited rural Sarawak during the recent parliamentary elections, said to me that he felt the dams were being built with the hope of achieving a “leapfrog development”. Clearly, he was expressing his reservations.

The first dam built on Borneo was the Batang Ai. Preparations began in the 1970s with the construction commencing in 1982. By 1985, the small (relatively speaking) dam fired up all four of its turbines.

Now, Sarawak has become host to Southeast Asia’s largest, the Bakun dam. The mammoth structure not only has a reservoir the size of Singapore, but its embankment at 205m high is as tall as the island nation’s top 15 skyscrapers.

Murum, another large dam, will be ready soon while preliminary studies are being done for another in Baram.

By the time the ambitious Sarawak Corridor of Renewable Energy is ready in 2030, Sarawak would have witnessed half a century of development best characterised by the dams.

But what will be the level of progress of those affected by these dams? As the better educated ones who have been enjoying more opportunities by virtue of being born in towns and cities, we must help those who are not so fortunate.

The best way for the opposing ends to converge is for activists like Peter to seek maximum benefits for rural dwellers who are being displaced, while the Government should not shut out criticisms.

After all, a government must not be afraid of its own shadow.

Assainissement financier, grands travaux, redécollage du pays : La Guinée, selon Alpha Condé !

2013/5/23

« Je n'ai hérité que d'un pays, pas d'un Etat », aime à le répéter Alpha Condé, Président de la République de Guinée. Il n'a pas tout faux. Sous Sékou Touré, la Guinée a été un Etat-policier. Sous Lansana Conté, ce fut le non-Etat. Pour le citoyen guinéen donc, l'Etat ne représente pas grand-chose. « Ils n'ont jamais été là pour nous, soit ils nous opprimaient, soit ils se servaient eux-mêmes. L'Etat c'était eux et pour eux », stigmatise les dirigeants Kameleba Sory, commerçant au quartier administratif de Kaloum. « Il fallait dans l'urgence changer les choses, restaurer l'autorité de l'Etat notamment », admet Ibrahim Kalil Kaba, rentré des Etats-Unis pour être Chef de Cabinet d'Alpha Condé.

L'Etat s'est donc appauvri au détriment de certains citoyens, des pontes du régime Conté. Pour faire simple, l'Etat s'est affaibli.

Assainissement des finances de l'Etat

Il fallait donc une impérieuse reprise en main de l'Etat, restaurer son autorité, autant dans ses prérogatives que dans ses devoirs. C'est ce que le régime Condé s'est attelé à faire dès ses premiers mois. Il s'est agi d'assainir les finances de l'Etat en combattant la gabegie, la corruption, en revoyant le système de passation des marchés publics et en inscrivant le paiement des impôts et des taxes douanières dans les habitudes des citoyens. Du coup, les recettes des deux principales régies financières (Douanes et impôts) ont doublé, sinon plus. Il fallait en outre maitriser les dépenses de l'Etat et amorcer la réforme de l'administration.

Plusieurs milliers de fonctionnaires et d'élèves ou étudiants boursiers fictifs ont été débusqués. Bien sûr, cela fait des mécontents. Dans l'élite et la classe moyenne. Comme en Côte d'Ivoire, on regrette que « l'argent ne circule pas ». Sans doute. L'Etat a repris la main. La corruption recule, l'argent facile n'est plus disponible.

Des habitudes de quelques décennies sont bousculées. Mais l'Etat croit que tout va finir par s'arranger. « Les gens vont finir par s'y faire et se faire de l'argent normalement », tempère un haut fonctionnaire du ministère délégué au Budget. Pour l'instant, ce ministère savoure son relatif succès.

L'Etat rééquilibre ses comptes, il engrange plus d'argent, recouvre de nouveaux fonds, ses dépenses sont maitrisées. Son budget est à la hausse et équilibré.

Le taux de croissance négatif à l'arrivée du Président Condé est aujourd'hui positif. Il flirte avec les 4%. Des efforts de gouvernance reconnus à leur juste valeur par les Institutions de Bretton Woods puisque la Guinée a obtenu le point d'achèvement de l'initiative PPTE.

La dette extérieure réduite, la confiance des bailleurs de fonds revenant progressivement, l'Etat entre autre commence à investir dans des projets de travaux publics. Une priorité d'autant que les infrastructures de transports déficientes et mal entretenues entravent énormément les activités de production, de commercialisation, de développement économique et social.

Pour l'Etat, il s'agit de renforcer les capacités d'entretien du réseau routier afin de sauvegarder les investissements réalisés, réhabiliter les routes nationales revêtues dégradées, construire et bitumer les routes nationales, améliorer les conditions de circulation dans Conakry et les capitales régionales (le Président compte instituer les fêtes d'indépendance tournantes pour booster le développement des régions) etc. Et tout cela à très court (courant 2013), à court (2013-2015) et moyen terme (au-delà de 2015).

Des chantiers trouvés en souffrance ont été achevés, des projets ont été entrepris et achevés, certains sont en voie de l'être et d'autres sont à l'étude (voir tableau).

Les grands travaux guinéens
Sur le terrain à Conakry notamment, les réalisations sont effectivement visibles : de nouvelles voies, de nouveaux échangeurs, des passerelles, etc. Tout comme l'extension du Port de

Conakry sur lequel des ouvriers travaillent nuit et jour. Et aussi d'autres bâtiments administratifs que l'Etat a entrepris de réhabiliter (le Palais Présidentiel) ou de construire pour être plus opérationnel.

A ce niveau d'ailleurs, l'Etat n'est pas le seul entrepreneur. Signe du retour de la confiance, de nombreux chantiers d'immeubles sont effectifs à Conakry, en l'occurrence au quartier Matoto où deux immeubles de 25 étages chacun sont en train de sortir de terre. Et également de deux hôtels cinq étoiles dans les quartiers de Camayenne et de Kaloum. C'est dire que la Guinée commence à faire rêver les investisseurs. On les voit d'ailleurs assez nombreux dans le hall des grands hôtels. Signe des temps, de nombreux Ivoiriens ont même entrepris de venir en Guinée faire des affaires.

La Guinée devient donc une destination. Elle est même devenue très fréquentable et est présente sur la scène internationale. Le Président Condé est même sollicité comme médiateur dans certaine crise comme la Guinée-Bissau.

La diplomatie guinéenne renaît de ces cendres. Samedi, plusieurs intellectuels africains se sont donné rendez-vous à Conakry pour fêter le cinquantenaire de l'Union Africaine (UA). Ahmed Sekou Touré, premier Président de Guinée, en est l'un de ses membres fondateurs. Diallo Telli, fils de Guinée, en est le premier Secrétaire général.

Alpha Condé rêve aussi de ces moments de gloire pour son pays. Et cela est possible. Son pays est sur une bonne pente. Il est cependant certain qu'il ne le restera pas longtemps sans électricité et sans eau. Parce que c'est un vrai souci à Conakry. L'eau et l'électricité sont distribuées parcimonieusement et quartier par quartier.

Une situation dont a heureusement conscience le régime Condé. Selon Mohamed Diaré, ministre délégué au Budget, 17% du budget de l'Etat sont consacrés à l'Energie.

L'Etat a en effet entrepris d'investir dans le thermique et l'Hydraulique. Il a acheté récemment 100Mw qui devrait réduire fortement le délestage dans la capitale.

Nous avons constaté la présence de ces groupes électrogènes géants dans les quartiers de Matoto et de Kaloum.

La problématique de l'Eau et de l'Electricité

Leur mise en service ne serait que question de semaines. Mais cela ne saurait suffire. C'est pourquoi, avec les chinois, le Gouvernement est en train de construire un grand barrage dans la ville de Kaleta. Et entrevoit aussi 4 micro-barrages dans différentes régions du pays.

Pour l'Eau, Mamadou Diallo, Coordinateur général de la Société des Eaux de Guinée (SEG) assure que cela ne saurait tarder. « Depuis l'arrivée du Président Condé, des projets ont été achevés, certains sont en cours, d'autres sont en attentes, nous sommes sur la bonne voie », est-il certain. Le réseau de distribution a été effectivement réhabilité et des stations de traitement d'eau modernisé. Mais le clou de tous ces travaux qui devraient faciliter la vie à Conakry est le 4ème projet Eau. Il devrait accroitre la capacité en Eau de Conakry de 340 000 m3. En province, l'Etat a misé sur un ambitieux programme d'hydraulique villageoise.

Près de 2500 forages ont été soit réhabilités soit construits. L'Etat a vraiment sorti le grand jeu pour l'Energie avec un programme d'urgence de réhabilitation. Malheureusement, les citoyens tardent à en ressentir les effets. C'est dire que l'Etat doit faire diligence en la matière. Au risque d'anéantir tous ses efforts. Mais il n'y pas que l'Eau et l'Electricité qui pourraient être les mauvais génies de Alpha Condé. Il y a la Politique.

Depuis quelques mois, la situation est tendue dans la perspective des législatives.

L'opposition conteste la date du 30 juin choisie « unilatéralement » par le Gouvernement, la liste électorale, l'opérateur de saisie, etc. Une marche de protestation a fait six morts. Le pouvoir crie à la mauvaise foi des opposants et à la manipulation de jeunes gens.

A leur demande, la communauté internationale a choisi un facilitateur. Saïd Djinnit réside à Conakry depuis plusieurs semaines. Les compromis sont minces. Condé a cependant donné un

signe d'apaisement à l'opposition samedi.

« A l' occasion du 50ème anniversaire de l'Union africaine (UA) et afin de célébrer les valeurs fondamentales de réconciliation et d'unité, le Président Alpha Condé a demandé à monsieur le Ministre d'Etat chargé de la Justice de libérer les personnes détenues lors de la marche de l'opposition. La grâce accordée s'inscrit dans la politique de pardon, d'apaisement et de rassemblement prônée par le Gouvernement et la Société civile. La journée du Lundi 20 Mai 2013 sera consacrée à une concertation entre le facilitateur, la CENI, les partis politiques et les experts afin que tout le monde soit situé sur les dispositions prises pour la transparence et la sécurisation du processus électoral », peut-on lire dans le communiqué du Porte-parole du Gouvernement.

Le Gouvernement maintient néanmoins la date du 30 juin. L'opposition entend boycotter le scrutin. Cela promet des lendemains difficiles. De quoi enrhumer toutes les reformes du Président Condé. Moins de raideur chez chacun des ces acteurs politiques serait salutaire pour cette Guinée en redécollage certain.

In Le Patriote (CI) –Factuguinee.com

Source of life running out: water scientists

Source : Press Trust of India
published on : May 28, 2013 5:05:49 PM

Paris: The majority of people on Earth people will face severe water shortages within a generation or two if pollution and waste continues unabated, scientists warned at a conference in Bonn on Tuesday.

"This handicap will be self-inflicted and is, we believe entirely avoidable," read a document entitled The Bonn Declaration issued at the close of the four-day international huddle.

The conference sought to assess the evidence of Man's impact on freshwater resources, which constitute only 2.5 per cent of the total volume of water on Earth.

Currently, an estimated third of the world's seven million people has limited access to adequate fresh water, according to conference delegates.

"In the short span of one or two generations, the majority of the nine billion people on Earth will be living under the handicap of severe pressure on fresh water," said the declaration.

The nine billion mark is widely projected to be reached from about 2040.

"We are flying the red flag out of our conference here," Charles Vorosmarty, co-chairman of the Global Water System Project research body that hosted the meeting, said in a teleconference from Bonn.

"These self-inflicted wounds have long-term legacy effects that are not easy to turn around."

The declaration points out that humanity uses an area the size of South America to grow crops and another the size of Africa to raise livestock.

Two-thirds of major river deltas are sinking due to groundwater extraction, and tens of thousands

of large dams are distorting natural river flows on which ecosystems have depended for millennia.

Much damage is being done by river pollution from sewer drainage or agricultural fertiliser and pesticide use.

Already, about a billion people around the world are dependent on finite water supplies being depleted at a fast rate, said Vorosmarty, who made a plea for more financial and technical resources for research.

"We're not making the requisite commitments to creating observational networks and satellite systems that can measure the state of water," he said.

"Increasingly, we are flying blind and finding it very difficult to figure where we are and where we're going and whether the things we are doing are making a difference."

UN-Water, a coordinating body for water efforts by UN groups, says Earth has about 35 million cubic kilometres (eight million cubic miles) of fresh water -- 70 per cent of it locked up in ice and permanent snow cover.

Thirty per cent of freshwater is stored underground in groundwater, which constitutes 97 per cent of all freshwater potentially available for human use.

About 0.3 percent is found in lakes and rivers.

Experts say some 3,800 cubic kilometres of fresh water are extracted from aquatic ecosystems around the world each year, partly as a result of global warming.

Running dry: Capacity of dams at 11%

The writer has posted comments on this articleJulie MariappanJulie Mariappan, TNN | May 29, 2013, 06.03 AM IST

http://timesofindia.indiatimes.com/india/Running-dry-Capacity-of-dams-at-11/articleshow/20323008.cms

CHENNAI: The Central Water Commission, an apex body of the Union ministry of water resources, has pointed to a rather alarming situation in the country's southern region, including Tamil Nadu, Karnataka , Kerala and Andhra Pradesh. The latest study by the board shows that the reservoirs in these states now have only 11% of their total storage capacity.

This is less than last year's 18%, the commission's latest bulletin to the states said. Unless the southwest monsoon sets in early, the situation appears precarious. If Stanley reservoir in Mettur in Tamil Nadu, from which water is drawn for irrigating the state's rice belt, dipped below 19 feet, the reservoirs around Chennai can meet the city's drinking water demands only for a few weeks. The levels in other major reservoirs, including Bhavanisagar , Vaigai, Pechiparai or Sathanur dams in Tamil Nadu , are also dismal and the situation could get grimmer.

The commission said states like Punjab, Jharkhand, Odisha, West Bengal, Tripura, Gujarat,

Uttarakhand and Madhya Pradesh have better storage than last year for the corresponding period ending May 22. Besides Tamil Nadu, the states that have reservoirs with lesser storage than last year for the corresponding period include Rajasthan, Maharashtra , Uttar Pradesh, Chhattisgarh , Andhra Pradesh and Kerala. In the 30 reservoirs taken up for study, only 5.62 billion cubic metres of water was available against the total storage capacity of 51.2 billion cubic metres (one cubic metre is equal to 1000 litres of water). Officials told TOI that the average storage in these reservoirs in the last 10 years was 18%.

"Accumulation of silt in reservoirs decreases the storage capacity. The more you degrade the catchment areas, the higher the silt in reservoirs. Governments have to take a serious look at this," said Dr A Latha, director, River Research Institute, Thrissur, Kerala . With rivers going dry from last year, even a spell of rain in the coming days will not help increase the storage. "More evaporation is likely. There is an imperative need to check huge extraction of groundwater immediately, so as to prevent rapid infiltration," water expert and professor at the Madras Institute of Development Studies S Janakarajan said.

Cairo knew of planned Blue Nile diversion in advance: Govt source

Tuesday 28 May 2013 : 07:13 PM

http://news.egypt.com/english/permalink/180853.html

Cairo was notified in advance about the diversion of the Blue Nile before the move was officially announced by Ethiopia late Monday evening, an informed government official told Ahram Online.

"We had already known this; we were notified and the president knew," he said.

Ethiopia on Tuesday began diverting the course of the Blue Nile, one of the Nile River's two major tributaries, as part of a project to build a new dam.

The move, called "historic" by Ethiopian government spokesman Bereket Simon, is likely to anger downstream Egypt and Sudan, both of which fear the move will negatively affect their annual quotas on Nile water.

Ethiopia's 'Renaissance Dam' is one of four dams planned for construction along the Blue Nile, which provides Egypt with the lion's share of its annual 55 billion cubic metres of Nile water.

On Monday, Ethiopian Foreign Minister Gebre-Christos said the dam, which is currently under construction and will be able to store some 84 million cubic metres of Nile water, would be used exclusively for power generation and would not reduce Egypt's share of Nile water.

The Egyptian government source said that, during President Mohamed Morsi's visit to Addis Ababa – which ended Monday evening only hours before the announcement – there had been unsuccessful attempts to convince the Ethiopian side to delay the move.

"There were attempts [to persuade Ethiopia to postpone the move] through several diplomatic channels, both direct and indirect, and during the president's talks with senior Ethiopian officials," the source said.

"President Morsi raised the matter, but it was clear Ethiopia is determined to go ahead."

The source added that Addis Ababa was offering "reassurances" that it would be "sensitive" to Egyptian concerns and would "try to accommodate" Cairo's demand that it fill the planned dam's reservoir only gradually, so as to ensure that the effect on Egypt's annual share of Nile water would not be too abrupt.

The Ethiopian move to redirect the course of the Blue Nile is perceived by Cairo as an indication of Addis Ababa's determination to follow through with its plans, despite Egypt's objections that such plans violate international agreements that put Egypt's annual share of Nile water at 55 billion cubic metres.

Addis Ababa has repeatedly shrugged off these agreements, asserting that they deny all Nile Basin states – apart from Egypt and Sudan – any serious share of river water.

Since 1902, there have been over ten agreements regulating the distribution of Nile water, including a 1959 agreement that specified Egypt's exact share.

Most of these agreements stipulate that no dams or other irrigation projects should be built on the Nile without the prior notification of all Nile Basin states.

It is a precondition consistent with international law and with regulations adopted by the basin states of other rivers.

In 1999, Egypt agreed to join the other Nile Basin countries in a negotiation process specifically aimed at addressing the demands of the upstream countries.

During the process, Egypt issued two recommendations: firstly, to reduce water wastage, currently estimated at millions of cubic metres (some studies indicate that total wastage is more than Egypt's entire annual share); and, secondly, to streamline usage of upstream water resources, including rainwater.

In 2010, both Egypt and Sudan (before the latter was split in two) suspended their participation in the talks due to a failure to define the terms of an agreement governing the construction of irrigation projects on the Nile.

The fate of this process remains in limbo, however, with both Cairo and Khartoum insisting on the full consensus of all basin countries before any dams can be built on the river.

The dispute over Nile water began in 2009 with demands made by upstream states, including Ethiopia, to reduce Egypt's share in line with a new water-sharing treaty already signed by most upstream states.

Egypt is already suffering a water shortage and there are genuine concerns that Ethiopia's planned Renaissance Dam would aggravate an existing problem that has until now been poorly attended to.

According to Egypt's National Planning Institute, the country will likely need an additional 21 billion cubic metres of water per year by 2050 – on top of its current 55-billion-metre quota – to meet the water needs of a projected population of 150 million.

A source from the UN Development Programme suggested that Egypt's annual loss of water – due to outdated irrigation systems and poor sewage maintenance – currently stood at some 10 percent of its official annual share.

"The fact that Egyptian authorities have turned a blind eye to the loss of fertile land is an added problem, as this means that Egypt would need much more water to help with desert land reclamation," the source said.

Egypt's concerns go beyond its share of Nile water.

A source close to the three-way consultation mechanism bringing together Egypt, Sudan and Ethiopia to discuss "technical aspects and influences" of Ethiopia's planned Renaissance Dam speaks of "safety concerns" as well.

"I'm not saying the Renaissance Dam will collapse shortly after its construction, but I'm saying there are concerns that – in a few years – it could develop cracks," he said.

The three-way consultation, which has been ongoing for over a year, began its sixth session in Addis Ababa two days ago.

It should issue a comprehensive report on the issue by the end of this month or early next month.