

Reducing Lost Water Could Bring Water to Millions in Asia – Study

Singapore: Millions of people in Asia and the Pacific could have access to clean water if leaks were plugged and water utility reforms adopted, says a new study by the Asian Development Bank (ADB).

“While Asia and the Pacific is increasingly facing a major water crisis, we see unacceptable levels of water being lost through leaks and inefficiencies,” said Bindu Lohani, ADB’s Vice President for Knowledge Management and Sustainable Development. “By cutting the amount of lost water in half, 150 million people could be supplied with treated water.”

ADB estimates that 29 billion cubic meters of water is lost each year in the region – enough to fill more than 11 million Olympic-sized swimming pools – causing Asia’s water utilities to lose more than \$9 billion in revenue each year.

By examining eight of the best-performing water utilities in Asia, *Good Practices in Urban Water Management* concludes that a low rate of unaccounted for water (UFW) is critical for efficient service delivery. While current UFW levels in the region are as high as 60%, an UFW level of less than 20% is a realizable goal. In fact, it notes that Phnom Penh managed to bring its lost water rate down to just 6% in 2008.

The study identifies seven universal themes to serve as a model for replication by water utilities: corporatization for better accountability; economic sustainability; unaccounted-for-water reduction; holistic approach to manage water resources including water supply and wastewater management; staff productivity; collaborative engagement amongst government, utilities and society; and inclusive approach to addressing the needs of the urban poor.

Asian water utilities need to show innovation to provide service to low-income households, the study says, noting that each of the eight water agencies studied provided some kind of subsidy for obtaining a water connection and, in deserving cases, for the use of water as well.

The study cites Singapore as one of the models for water management which other Asian cities can learn from. The country has a low level of lost water due to leakage, a strong government commitment for water sustainability, and is pricing water to take in the full costs of delivery and management. Its water utility, PUB, is seen as a test bed for innovative technologies.

(Source: www.adb.org/news, 3rd July 2012)

China's Three Gorges Hydropower Plant Running at Full Capacity

Beijing, PennWell: The last turbine of China's 22,500 MW Three Gorges hydroelectric project has been connected to the country's grid, marking one of the final steps for the US\$50 billion project that began in 1994.

The generating unit -- No. 32 for the massive project

-- added 700 MW to the total generating capacity. Chinese officials say the output translates to 11% of the country's total supply.

The project has been a subject of controversy since its inception due to the 1.3 million residents displaced by its 600 km-long reservoir and possible geological impact. The Three Gorges project is located on the Yangtze River in Hubei province.

(Source: www.hydroworld.com, 7th June 2012)

Himalayan Mountains Buck Glacier Melt

London: Some glaciers in the Himalayas mountain range have gained a small amount of mass between 1999 and 2008, new research shows, bucking the global trend of glacial decline. The study published on Sunday in the *Nature Geoscience* journal also said the Karakoram mountain range in the Himalayas has contributed less to sea level rise than previously thought. With global average temperature rising, glaciers, ice caps and ice sheets melt and shed water, which contributes to the increase of sea levels, threatening the populations of low-lying nations and islands. The research at France's University of Grenoble estimates that the Karakoram glaciers have gained around 0.11 to 0.22 metres per year between 1999 and 2008. “Our conclusion that Karakoram glaciers had a small mass gain at the beginning of the 21st century indicates that those central/eastern glaciers are not representative of the whole (Himalayas),” the experts at the university said. The study appears to confirm earlier research that had suggested the Karakoram glaciers have not followed the global trend of glacial decline over the past three decades. The mountain range's remoteness had made it hard to confirm its behaviour. The Karakoram mountain range spans the borders between India, China and Pakistan and is covered by 19,950 square kilometres of glaciers. It is home to the second highest mountain in the world, K2.

(Source: *Daily Times, Pakistan*, 16th April 2012)

Euro Crisis Adds to Carbon Pricing and Trading Volatility

The Euro crisis, coupled with unresolved global issues over the post-2012 Kyoto framework, continues to make carbon pricing a volatile and unpredictable activity.

Demand for carbon has already reduced drastically as a result of the European sovereign debt crisis according to a new report from energy analysts GlobalData.

At the same time, the continuing failure of the international community to agree on a common goal in a post-2012 Kyoto framework has damaged private sector confidence, adding further to the lowering of carbon trading prices.

The report's conclusion is that price volatility will become a key characteristic of the carbon market in the immediate future and that forecasting prices with any degree of accuracy will become very difficult.

Taking a "pessimistic" short-term view of the carbon



market, due to the Euro/Kyoto factor, GlobalData expects prices to stay low.

The EU recession, it says, means emissions will grow less than expected, with carbon prices only recovering when the EU economy shows signs of emerging from recession. That, it concludes, "seems unlikely in the next few years".

"The over-supply of allowances will keep pulling prices down long-term," it maintains, with the proviso that global macro economic conditions will also play a role, especially if India, China and Brazil promise to meet certain emission targets by 2020.

The report Future of Emission Trade - Price Volatility will be a Key Characteristic of the Commodity also lists several other price impact factors, such as geo-climatic and energy policies, geo-politics, global economic growth, crude oil price, coal prices and normal carbon demand/supply patterns, all adding to the volatility scenario.

(Source: www.edie.net/news, 9th July 2012)

600 MW Solar Power Projects Dedicated to Nation

PTI Apr 20, 2012,

Charanka, Gujarat: Gujarat Chief Minister Narendra Modi dedicated over 600 MW of installed solar power projects to the nation and called it a major step towards meeting India's energy security.

The projects, having potential to generate 3 million units of clean energy per day, are spread over several districts. These include Asia's largest solar park with 214 MW generation capacity at Charanka village in North Gujarat district of Patan.

The park at Charanka, spread across 5,000 acres, has 500 MW of generation capacity of both solar and wind energy. Solar project developers like Alex Astral, US-based Sun Edison, Lanco Solar, Roha Dyechem and GMR Gujarat Solar Power have set up plants in the park.

While 214 MW of grid connected solar power was commissioned at Charanka by 17 national and international companies, 10 solar plants having combined generation capacity of 87.49 MW have gone on stream in Surendranagar, 8 in Kutch (85 MW) and three each in Banaskantha (55.20 MW) and Rajkot (25MW), amongst others.

State utility Gujarat Urja Vikas Nigam Ltd (GUVNL) had signed power purchase agreements (PPAs) for 968.5 MW with 85 national and international solar project developers. Of this, 605 MW was commissioned on 20 April 2012.

Speaking after dedicating the projects simultaneously from here, Modi termed it as a major step towards meeting the country's energy security. "Gujarat shall show way to rest of the world in solar energy. Despite being a power surplus state, we are spending Rs 2,000 crore annually on clean energy in our war against climate change," he said.

The Gujarat Government also announced it will shortly come out with a rooftop solar power plant policy that would enable middle income group families to generate revenue by selling surplus power. "We shall soon come out with a rooftop solar policy as our aim is to produce solar power on rooftops and fields of farmers," Modi said.

The ADB extended USD 100 million financial support to the solar park at Charanka, today announced it would give an additional USD 500 million at concessional terms to Gujarat.

US Consul General Peter Haas, addressing the gathering at Charanka, said India and America have a broad agenda for development of clean energy technology.



(Workers install solar panels...)

WKV Received an Award as "Best Supplier" for Hydropower Equipment in Chile

Wasserkraft Volk's successful work of many years was recently valued with an award in Chile. WKV was awarded as "Best supplier for hydropower equipment" from the local Chilean Hydropower association (APEMEC) at the international fair Expo - APEMEC 2012.

As a leading supplier of technology and equipment for small and medium sized hydropower plants, WKV makes a significant contribution towards sustainable future.

Both awards confirm WKV's successful and fair cooperation with its clients and the premium - quality



The award "Best Supplier"

of the hydropower equipment which WKV deliver and install all over the world. The clients from WKV, all of them members of APEMEC, selected WKV as "Best supplier" for the following reasons:

- WKV delivered the most hydropower plants,
- WKV delivered all plants on time,
- WKV reliably installed and commissioned all hydropower plants, and
- All WKV Plants are running from the beginning without any problems



Mallarauco – WKV Francis turbine

The award was handed over from the Energy Minister to WKV local agent Mr. Oswald Weinreich and WKV's Installation and Commissioning Engineer Mr. Marco Bartenschlager during the Expo – Apemec.

Parallel to this award as "Best supplier", one of the clients of WKV received an award for the "Best project" as well. The project Mallarauco (with WKV – Francis turbine) was selected as "Best Project" as an model for good cooperation with local partners, especially with the agricultural irrigation community.

Both awards confirm WKV's successful and fair cooperation with its clients and the premium quality of the hydropower equipment which WKV deliver and install all over the world.

(Source: WKV Press Release)

Rio+20 Pledges Support to Mountains for the Future We Want

(23 June 2012, Kathmandu, Nepal)

The future of mountains and mountain people received a long needed boost at the UN Conference on Sustainable Development, commonly known as Rio+20, which concluded in Rio de Janeiro, Brazil on 22 June. The Rio+20 declaration, 'Our Common Vision', adopted by Heads of State and high level representatives from around the world, gives specific recognition to the global benefits of mountain ecosystems and the vital contributions of mountain people to sustainable development. Moreover, it calls for international support for sustainable mountain development in developing countries, and encourages countries to adopt mountain-specific policies – both major steps in ensuring the future wellbeing of mountain people.



Dr. David Molden, DG, ICIMOD.

The declaration, which renews the global commitment to sustainable development and to ensuring "the promotion of an economically, socially, and environmentally sustainable future for our planet and for present and future generations", includes three paragraphs on mountains. It recognizes the global benefits derived from mountain regions as being critical for sustainable development, noting that "mountain ecosystems play a crucial role in providing water resources to a large portion of the world's population". It recognizes the vulnerability of mountain ecosystems to the adverse impacts of climate change, deforestation and forest degradation, land use change, land degradation, and natural disasters, as well as the impacts of melting mountain glaciers, on the environment and human wellbeing.

The declaration acknowledges the importance of mountains as home to poor and disadvantaged communities (including indigenous communities) and, more importantly, the role of mountain people as the true stewards of the mountain environment and ecosystem resources. It therefore encourages UN member countries to "incorporate [e] mountain-specific policies into national sustainable development strategies which could include, inter alia, poverty reduction plans and

programmes in mountain areas in developing countries". This is truly a positive step in global policy development processes for improved integration of environment and development. The call for international support for sustainable mountain development in developing countries is acknowledgement that mountain countries have been disproportionately impacted by the forces of climate and global change and that supporting the mountains to adapt to and mitigate the impacts of these changes will have global benefits.

"The three paragraphs on mountains lay out a long-term vision for a holistic approach for sustainable mountain development", said Ambassador Gyan Chandra Acharya, Nepal's Ambassador to the United Nations.

The International Centre for Integrated Mountain Development (ICIMOD) helped bring these messages forward through the long preparatory process, right up to the final days in Rio. ICIMOD's side event on 'Mountain Knowledge Solutions for Sustainable Green Economy Through an Improved Water, Food, Energy, and Environment Nexus' highlighted the need to better manage mountain natural resources as global public goods supplying water for life, food for health, and clean energy for livelihoods. ICIMOD also participated in the Mountain Pavilion – the only pavilion in Rio devoted to a global theme and not a country, which, according to Manuel Bessler, Assistant Director General of the Swiss Agency for Development and Cooperation, rightly showed that "mountains do not stop at frontiers or borders". ICIMOD organized three events in the Mountain Pavilion: a global youth forum on mountain issues, and sessions on the role of mountains in promoting sustainable green growth strategies and on women's role at the frontline of sustainable mountain development.

"The conference urged States and international agencies to take urgent holistic action to conserve mountain ecosystems and biodiversity, to protect the environment, and to eradicate poverty and inequality for sustainable mountain development", said Dr David Molden, ICIMOD Director General. Dr Keshav Man Shakya, Nepal's Minister for Environment, expressed the commitment to work together with others to promote the mountain agenda. "Human beings and mountains are inextricably linked and therefore they need to be looked at in an integrated manner, which requires coordinated efforts from all sides", he said. "We have to set in motion a new development paradigm that promotes sustainable development in an inclusive manner", said Dr Baburam Bhattarai, Prime Minister of Nepal. "Research, learning, and exchange of information and best practices to promote an interface among traditional knowledge, science and policy, capacity building, technical expertise, and innovation are critical for sustainable mountain development", the Prime Minister continued, calling for "an enhanced level of collaboration and networking among specialized regional and international institutions".

Tibet's Second-largest City Builds Leading Solar Power Base

A leading solar photovoltaic power generation base is being built in Xigaze, the second-largest city in southwest China's Tibet, to ease winter power shortages by harnessing the area's ample sunshine. A newly-operational 30-MW solar photovoltaic (PV) generation plant at a PV industrial park located about 3 km northwest of Xigaze city.

"The combined capacity of the city's PV industry has therefore reached 100-megawatts, the largest in China," said Wang, secretary of Xigaze's committee of the Communist Party of China. Xigaze, with an average 3,183 hours of annual solar radiation and at least 4.67 square km of usable wasteland, is an ideal location for building solar battery arrays, said Wang.

(Source: <http://chinatibet.people.com.cn/7789395.html>, From: Xinhua, 17th April, 2012)

Hydropower Projects should be Constructed in PPP Model

A Study undertaken by Mr. Ram Chandra Pandey, GM, Generation Dept., Nepal Electricity Authority has found that the over dependence by the Govt. of Nepal to private sector needs to be reviewed on account of their performance and limitations. Public-private participation is a must for development of hydropower owing to the lowest cost of investment on hydro projects and timely completion of the projects.

The size and nature of projects undertaken and accomplished by Private and Public sectors in Nepal also show that while the Private Sector could invest and develop more in small ROR schemes, the Public Sector could contribute more in large hydro projects including storage schemes.

A review by Mr. RC Pandey reveals that Bhutan, Bangladesh, Pakistan and India, all of them have more than 90 % contribution by Public Utility and even Sri Lanka has 86% contribution by Public Sector. The Hydropower Policy of India states, that the Public sector role will not only continue but will expand; whereas Nepal's hydropower policy gave much emphasis on the private sector. Thus Nepal's current policy which gives more emphasis to Private Sector in hydropower development needs review especially in light of its performance during the past one decade from 2002 through 2012 during which the Private Sector could add only 64 MW i.e. 21% of the power added to INPS during this period despite holding 91% of the survey and 38% of generation construction licenses.

Mr. RC Pandey has found the average cost (per kW) of project implementation in Nepal as follows:

- a) NEA owned projects (public sector): US\$ 2630
- b) NEA subsidiary (Public-private participation): US\$ 1237
- c) Private sector Projects: US\$ 1482

Even though the figures have not adjusted to the present price, and most of the projects in private sector

are small size without the economy of scale, still the picture is clear. The public - private sector completes the project in the lowest cost. Further, fund raising to this model is not difficult and the public has confidence in this sector.

From this it is clear that in future all projects need to be implemented by the PPP model. HYDRO Nepal believes that due to NEA's poor performances in Chamelia, Kulekhani- III, Trishuli A, NEA should not implement any such new medium projects. NEA should be entrusted with only large storage projects where there will be substantial resettlement required. Now onwards, Nepal should focus PPP model preferably with NEA's subsidiaries for the implementation of Hydropower projects.

ADB to Help Finance Rajasthan Solar Plant, One of Largest in India

Jodhpur, India, 24th April 2012: The Asian Development Bank (ADB) will lend \$103 million to Reliance Power Ltd. to help finance a solar plant (100MW) in Rajasthan state that will help bring the country closer to its ambitious solar power generation goals. This plant will cost \$415m and will be completed in May 2013.

The plant will be one of the largest solar plants in India, and the loan marks ADB's first-ever financing for a concentrating solar power project.

Under the Jawaharlal Nehru National Solar Mission (NSM) – an initiative unveiled by the Government of India in January 2010 – India aims to have two gigawatts of installed solar power generation capacity by 2013, 10 gigawatts by 2017, and 20 gigawatts by 2022.

Reliance Power was one of the successful bidders to develop 470 megawatts of concentrating solar power capacity under the first phase of the NSM. The plant will be located near the village of Dhursar in the Jaisalmer district of Rajasthan, 180 kilometers west of the city of Jodhpur. The site has one of the highest levels of direct sunlight in the country.

As well as ADB's loan, other bilateral agencies and local commercial lenders will provide funds. It will be the first thermal solar energy plant built by Reliance Power, a listed company of the Reliance ADA Group.

ADB is supporting the development of solar energy in developing Asia as part of its goal of promoting environmentally sustainable economic growth. Under its Asia Solar Energy Initiative, announced in May 2010, ADB aims to commission or support 3,000 MW of solar power capacity in developing member countries by May 2013.

Government Rolls up Sleeves to Build Budhi Ganga Hydro

The government is planning to develop the 22 MW Budhi Ganga hydropower project by creating a

development committee. Joint secretary of the Ministry of Energy (MOE) Anup Kumar Upadhyay said that the ministry had decided that the Budhi Ganga project would be developed by the government itself. "We will probably form a development committee under the ministry to build it," he added.

According to the MOE, the government could give the responsibility of operating and maintaining the Budhi Ganga project to the NEA after its completion.

Upadhyay said that work on the project would start from the next fiscal year. A detailed engineering design and environmental impact assessment are expected to take about two years. "Construction of the project will take some four years," said Upadhyay. "The project will come online by 2019."

According to the feasibility study conducted by the NEA, it will cost around Rs 4.60 billion to develop the project while the project will generate 162 million units of energy annually.

The Kuwait Fund has agreed to provide Rs 1.55 billion to build the project while the Saudi Fund has pledged a soft loan worth Rs 1.70 billion, according to the Department of Electricity Development (DOED).

The government has to pay an interest of 2 percent per annum on both these loans. The Kuwait Fund had previously loaned money for the Kulekhani project. "The government will invest Rs 1.36 billion," said Dilli Bahadur Singh, Chief of the DOED. Budhi Ganga will be the first hydropower project the government will be undertaking in 28 years.

(Source: The Kathmandu Post; 12th July 2012)

NEA to Buy Electricity Generated from Waste

NEA has decided to buy 3 MW of biomass energy from Balaju Biomass and Bricket Company (BBBC) and 1 MW of energy from Everest Sugar Mill, Janakpur.

NEA sources said that it would pay Rs. 8 per unit for biomass energy and Rs 8.40 per unit of energy generated by the sugar mill.

Officials said that BBBC would generate energy at Sisdol, Nuwakot where solid wastes from the Kathmandu valley are dumped. The energy produced at the dumping site will be transmitted to a substation at Balaju. "The meeting has decided to buy the energy produced from biomass for six months on a trial basis," added the member.

BBBC said that it would be able to produce some 90.82 million units of energy from biomass annually. The company had asked the NEA to sign a 25-year PPA and proposed a rate of Rs 12 per unit.

The NEA will purchase energy during peak hours in the winter from the sugar company for five years.

According to the private sector's data, the country's sugar mills have a combined potential capacity to produce 15-20 MW of energy which could be sold.