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ADB's Regional Economic Cooperation Initiative

For Whom The Bell Tolls ?

- Piyush Pant

They come in the name of removing poverty from the land, they see abundant natural resources all around and they make projects to tame and conquer them for benefiting the multinationals and pushing the indigenous people to further deprivation and penury . This is how the international financial institutions like World Bank and Asian Development Bank operate. The only change that has occurred in their mode of operation relates to the shifting of scene of action from national to regional. Asian Development Bank's Greater Mekong Sub-region Economic Cooperation (GMS) programme and South Asian Growth Quadrangle (SAGQ) programme are pointers in this direction.

The GMS programme was initiated by ADB in 1992 in the name of transforming the nature-rich Mekong region into a new frontier of Asian economic growth. Though the growth in the region was touted as something which will bring prosperity and overall development of the countries belonging to the region but the real intention of ADB's Master Plan was to mobilize the region's public and private resources, through regional economic cooperation, towards regionwide private investment. In both the programmes, the power sector was identified as the most potent source of generating profits for the private investors. If you go into the nitty-gritty of the Plan and take care to go through the adverse impacts yielded by the hydropower dams built in the participating countries, you will be convinced that GMS is not a plan for regional development, rather it is a plan for investment and trade liberalization. It can be said that the much publicised regional cooperation is, in fact, a stepping stone to economic globalisation which acts for, serves and protects the interests of the private sector. It is said that the sub-regional cooperation models of the GMS and SAGQ serve the unique opportunity for defining and entrenching the private sector's presence in key sectors such as power, water, transportation and human development. Knowing it well that most of the countries participating in GMS and SAGQ programmes do not have well-developed and efficient private sectors, naturally companies from outside the region are roped in and they have a free hand in exploiting the natural resources of these countries and rake in the mullah. Their acts of commercial rampage are facilitated by the ADB and the host governments since ADB provides risk protection to private investors by brokering the guarantee process and by providing financial and legal advice to host governments. Under this arrangement, risk protection is operationalised through a system of guarantees and counter-guarentees in which the investors usually bear the most minimum of commercial risks whereas the majority of the immediate financial and longer term economic risks are taken care of by host governments and borne by the people of the country concerned. The stark reality of the regional cooperation is that in such a framework, the rights of the investors are protected, but not the rights of the local people and communities.

And what do the local people get out of such regional economic cooperation ? Nothing but displacement, loss of livelihood sources and lands.

In fact, large hydro dams do not make economic sense. Hydro dams are out-of-date, uncompetitive and unreliable power providers. Around the world, big hydro dams along with the nuclear power stations, big coal plants are being replaced by smaller, high-efficiency combined cycle gas turbines cogeneration schemes.

In this issue of ***INFOPACK*** we have focused on ADB's Master Plans for regional economic cooperations like GMS and SAGQ.

ADB's Involvement In the Greater Mekong Sub-Region

By

NGO Forum on Guidebook Series

Bird's Eye View

The report is prepared by NGO Forum on Guidebook Series regarding the involvement of Asian Development Bank (ADB) in various development programmes like dam-buildings, highway constructions. The objective of this report is to reveal the social, economic and environmental impacts on local people inhabiting the areas where the ADB's projects are being implemented in the name of poverty reduction and improvement of living standards of the people living below the poverty line in Greater Mekong Sub-region (GMS) countries.

The 89-page report includes three topics: 1) ADB's involvement in the Greater Mekong Sub-region, 2) ADB and the Mekong Power Grid, 3) ADB's Involvement in Cambodia.

In the introduction, the report says that the ADB has been promoting regional and sub-regional cooperation since it was established in 1966, and the Bank has sponsored building of regional cooperation mechanisms in South Asia, Southeast Asia and Central Asia.

The report, under the topic "ADB's Involvement in the Greater Mekong Sub-region", refers to Greater Mekong Sub-region (GMS) countries including five countries like Burma, Laos, Thailand, Cambodia and Vietnam and the Yunnan Province of China where the Mekong River flows from its source to South China sea across Cambodia and Southern Vietnam.

The report further states that Mekong river provides food, water, transport and economic sustenance to more than 50 million people living in the basin.

The report also says that the ADB estimates that the poverty incidence of living US$1 a day in the four Mekong countries remains very high. Those living on below US$1 a day are mostly living in rural areas and are engaged in agriculture. These people actually rely on the natural resources for their livelihood. However, this dependency is becoming increasingly unsustainable due to natural resource degradation, especially harvest from forests and rivers, because of ADB's development projects.

The report further says that in 1992 the ADB initiated a comprehensive programme called " The GMS Economic Cooperation Programme" on economic cooperation among the countries of the Greater Mekong Sub-region. The goal of this programme was to promote economic and social development by strengthening economic linkages. The GMS economic programme seeks to:

1. Realize and enhance development opportunities
2. Encourage trade and investment among GMS countries.
3. Resolve or mitigate cross-border problems.
4. Meet common resource and policy needs

The report also points out that under the GMS programmes the ADB, the GMS governments and the co-financiers are investing in the 8 sectors like Energy, Environment and Natural Resources Management, Human Resource Development, Investment, Tourism, Telecommunications, Transport and Trade. Since 1992, the ADB has been pushing to build dams, roads, railways and other infrastructure in the GMS by providing loans to the GMS countries. The ADB's total assistance to loans of purely National Dimension was US$10.637 billion, as of 31st December, 2003, and US$79million in technical assistance for project preparation.

The report further says that after the success claimed by ADB on the 10-year GMS programme, the ADB had put forward a New Strategic Framework for the next 10-years of the Greater Mekong Sub-region Economic Cooperation Programme with an objective on poverty reduction.

The GMS Strategic Framework included the following strategic thrusts:

1. Strengthen infrastructure linkage with multi-sectoral approach;
2. Facilitate cross-border trade and investment;
3. Enhance private sector participation and improve its competitiveness;
4. Develop human resources and skills competencies;
5. Protect the environment and promote the sustainable use of shared natural resources.

To operationalize the GMS Strategic Framework, the ADB outlined eleven Flagship Projects aiming to link more closely the six Mekong countries and to promote cross-border trade and investment. In 2004, the ADB had set up a five-year (2004-2008) Regional Cooperation and Strategy Programme (RCSP) for the GMS countries. This programme based from the ten-year GMS Strategic Framework (2004-2015) and the ADB strategy under this RCSP is to support pro-poor and sustainable growth through followings:

1. Strengthening connectivity and facilitating cross-border movements and tourism;
2. Intigrating national markets to promote economic efficacy and private-sector development;
3. Addressing human development through health and other social, economic, and capacity-building issues associated with sub-regional linkages;
4. Environmental and shared natural resources management to help ensure sustainable development and conservation of natural resources;

The report further says that the eleven Flagship projects are supported by a three-year (2004-2006) rolling investment and technical assistance programme. The purpose of providing Technical Assistance is to:

1. Harmonize the legal and regulatory frameworks among GMS countries to creat a GMS market;
2. Support Community participation and human resources development to offset negative externalities;
3. Support the development of the private sector.

The report here points out that although the ADB heralds the GMS Programme, the 10-year Strategic Framework and the RCSP as solution for effective and rapid poverty reduction, the Non-Government Organizations (NGOs), People Organization (PO), and the Civil Society Organizations (CSOs) report that the ADB's activities in the last decade have had severe negative effects on people's livelihood and the region's environment.

Following are some of the disastrous impacts on environment and the people's livelihood, because of the construction of dams in the Mekong River.

1. Silt rich in nutrients does not find its way down stream, depriving farmers in the river basin as well as in the Tonle Sap.
2. The unseasonal flooding caused by unscheduled discharge from dams are depriving farmers to till the lands.
3. The sudden change in water climate after the discharge by dams destroys the fish and plant life and results in low fish catch among fishermen in Lower Mekong. The construction of dams also disrupts the seasonal migration patterns for fish and wildlife.
4. The construction of dams results in a low level of water and may allow saltwater to flow upstream, thereby contaminating the Mekong's fresh water and rendering the water undrinkable and unacceptable for agricultural use and also result in severe drought.
5. The control and the unscheduled releases of waters from dams resulted in deaths , and threatens the lives of people living near the banks due to flooding.

The report further tells about the involuntary resettlement and unclear

compensation. It says that many people were displaced because of the constructions of roads and dams without any consultation, assessments and proper compensation and resettlement. Farmers and indigenous people affected from the construction of dams and roads were relocated in such areas where their livelihoods are not feasible and sustainable.

The report also points out that the ADB's lack of transparency and consultation provided for affected communities on ADB's projects put the Bank's accountability into question. It says that the Bank has made no credible attempts to involve local communities, indigenous peoples, regional NGOs and other sectors of Civil Society in any of its plans, contradicting to its own guidelines on participatory development. In some cases, the Bank has been known to withhold information about the adverse effects of their projects on the environment and people's livelihood.

The report further says that the ADB's concept of liberating one-third of GMS people from US$1 a day poverty line is misleading as even US$2 a day may not be enough to free household from poverty. It says that the economic policy of ADB which says that economic integration and cooperation through enhanced cross-border trading would increase the income of ordinary people is already discredited. **As ten years after the ADB's involvement in Mekong region poverty incidence in rural areas is still very high.**

The report points out that the ADB has been leading the GMS countries through its varied programmes to be a single market towards global integration by constantly changing its policies. The aim of the ADB is to lead the GMS countries into a broader integration to Asian and global economies exposing them to further problems from trade deficits because they cannot compete against the industrialized countries. For example, Laos, Vietnam and Cambodia are already suffering from trade deficits for the last 10 years due to imbalance of trade from the industrialized countries.

Under the topic called **"ADB and the Mekong Power Grid"** the report tells about the involvement of ADB in the power sector worldwide. It says that power sector restructuring worldwide is the introduction of power trading and exchange - the buying and selling of electricity - either through bilateral or multilateral arrangements. This type of arrangements create a competitive market where retailers could buy electricity from power pool.

The report points out that in the late 1990s, the Nordic countries (Sweden, Norway, Denmark and Finland) established the Nordic pool, the first international electricity exchange allowing consumers and power producers to trade freely. In the early 1990s, anticipating a prolonged Asia-Pacific economic boom, the idea of an ASEAN (Association of South East Asian Nations) Power Grid was planned to address the anticipated upsurges in the demand of energy. The ASEAN Power Grid is a power pooling project aimed at integrating the power generating industry in the ASEAN region by linking key regional power generation sources with future large hydro dams.

The report further says that most of the loans ADB extended to electricity sub-sector have targeted (1) additional power generation capacities, (2) improvement of power transmission and distribution, or (3) increasing natural gas transmission capacity.

The report points out that behind these ADB loans to the energy sector is the Bank's energy policy which have undergone changes as per priorities. Since ADB's inception in 1966, energy has been one of the mainstays of its portfolio. Since then it had made 284 public sector loans, totaling US$19.1 billion, to the energy sector. From 1967 to 1994, ADB's total lending to energy was US$12.68 billion and TA (Technical Assistance) was US$101.3 million, from 1995 to 1999, ADB's total lending to energy was US$4.83 billion, and TA was 74.i million, from 2000 to 2001 - US$1,803 million and TA - US$253.4

million.

The report says that ADB's assistance has focused mainly on the electricity sub-sector, because it believes that electricity is the most convenient form of energy and has well development impacts. In the 1990s, the aim was to involve the private sector in energy generation and distribution.

The report further says that in 2000, ADB introduced a policy called "Energy 2000" which recommends a reorientation of the energy and aimed at promoting private sector involvement by restructuring the energy sector and creating an enabling environment for private investors. the "Energy 2000" also aimed at promoting regional cooperation by helping Developing Member Countries identify and implement export-oriented hydro power and natural gas-based generation and transmission projects.

In this connection the report says that the proposed Mekong Power Grid also known as Regional Power Interconnection and Trading Arrangements is an interconnection of various power system among countries in the Greater Mekong Sub-region to facilitate power trading towards private sector investments in the power sector.

The goal of this regional cooperation is to promote a commercially-based energy system that reliably and competitively supplies electricity to all areas of the GMS in a manner that minimizes environmental and social costs. Additional objectives of this system include enhancing power generation from sub-regional sources, rural electrification, pricing energy on a commercial but more equitable basis. According to ADB, the GMS is rich in energy sources but these are unevenly distributed. It feels that if evenly distributed, these sources can provide opportunities for expanding economy and reduce poverty.

The report further says that the regional cooperation programme of ADB for GMS consists of four major components. These are:

1. ADB seeks to interconnect various national power systems into the sub-regional grid;
2. It seeks to mobilize the private sector or invest in the power sector by improving GMS countries' policy, enabling to create a favourable climate and opportunities for the private sector to invest in the sub-regional grid, such as co-financing with Independent Power Producers (IPPs) through build, operating and transfer (BOT) schemes for power generation and transmission.
3. ADB seeks to implement a power market trading system consistent with encouraging power sector investments, including structuring power tariffs on a commercial basis.
4. ADB will develop a corps of technical personnel to run and manage the integrated power sector operations in the GMS.

The report further mentions that although the ADB tries to give rosy picture of the Mekong Power Grid in the GMS, the issues and concerns related to this project can not be overlooked. Besides all the benefits, the projects also have many negative social, economic and environmental impacts. These are:

1. The Mekong Power Grid is promoting the utilization of hydropower, and this means building of dams in Mekong River and some of its tributaries. Construction of dams threatens the ecosystem where over 80 million people get their livelihood from food, water, transport and economic sustenance.
2. Privatization and degradation of power utilities, as actively promoted by the ADB and the World Bank have been eliminating incentives for utilities to do demand-management . Privatized utilities under a deregulated environment may no longer be obliged to meet all demands of future

customers.

3. The lack of participation and transparency in the process of developing the Mekong Power grid left no room for those directly affected by the transmission lines or hydropower projects to raise their concerns.

While analyzing the project the report concludes that the Mekong Power Grid is the part of a much larger ASEAN Grid. It is the ultimate goal of Regional Power Interconnections and Power Trade Arrangements to establish an ASEAN Power pool aiming at integrating the power generating industry in the ASEAN region.

During the 22nd ASEAN Ministers on Energy Meeting on June 9, 2004, the heads of ASEAN Power Utilities reported that they are preparing a common policy for power interconnection and trade through ASEAN cooperation agreement, as well as through the possible commission of five power interconnection projects like The Laos-Thailand, The Cambodia-Thailand, The Cambodia -Vietnam, The Sumatra-Peninsular Malaysia, The Sarawak-West Kalimantan, from 2005 to 2009.

Besides all the above-mentioned factors, the report further says that the construction of the Mekong Power Grid is to supply power to Thailand and Vietnam for commercial purposes, which would benefit a Thailand electric company who will buy cheap power from Mekong countries, in the hope of selling that to the ASEAN Grid to supply power to Malaysia and Singapore. This is one reason why despite of social and environmental effects from damming of Mekong River, the ADB is still supporting the construction of dozen of dams in the Upper Mekong.

The report also says that the competitiveness will be limited to GMS labour. The GMS countries have a huge reserve of cheap labour. The private sector including local and foreign will only exploit this cheap labour.

The report further points out that in the name of helping the GMS countries eradicate poverty, the ADB interferes in the GMS countries' internal economic policies using technical assistance money. The poverty reduction objective is just sugarcoating the ADB"s destructive projects in the GMS countries. The ADB is trying to convince the GMS that infrastructure projects, such as dams, roads, highways are the measures to alleviate poverty in the region. The propagation of poverty reduction programme of ADB is to weigh down the sever negative impacts to the environments and economic displacement of the people living in the areas.

Under the topic called **"ADB's Involvement in Cambodia"**, the report tells how, despite all efforts, the ADB failed to achieve its goal to eradicate poverty in Cambodia by generating power in that country.

The report says that Cambodia is a land of paddies and forests dominated by the Mekong River and Tonle Sap Lake and is considered one of the poorest countries in the world. In rural areas about 85% of the labour force is employed in agricultural activities, including crop farming, livestock raising, fishing, and forestry. The country is dependent mostly on multilateral aid and on bilateral economic assistance. The International Financial Institutions (IFIs) that are extending loans to Cambodia are the World Bank, the International Monetary Fund (IMF), and the Asian Development Bank (ADB).

The report says that in 1999 Cambodia became a full member of the Association of South East Asian Nations (ASEAN). On July 29, 2002, the Royal Government of Cambodia established its relationship with the ADB by entering a Poverty Reduction Partnership Agreement (2002-2015). During the period of 1992 to 2002, the ADB provided loans amounting to US$675.310 million to Cambodia for 26 public sector projects from the Asian Development Fund (ADF) resources. During this period, the ADB

had also extended 29 Project Preparatory Technical Assistance or PPTAs amounting to US$14.970 million, and 68 Advisory Technical Assistance or ADTAs totaling to US$51.537 million to Cambodia.

The report further says that Cambodia's economic performance is not spectacular despite enough assistance was being provided by the ADB, rather it is still quite unstable. Cambodia's economy is heavily dependent on external assistance. Its external debt as percentage share to its GDP went up to 11.3% in 2001 and 2002 (excluding its debts to the US and Russia). But the ADB viewed Cambodia's external debt as manageable.

The report further says that Cambodia exclude itself from the social and environmental effects resulting from ADB-assisted projects like dams and energy for communication and industries, roads and highways for cross-border trading.

The report also says that the ADB's grand design of building hydropower dams will bring more harm and create exploitation to the people of the Mekong river basin. Floods in Cambodia are very common due to dam-building projects. The dam in SE San river in Vietnam had already cost Cambodian families dearly with unannounced water release claiming 39 lives. The report further says that by the end of March, 2004, the annual fish catch from Tonle Sap and the Lower Mekong Basin had gone down by 50% , increasing the prices of fish steeply. This trend of lower fish catch threatens 50% of Cambodians who are directly and indirectly dependent on Tonle Sap resources. There are around 1 million Cambodians who live in fish-dependent communities. Forty percent of the rural population of Cambodia is living in or near poverty as their livelihood is being destroyed by the dam-building projects.

The report also says that fishing conflicts are already alarming throughout Cambodia. The fishing industry remains politically charged and under poor management. Unregulated growth of fishing lots, centralized fishing policies and a surge in local population had contributed to an increase in confrontations. The expansion of private fishing lots on Tonle Sap Lake, which can produce thousands of dollars worth of fish each month, leaves limited fishing grounds for local fishing communities. People's access to fishing for subsistence living has been denied by fishing concessionaries. Despite the government's effort to crackdown on illegal fishing, these concessionaries were unchanged as they seek to maximize their income.

The report further says that while the Cambodian government is dealing with illegal logging, the Forest Concession Review report by ADB fails to recommend the cancellation of concession. It was only the ordinary people who are dependent on the forest as their source of livelihood who were driven away. The military and those who have connections with government are the people who benefit from the forest resources. Most of the forest activities are illegal.

The report also points out that the ADB is funding road projects in Cambodia, which has a number of adverse social and environmental effects on communities on Highway No1, linking Cambodia to Vietnam for cross-border trade. This highway project is expected to affect 5,920 people living in 1,184 dwellings. Unfortunately, the government of Cambodia has failed to address the affected communities' concerns in a satisfactory way. Following are some of the problems associated with the highway No I project.

1. **Lack of Communication and Information:** A survey conducted by the working group of the NGO Forum on Cambodia revealed that the government authorities made the house owners to sign an agreement to move out of their houses and receive the government's compensation without being explained and clarified about the deals.
2. **Poor Resettlement Plan:** The resettlement plan fails to provide relocation

in cases where the affected communities do not have a land title. The failure to assure resettlement for people without land titles constitutes a violation of the ADB Loan Agreement Schedule, which states that Project Affected People shall not be required to have formal legal title to the land used by them in order to be eligible for compensation.

3. **Inappropriate Compensation and Intimidation Tactics:** Case studies by NGO Forum shows that the compensation allocated by the government was substantially lower than the actual price for relocation and reconstruction of most dwellings. Most of the people had to agree to the government's compensation as they had no other alternative. The government of Cambodia used intimidation tactics to coerce people into accepting an inadequate resettlement plan.

The report further points out that there is a discrepancy between Cambodians and foreigners working on road projects. The benefits from these projects goes to foreigners through "Consulting Services", amounted to US$4,697,790.

The report also talks about the lack of Consultation and Transparency of the ADB. It says that the environmental and social impact assessment was done by the ADB without the knowledge and consultation of the local people, particularly those affected by the road construction.

At the end the report tells about the myopic view of the ADB on poverty and poverty reduction. The report says that the UNDP characterized poverty as (1) low income and consumption, (2) poor nutritional status, (3) low educational attainment, (4) less access to public services including school and health services, (5) less access to economic opportunities, (6) vulnerability to external shocks, (7) exclusion from economic, social and political processes. But the report says that according to the ADB, absolute poverty means person who is earning only US$ 1 a day. The ADB believes that the number can be reduced only by increasing daily income above 1 dollar a day, which can be attained through an increased cross-border trade between Cambodia and GMS countries. Thus, the governments have to provide an enabling environment through change in their policies and infrastructures. All the ADB projects and programmes are aimed at enhancing trade through opening up countries' economic border to spur economic activities. ADB successfully pushed Cambodia towards a market economy through loan conditionalities. The loan conditionalities were included to pressure the DMC governments to open up and liberalize their economy. The Bank is using loan conditionalities to promote macroeconomic, legal and other border policy changes.

The report points out that the ADB is moving towards more in line with the approach advocated by the World Bank and the International Monetary Fund (IMF). The ADB viewed the private sector as the engine of economic growth in Cambodia and thus its emphasis on private sector participation manifests that intention. **The report says that only few people with capital will benefit from the free trade. The entire GMS free trade area will serve as funnel for foreign goods and services and as 'tools' for foreign capitals to exploit untapped resources.**

So the report finally recommends that Cambodian people must participate in economic, social and political processes through democratic consultations for their own economic growth. It says that local communities, and all stakeholders must organize and fight for their rights against these development aggressions sponsored by ADB and other International Financial Institutions. They have to engage in constructive negotiations. The struggle should be launched at the local and global levels.

ADB's Involvement in Dam-Building

By

NGO Forum on Guidebook Series

Bird's Eye View

The report is prepared by NGO Forum on ADB Guidebook Series regarding the involvement of Asian Development Bank in dam-building. The objective of this report is to reveal the shortcomings and deficiencies of the Bank and other International Bank Institutions prevailing in the policies of implementation of their projects on dams in developing member countries (DMCs).

The 109-page report is divided into six parts including 13 tables.

Part I of the report gives an introduction containing definition, meaning and types of dams built by the Asian Development Bank in its developing member countries.

Part II gives a picture of ADB and its functions.

Part III deals with ADB's policies on dam-building and new frameworks for decision -making.

Part IV mentions about the impact and effectiveness.

Part V talks of beyond dams and alternatives.

Part VI tells about the involvement of the ADB in dam-building : past, present and future.

In the **introduction**, the report says that the word 'Dam' refers to a barrier built to block, retard, hold back or impede the flow of water - usually of river, stream or waterway for different usage either by diverting the water flow or impound the water.

Dams have been promoted as an important means of meeting needs for water and energy services. Some of its goals include creating income from export earnings, either through direct sales of electricity, or by selling cash crops or processed products from electricity-intensive industry such as aluminum refining.

The report says that there are three types of dams according to height and size - small, large and major. Large dams are of 15 meters (50ft) in height and the Major dams are of 150 meters in height. There are 500,000 dams worldwide, majority of which are of small structures, while more than 45,000 are large dams built to generate electricity , supply water, control floods and facilitate navigation. The report also says that the purpose of constructing a dam differs in terms of its intended uses. Some dams are constructed for various purposes such as irrigation and drinking water, hydropower, flood control, navigation, recreation and multi-purpose. Large dams can store large amount of water in the reservoir, which has transformed millions of dry lands of deserts into productive agricultural land. Dams also replenish the water supply of cities and towns for drinking and other uses like sanitation. A hydroelectric dam is built for generating electricity for industrial, commercial and residential consumers. Dams are also built to protect low-lying areas from flooding of water. Dams also help make inland waterways accessible to ship and barges. Operation of dam and reservoir can also attract and enhance tourism. The lake created by the reservoir became recreational parks for boating, swimming, fishing, bird-watching and nature walks.

The report says that while dam can serve many different functions, it can prove impossible to operate at maximum efficiency for each purpose. For example, irrigation, power generation, flood control and recreation may place conflicting demands on dams. A farmer who depends on a dam for irrigation wants water released from the reservoir only when crops need water during the summer season. On the other hand, an electric power company wants water released throughout the year to provide its customers with a steady source of power. Dams provide the most effective flood control when reservoir levels are relatively low. In contrast, people who use reservoirs for recreational activities prefer the water levels to be high because it makes for better

swimming and boating.

The report further says that today, dams play a major role in both human and economic development. However, there are some drawbacks like environmental degradation and community displacement caused due to construction of dams.

In part II, the report gives a picture of the Asian Development Bank (ADB) and its involvement in dam-building. The ADB is a regional multilateral development bank (MDB) established in 1966 with its headquarter in Manila, Philippines, consisting of 64 member-countries (46 from Asia and Pacific and 18 from other parts of the glob). It provides loans to its developing member countries for developing their respective economy. ADB's mission is to help its member countries reduce poverty and improve their living conditions and quality of life. ADB's Main Instruments in providing help to member countries are : Policy dialogue (conferences), loans (project lending loans), Technical assistance (preparatory, regional, and advisory assistance), Grants, Guarantees, and Equity investment.

The report further says that in 2003, ADB's total lending amounted to US$ 6.1 billion. , According to World Commission on Dams (WCDs), US$ 2 trillion had been spent on construction of 47,655 dams during the 20th century. It also says that 22,000 dams out of the total 45,000 large dams worldwide have been built in China. In Asia , India ranks next to China with 4,412 dams. Most of the 31,340 large dams in Asia were built for irrigation (63%), followed by hydropower (7%), flood control (2%) and water supply (2%) functions India, China, Turkey, Japan and Iran in Asia are among the most active dam-building countries.

The report says that rate of large dam-building peaked up in Asia during 1970 - 1980s, but slowed down in the 1990s, reflecting multiple trends such as focus on improving existing surface irrigation infrastructure. Still, in 2000 more than 83,000 MW of additional hydroelectric generating capacity was under construction in 23 countries, majority of which is in China, followed by India, Iran and Indonesia.

The report further says that since its establishment in 1966, the ADB is involved in providing technical assistance (TA) and project loans for infrastructure building. ADB got involved in dam-building schemes through its energy, water supply and agricultural irrigation programme activities only after the oil crisis. The oil crisis in 1970 with the increase in oil prices starting in 1974 until the mid 1980s, influenced the energy policy (First Energy Policy) of ADB, as well as the Bank's entry to dam-building. ADB's lending policy then focused on tackling the energy crisis by helping utilize indigenous energy resources in developing member countries.

The report says that the dam-building projects are so big and profitable that a 'new comer' like Asian Develop Bank, in its early years, was able to pick up only the crumbs left by the larger organizations like World Bank. But the situation changed with oil crisis crippling the world's energy sector in Asia. The ADB now able to take up numerous dam projects for electricity generation. Between October 6, 1970 and December 5, 2003, the ADB had approved a total of 86 water sector loans with dam components to 17 countries in Aisa and Pacific region amounting to US$ 4.386 billion. Out of this, hydropower projects get the lion share of the loans. Hydropower then became the alternative source of power for industries as the oil prices went quadruple in the international market.

The report says that Indonesia is the country that got the highest amount of loans from ADB, amounting to US$ 1.019 billion, followed by China with total loans of US$ 994.3 million, and the third is Pakistan with US$ 658.7 million. The countries that got the lowest amount of loans from the ADB are Taiwan, Samoa, Afghanistan, and Vietnam. Philippines, where the ADB's

headquarter is located, got 11 project loans from November 2, 1971 to December 18, 1998 amounting to US$ 500.1 million. South Korea got three dam-related project loans amounting to US$ 75.15 million, Sri Lanka got loans of US$ 204.13 million for nine dam-related project. In Pakistan, the Ghazi Barotha Hydropower Project ,approved in January 16, 1996, was the biggest single loan extended by the ADB in a hydropower project amounting to US$ 300 million.

Myanmar and Afghanistan got the loans of US$ 60.5 and US$ 9 millions respectively from the ADB for two dam-related projects . The unfavourable political situation in these two countries prompted the ADB to suspend any loan to them. Thailand got five dam-related project loans amounting to UA$169.98 million. However, the government of Thailand has stopped availing loans from ADB, while on the other hand , the private sector continues to do so. Nepal got two hydropower project loans from ADB amounting to US$ 168.3 million. But the current situation in Nepal led to the withdrawal of support and aid from the donor countries and agencies. Vietnam got its first loan only on November 27, 2003.

The report says that the ADB funded large dams constructed in Asia and Pacific region from 1970 to 1990 including 16 hydropower dams, 4 dams for irrigation purposes, 4 dams for water supply and 5 multipurpose dams.

In **part III**, the report tells about the ADB's policies on dam-building and new framework for decision making. It says that the ADB has its own policies to deal with as far as financing dam project is concerned. Major private and public commercial banks have their own frameworks,. However, what is considered as landmark is the World Commission on Dams (WCD) Guidelines, the new framework for decision making.

The ADB has, at least, five policies such as Environmental, Water, Energy, Indigenous Peoples and Involuntary Resettlement.

1. **Environmental policy:** Dam building inundates and fragments rivers thus degrading riverside ecosystems, biodiversity, hydrology and its habitat. Therefore, in case of dam-building, ADB has to integrate environmental considerations in the dam project.
2. **Water Policy:** Dam-building fragments rivers, blocks up and diverts water. The ADB recognizes that between 1995 and 2005, the projected water demands for both domestic and industrial users for the Asian region are growing rapidly at the rates ranging from 70% to 345%. According to ADB's water policy all such projects will be justified in the public interest and in the interest of stakeholders such as affected communities - indigenous peoples, local people, governments and financiers (IFIs) of the project, must be provided with the opportunity to comment on the justification with their views considered. The ADB will promote the informed participation of Government, Civil Society, and other stakeholders in the country in an open and inclusive manner towards this end.
3. **Energy Policy:** This policy is premised on the fact that many people of its developing member countries (DMCs), most of them are poor, do not have access to energy. ADB's goal in the energy sector is to increase the availability of energy in a least-cost and environmentally friendly manner and to improve energy's access to people at an affordable price. In case of dam-building, the ADB will assist hydro-project because the Bank considers hydropower as clean and renewable.
4. **Indigenous Peoples Policy:** This policy focuses on the participation of indigenous peoples in development and the mitigation of undesired effects of development. ADB recognizes its responsibility to ensure equality of opportunity for indigenous peoples. Adequate measures must be taken to mitigate the affected indigenous peoples, ensuring that project affected peoples are as well off with the project as without it.

5. **Involuntary Resettlement Policy:** The objective of this policy is to avoid or minimize resettlement, wherever feasible by the project. If displacement cannot be avoided, the affected peoples at least must be well off after resettlement as they were before. In dam-building, like any other infrastructure project, involuntary resettlement should be an important consideration in project identification and should be dealt with from the earliest stage of the project.

The report further says that according to World Commission on Dam (WCD), the traditional "balance sheet" approach of assessing costs and benefits of a dam project is an inadequate decision-making framework. Because of the rights-related issues and the potential risks associated with dam-building, WCD proposes an approach to be adopted based on the recognition of rights and assessment of risks (rights and risks approach) as a tool for guiding future planning and decision-making. The 'rights and risks approach' is founded on five core value including **equity, efficiency, participatory decision making, sustainability, and accountability**.

It also says that the decision making framework promoted by WCD is organised within seven strategic priorities with corresponding principles. Following are the WCD's reports and ADB's planned responses to WCD.

Strategic Priority I: Gaining Public Acceptance

Public acceptance of key decision is essential for equitable and sustainable water and energy resources development. Acceptance emerges from recognizing rights, addressing risks, and safeguarding the entitlements of all groups of affected people, particularly indigenous and tribal peoples, women and other vulnerable groups. Decision making processes and mechanisms are used that enable informed participation by all groups of people, and result in the demonstrable acceptance of key decision. Where projects affect indigenous peoples, such processes are guided by their free, prior, and informed consent.

According to ADB, rights vary from country to country. ADB abides by national policy and law in its assistance to DMCs as long as these are not in contravention of ADB's own policies. Formal agreements are entered into with individuals or communities only in terms of resettlement and compensation, not in overall agreement to the project itself. The Indigenous Peoples Development Plans (IPDPs) rarely involves substantive involvement by indigenous peoples in deciding whether a project is to proceed. According to ADB this is considered as a matter of national sovereignty and government's responsibility.

Strategic Priority II: Comprehensive Options Assessment

To explore the alternatives to dams, needs for water, food and energy are assessed and objectives clearly defined. The selection is based on a comprehensive and participatory assessment of the full range of policy, institutional and technical options. In the assessment process, social and environmental aspects have the same significance as economic and financial factors. Normally this is also considered by ADB as the government's responsibility. Also, ADB is assisting its DMCs to explore development options.

Strategic Priority III: Addressing Existing Dams

Opportunities do exist to optimize benefits from many existing dams, address outstanding social issues and strengthen environmental mitigation and restoration measures. Benefits and impacts may be transformed by changes in water use priorities, physical and land use changes in the river basin, technological developments, and changes in public policy expressed in environment, safety, economic and technical regulations. Management and operation practices must adapt continuously to changing circumstances over the project's life and must address outstanding social issues.

The ADB's draft revised environmental policy and guidelines include provision for testing and applying strategic environmental assessment. According to ADB, the private sector investor would look for a long-term predictable financial scenario to minimize the risk.

Strategic Priority IV: Sustaining Rivers and Livelihoods

Rivers, watersheds and aquatic ecosystems are the basis for life and the livelihoods of local communities. Dams transform landscapes and create risks of irreversible impacts. Options assessment and decision-making around river development prioritizes the avoidance of impacts, followed by the minimization and mitigation of harm to the health and integrity of the river system. Impacts can be avoided through good selection of site and project design. Releasing tailor-made environmental flows can help maintain downstream ecosystems and the communities that depend on them.

ADB is yet to provide such assistance to its DMCs. Studies are being undertaken in ADB-supported project to more precisely determine appropriate environmental flows for a dam.

Strategic Priority V: Recognizing Entitlement and Sharing Benefits

Successful mitigation, resettlement and development are fundamental commitments and responsibilities of the state and the developer. They bear the onus to satisfy all affected people that moving from their current context and resources will improve their livelihoods. Accountability of responsible parties to agree mitigation, resettlement and development provisions is ensured through legal means, such as contracts, and through accessible legal resource at national and international levels.

The recognition of rights varies from country to country. ADB abides by national policy and law in its assistance to DMCs as long as these are not in intervention of ADB's own policies.

Strategic Priority VI: Ensuring Compliance

Ensuring public trust and confidence requires that governments, developers, regulators and operators meet all commitments made for the planning, implementation and operation of dams. A set of mutually reinforcing incentives and mechanisms is required for social, environmental and technical measures. These should involve an appropriate mix of regulatory and non-regulatory measures, incorporating incentives and sanctions.

Incentives are not offered by ADB because project proponents are expected to abide by criteria and guidelines as identified in project documents. ADB has adopted performance-based lending as a policy, which implies that lending can be made a condition of DMC compliance with ADB policies.

Strategic priority VII: Sharing Rivers for Peace, Development and Security

Storage and diversion of water on trans-boundary rivers has been a source of considerable tension between countries and within countries, as specific interventions for diverting water, dams require constructive cooperation. Consequently, the use and management of resources increasingly become the subject of agreement between states to promote mutual self-interest for regional cooperation and peaceful collaboration. This leads to a shift in focus from the narrow approach of allocating a finite resource to the sharing of rivers and their associated benefits in which states are innovative in defining the scope of issues for discussion. External financing agencies support the principles of good faith negotiations between riparian states.

ADB has not supported dams where objections are raised by sub-national entities. ADB's new Water Policy incorporates the principles of equity and recognizes the need to look at a wide range of potential benefits.

The report says that based on these seven strategic priorities and Policy principles, WCD offers 26 criteria and guidelines for good practices to allow

government officials, developers and affected people alike to assess whether decisions taken, agreements signed and law promulgated have been complied with.

The report further says that out of 26 guidelines, the ADB conforms with only 17, partially conforms with three. The crucial among the guidelines where the ADB is not conforming with are:

1. Free, Prior and Informed consent.
2. Negotiated decision-making process.
   ADB has left these two important tasks to the borrower-government, as being the owner.
3. Ensuring operating rules reflecting social and environmental concerns.
4. Improving reservoir operation.

ADB only considers these issues after the completion of the project, unless it is stipulated in the loan agreement.

The report also says that aside the ADB, two banks like the World Bank and African Development Bank adopted the new decision-making framework recommended by the WCD.

The report further mentions that following the launching of the World Commission on Dams Report in November 2000, it also ended the Commission's existence. The Dam and Development Forum (DDP), a project of the United Nations Environment Programme (UNEP), was formed to respond to a call from a wide range of stakeholders for an entity to support and guide those countries and regions that request assistance in disseminating and analyzing the WCD's guidelines and determine appropriate responses and actions relevant to preventing national contexts. It says that DDP is not meant to implement the WCD's recommendations. The aim of DDP is to promote a dialogue on improving decision-making, planning and management of dams and their alternatives based on WCD's core values and strategic priorities. The objectives of the DDP are as followings:

1. Support country-level, regional and global dialogue on the WCD report and the issues it addresses with the aim of engaging all stakeholders.
2. Strengthen interaction and networking among participants in the dams debate.
3. Support the widespread dissemination of the WCD report and the report of the Third WCD Forum, and make available other stakeholders' responses.
4. Facilitate the flow of information and advice concerning initiatives relevant to dams and development.

The report further says that on June 4, 2003, responding to the growing international pressure 10 major commercial banks, along with IFC, recommended a new set of guidelines - the Equator Principles (EPs). The Equator Principles are voluntary guidelines based on an external benchmark of the World Bank and IFC sector-specific pollution abatement guidelines and IFC safeguard policies. The aim of these guidelines is to provide a common framework for the project finance industry or lenders to assess and manage the environmental and social issues that arise from the development of energy and infrastructure projects. The EP also includes in its preamble a very key policy statement - that financial institutions will not provide loans to customers who are unable to or do not follow the financial institutions' environmental policies.

The report further says that the lenders will clarify new projects according to the environmental and social risks that they pose.

In Part IV, the report reveals the impacts and effects of dams on human life and on the environment. It says that before, and even after the WCD report came out in November 2000, there already existed a debate between those

who focus on the role of dams in generating cheap and clean electricity, preventing floods and supplying water for drinking and irrigation, and those who see dams as social and environmental disasters.

The report here mentions that though the dams have made an important and significant contribution in generating cheap and clean electricity, preventing floods, supplying water for drinking and irrigation, its social and ecological disasters can not be ignored. According to the WCDs, following are the impacts of dams on local people and the communities:

1. **Temporal Employment versus Permanent Displacement:** Employment generated during construction is temporal and short-lived. A dam project displaces local and indigenous peoples from their traditional places and deprives them from their source of livelihoods like agricultural production, fishing, livestock grazing, fuel-wood gathering and collection of forest produce.
2. **Dam Deprives and Displaces People:** There are about 40-80 million people who have been forcibly evicted from their homes to make way for dams. The impacts of dam-building have been particularly devastating in Asia, Africa and Latin America. Large dams in India and China alone, have displaced some 26-58 million people between 1950s and 1990s. In some cases, it also affected the lives of people, many have lost their lands, livelihoods and access to natural resources.
3. **Resettlement Focused only on Physical Relocation:** In India, 75% of the displaced people have not been rehabilitated and are impoverished. In case of 10 million Chinese resettled at least 60% are still in extreme poverty. Lack of economic and social development measures of resettlement programme forces the affected people to abandon resettlement sites and migrate elsewhere for livelihood opportunities.
4. **No Lands, No Titles, No Compensation:** Not all affected people are adequately compensated due to lack of technicalities. According to WCD case studies, communities situated downstream, those without land or legal title, indigenous people and those affected by project infrastructure were not considered as affected people.
5. **Dams Displaced Indigenous People:** The impacts of dam-building not only fragmented the riverine ecosystem, but also physically displaced and deprived the indigenous peoples from the river systems on which they depend for their traditional livelihoods. This practice also alters their cultural way of life. Indigenous people are the victims of no-lands, no-title, and no compensation resettlement practices. For example, in Indonesia, 72% of the 32,000 displaced people were in worst condition after they were resettled. The displaced 800 ethnic minority families in Laos are suffering from severe food crisis, shortage of arable land and insufficient clean water.
6. **The control and the unscheduled releases of waters from dams threaten the lives of people living near the banks:** In April 2005, at least 62 Hindu pilgrims were killed when the water from the Indira Sagar dam of the state-run Narmada Hydroelectric Development Corporation was released without warning during a religious ceremony.

Besides above mentioned impacts of dams on human lives, the report also gives an account of its impacts on environment. Dams alter, fragment and degrade riverine ecosystems and result in losses to biodiversity. The unscheduled release of water from the reservoir results in sudden change in water climate disrupting seasonal migration patterns for fish and wildlife and destroys plants.

Dams also emit greenhouse gases. Large dams' reservoirs emit greenhouse gases due to the rotting of flooded organic matters like flooded vegetation and soils, the plants that grow in the reservoirs, and the detritus that flow into the reservoirs from the upstream. It has been estimated that reservoirs

worldwide release 70 million tons of methane and around a billion tons of carbondioxide each year. Dams also breed waterborne diseases.

According to Patrick McCully, the dam industry is pushing hard for hydro to be eligible for global warming-related subsidies, especially under international schemes such as the Kyoto Protocol Clean Development Mechanism (CDM).

The report further says that there exist more deficiencies related to large dams. These are:

1. **Dams have had poor economic performance:** WCD found that large dams are only economically viable. The average overrun of dams is 56%.Dam's hydropower is not cheap and reliable as the dams are hugely expensive to build. 55% of the hydropower projects studied by WCD generated less power than the planners promised. Global climate change also will increase the frequency and severity of draughts, making hydropower generation more unpredictable and unreliable source of energy. All these factors make the hydropower a very costly form of power generation. De-commission of a dam is also considered to be an expensive affair.
2. **Dams are not assurance for effective flood control:** Dams can stop regular annual floods but often fail to hold back exceptionally large floods. When large flood occurs, damages are far greater than they would have been without the dam. They can also cause serious floods when reservoir operators make sudden release during extreme storms, or when dams break. For example, in February 2005, the 150m-long Shadikor dam in Baluchistan breached after a heavy torrential rains resulting in floods causing at least 135 fatalities, with hundreds missing.
3. **Dams for irrigation are not assurance to reduce hunger:** The large dam and canal irrigation schemes frequently destroy huge fertile lands through salinization and water clogging. The construction of reservoirs and canal itself consumes large amount of fertile land. Many large irrigation schemes have displaced small landlords and replaced traditional farming systems, increasing landlessness and rural hunger. But the ADB thinks that large dams enable to produce more crops that will help reducing poverty. However, people go hungry and suffer from malnutrition in countries like India, Pakistan and the US, which have produced surplus crops for years.
4. **Dams for water-supply did not reach targets:** According to the survey of WCD, dams that were built for the supply of potable water and other domestic and commercial uses did not reach its stipulated targets. Only 33% of the targeted 100% supply was utilized by the intended beneficiaries.

The report further says that constructions of large dams require hundreds of millions US dollars, thus leaving countries without any option but to turn to multilateral banks like World Bank and ADB, and other big commercial banks for loans. ADB alone, from 1971 - 2003, extended a total of US$ 4.386 billion loans to 86 projects. **Despite the under performance of most dams, the people are burdened more by paying higher taxes or enhancing the rates of electricity.**

In part IV, the report deals with three cases of ADB-funded dams. They are:

1. The Theun-Hinboun Hydropower project in Laos,
2. The Nam Leuk Hydropower project in Laos,
3. The Kali Gandaki Hydropower project in Nepal.

The report here says that these are the classic examples of how financiers and project proponents attempted to cover up issues related to social and environmental impacts attributed to the hydropower project. To substantiate this the report presents case studies of above-mentioned three projects and brings out in the limelight the real impacts of these large dams on the life

and livelihood of the riverside people as well as social and environmental impacts. These impacts common to all the three projects are the following.

1. **Decline in fish catch:** Villagers reported substantial decline in fish catches due to diversion of water. Decline of fisheries led to loss of an important source of income. The livelihood of fisher-folks has been affected due to the construction of large dams. Many of them had given up fishing and left the areas seeking alternatives for survival, leaving their families behind with no physical care and security.
2. **Loss of riverbank's gardens:** The diversion of water resulted in flooding and destroying vegetable gardens in the riverbanks thus depriving the people living in those areas of their source of survival and causing them miseries.
3. **Decline of water quality and quantity:** Before the dams were built the villagers relied on the river for potable water and other domestic uses. The damming of river resulted in poor quality of water as the natural resources are flooded with contaminated muddy river water, resulting in many water-borne diseases. Many domestic animals died after drinking this polluted water released from the reservoirs. People have to fetch drinking water from distant places.
4. **Displacement without resettlement and compensation:** The affected people were provided with neither proper compensation for their losses nor guaranteed job. Instead, they had to lose their traditional livelihoods as in most cases the villagers were forced to relocate. They were not properly resettled as promised by the ADB before the project had started. Very few households were resettled, rather relocated. The villagers affected by the dam constructions claimed that they have become poorer after the dams were built whereas it has been stipulated in the ADB Policy (Involuntary Resettlement) that the affected people should not be worse off as a result of the ADB funded projects. Most of the amount available for resettlement and compensation were spent on other construction activities.

The report further mentions that dams were approved despite the concerns and issues like poor decision-making, inadequate environmental impact assessment, conflicts of interests, potential for severe environmental and socio-economic impacts raised by ADB-funded countries, Non-government Organizations and Civil Societies. All these issues were constantly downplayed and ignored by ADB and the project developers causing misery and difficulties to the local villagers, particularly indigenous people.

In part V, the report tells about Alternatives to dams. It says that sever negative impacts of dams led to the thought of finding such other viable alternatives and measures to dams which are more sustainable and cheaper for improving the efficiency of existing water supply and energy system and managing the utilization of existing water resources. Following are some of the measures:

1. **Demand-side Management (DMs):** The objective of Demand-side Management is to reduce demand for power and water consumption by recycling, shifting to less water-intensive crops and encouraging the use of more efficient electrical appliances and technological and policy options that help promote efficiency of water and power.
2. **Supply-side Efficiency:** The objective of this option is to avoid unnecessary loss of water through reductions in water leakages in water pipes, keeping up with system maintenance and upgrading of control, transmission and distribution technology in the power sector.
3. **New supply options (the renewables):** When efforts to conserve resources and improve the efficiency of existing dams are not enough to meet growing demand for power, renewable energy supply options such as efficient and sustainable biomass, wind solar, geothermal, and ocean

energy sources and fuel cells should be considered.

In part VI, the report talks about the ADB's involvement in Dam-building: past, present and beyond.

The report says that scientific community, the dam and hydro industry and the WCD acknowledge the negative impacts of large dams on people and environment. Costs and risks in constructing large dams are very high. But the financiers and dam-builders continue to build dams because governments are providing special subsidies to commercial investors, monopolies and the socialization of private risk for them to put their money into large hydropower projects.

The report further says that WCDs found that dams have been a longtime favourite of politicians, government officials, dam-building companies and development banks. They have been getting immense opportunities for corruption and favouritism and skewed decision-making away from cheaper and more effective options. ADB's involvement in dam-building in Asia and Pacific region is tainted with misconduct and negligence. ADB often failed to abide by its own policies and has also failed to recognize the negative impacts of dams. The ADB had employed the consultants to conduct the impact assessments who had consistently exaggerated the benefits of dams and downplayed their costs.

The report also points out that what ADB says in public contradicts in reality. Despite ADB's claims on praises of consensus, consultation, environment protection, and other developmental achievements, the realities of displacement and environmental degradation are still happening. These recurring problems are rooted in the initial stages of any ADB-funded infrastructure projects.

The report says that despite all the criticism, the ADB will continue to fund dams in developing countries, provided their environmental and social effects can be satisfactorily managed in accordance with ADB's policies.

In 2003, the World Bank re-embarked on what is called a "high risk, high reward" strategy to projects in the water sector calling for increased investment in dams. Critics said that borrower-government and its taxpayers would be the victims of this strategy as the cost of the project will increase in order to implement the policies related to safeguards. On the other hand, the donor promises high reward for investors, but at the expense of borrower- government, its taxpayers and electricity consumers. This makes doing business with ADB costlier.

The report in conclusion says that the emergence of people opposing to dam is not parallel to the history of dam-building. As dam-building accelerated after 1950s, opposition to dams has become more widespread, vocal and organized. In many countries the resistance of indigenous peoples to dam-building forced the donors like World Bank either to withdraw from the projects opposition its operation indefinitely.

The report further says that the influence of the anti-dam movement has been also increasing rapidly all over the world. In India, jailed-activists have gone on hunger strike to protest against the displacement of large numbers of villagers by the series of dams along the Narmada Valley.

The Ilisu dam in Turkey has also elicited international reaction, as well as highlighted the impact on the Kurdish people whose villages and towns would be flooded. Campaigners argue it could potentially trigger a war with Syria and Iraq by damaging potable water supplies and the livelihoods of local farmers. Industrialists and financiers cannot ignore this debate.

In the end, the report says that it is the strong people's movement that will serve as a deterrent to any socially and environmentally-destructive dams, and not the Bank's ambiguous safeguard policies.

South - Asia Growth Quadrangle

Cooperation In The Energy Sector

Authored By

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Bird's Eye View

The paper in its introduction says that when sub-regional cooperation in the Greater Mekong Sub-region (GMS) was initiated in 1993, there was considerable skepticism about its outcome. There were doubts expressed as to whether the GMS countries (Vietnam, Lao PDR, Cambodia , Thailand, and Yunnan Province of the People's Republic of China) would put aside their differences and historical rivalries and make it work.

The paper further says that in order to ensure the acceptance of the idea that every one gains from working together and to keep the momentum going , the ADB (as the coordinator and the lead donor agency for this initiative) realized that it was necessary to first commence work on those types of projects that would quickly bring in tangible benefits.

It says that the strategy has paid handsome dividends. It further says that though a lot of preparatory studies went into the first round of project identification and discussion before the investments started, now there is overall acceptance that GMS is a very beneficial initiative, and that it has changed the way the GMS countries do business with each other. It says that beyond the individual projects which created power and transport links between the countries, there has been a lot of invisible progress in terms of institutional strengthening, regulation, legal aspects and cross-border trade. Further, the major gains for the future lay not so much in the visible projects but in the more invisible achievements like regular policy exchanges, cooperation at the working level and improved enabling sector frameworks for doing business.

The paper says that the GMS initiative has convinced ADB that any group of countries, with the will to interactively develop with each other, can gain from institutionalized regional cooperation. It says that the next potential grouping for regional cooperation is the so-called South Asian Growth Quadrangle (SAGQ) , comprising Bangladesh, Bhutan, The eastern and north-eastern states of India , and Nepal. It further says that applying the GMS experience, the first task at hand is to identify the physical investments, which will bring about the first investment projects and benefits for the region. It lays emphasis on the need to initiate open discussions that can sensitize all countries to each other's development needs, build up confidence in each other's motives and identify barriers to cooperation.

Further talking about cooperation in energy sector the paper says that an analysis of the economic, geographical and social situation of the SAGQ countries shows that energy demand and supply, or rather the lack of it, plays a crucial role in the economic growth of the countries. Therefore it is only logical to assume that energy projects, that could be carried out within the new regional framework, would be a priority as they were in the case of the GMS initiative. Now the paper moves on to give a brief summary of the demand and supply situation in each country, and an analysis of its comparative advantages and natural resources and says that on the basis of this analysis, specific projects must be identified and a full-fledged distribution analysis of the benefits between the participating countries be carried out. Finally, the enabling framework conditions and the groundwork in each country must be undertaken. It further insists that only after commercial arrangements have been completed, technical norms agreed upon, and bureaucratic hindrances eliminated, will it be possible to solicit firm financing for the projects.

Now as for the demand and supply situation in each country, it says that Bangladesh's energy use in the year 1999 was equivalent to 200 million tons of oil which was met by gas (80 percent) , hydro (4 percent), coal(1 percent) and oil (15 percent).This worked out to 97 kgoe on a per capita basis. It says that the major constraint to the development of its energy sources has been

the constraint of finances, especially foreign exchange. Since Bangladesh has a very small industrial capability in the sector' almost all-key goods have to be imported.

About Bhutan it says that despite Bhutan's low level of economic development, its per capita energy consumption is relatively high because its forest resources provide abundant and readily available source of energy. Per capita energy consumption is about 800 kgoe which is the highest in the region. Fuelwood accounts for 77 percent of total energy consumption and for virtually all non-commercial energy consumption. Bhutan has no known oil or gas reserves, and all petroleum products are imported which accounts for about 8 percent of total energy consumption. It says that Bhutan has a gross hydroelectric potential of 30,000 MW of which about 10,000 MW can be commercially exploited. At the same time, it points out, Bhutan's development of its resources is constrained by access to markets, though it produces more than enough electricity to meet its demand even 20-30 years into the future. Currently Bhutan exports most of its production to India.

Now the paper talks about the Indian scenario. It says that India's commercial energy use in the year 1996 was 450 Mtoe and this was met by coal(53%), oil(24%), natural gas(6%), hydro power(16%) and nuclear power(1%). Self-reliance on primary energy was about 87 percent. It further says that during the 1980s and 1990s, annual consumption of coal, oil and natural gas grew by 5.5, 7.6 and 21.5 percent respectively. During the same period hydro-generation grew by 4 percent and thermal generation grew by 11.6 percent. The paper says that the recoverable/exploitable reserve consists of coal (74 billion tones), oil (732 million tones) , natural gas (24.2 trillion cubic feet) and hydro (294 TWh per year). It further says that India's hydroelectric potential is capable of generating 84000 MW of electricity of which about 30,000 MW is in the SAGQ sub-region. It points out that though India has the potential of substantial self-reliance, the uneven distribution of primary energy will force India to rely extensively on imported fuel to meet the energy demand of the south and western regions of the country.

Moving on to Nepal the paper says that Nepal's commercial energy use in 1996 was equivalent to 6.9 Mtoe which was met by oil (54 %), hydro (36%), coal (9%) and imported electricity (1%). It further points out that commercial energy forms only 9 % of total energy and per capita annual consumption of commercial energy was only 39 kgoe which was the lowest in all the SAGQ countries. Nepal has exploitable hydro potential equivalent to 179 TWh per year capable of generating about 42,000 MW of electricity. It says that Nepal's oil and electricity demands grew by about 9 and 14 percent respectively in the 1980s and 1990s and is expected to grow at similar rate in future. It says that in order to meet the demand Nepal will have to rely on imported oil, otherwise the alternative method of meeting the growing demand for the country is to develop its hydro-potential. In this context it is important to note down, it says, that Nepal's constraint lies both in technology and capital, particularly foreign exchange.

Now discussing the cooperation in energy development, the paper talks about the GMS experience and says that in 1992 ADB started a technical assistance programme for promoting sub-regional cooperation among GMS countries. As a result of decision taken at the GMS ministerial conference held in Yangoon in April in 1995 an Electric Power Forum was established to have an advisory body to the conference as well as to provide an institutional framework for coordinating regional power sector development.

The paper says that from 1995 to 1999 significant developments have occurred in the regional power situation. Cooperation among the members have steadily increased resulting in the development of a number of sub-regional power projects such as Thion Hinboun and Houay Ho in the Lao

PDR while another project of regional importance - Nam Leuk Hydropower Project-has been commissioned in April 2000 and is now exporting its output to Thailand. It further says that the other developments under this programme include establishing an Expert Group on Power Interconnection and Trade to advise EPF on facilitating cross-border power trade, adoption of a Policy Statement and commencement of a study to update regional transmission planning.

From here the paper moves on to mention the potential for cooperation in the SAGQ and says that the region has an undeveloped hydropower potential of around 50,000 MW, compared to its 1992 aggregate peak demand of about 10,400 MW and the anticipated peak demand of about 18,000MW by the year 2000 and about 26,000MW by the year 2010. It says that given the pattern of demand, all the countries could benefit in the long term by optimally developing and scheduling their generation capacities in an integrated manner through regional cooperation. This will also help the countries avoid having to build transmission grids across high mountains and major rivers. It says that thus trading of electricity would widen the resource base and the market for electricity in the region thereby facilitating development of least cost larger hydro-projects.

Now the paper talks about the bilateral cooperation and trade being carried among the countries of the region and gives details of such cooperation existing between India and Nepal. Details of bilateral cooperation between India and Bhutan are also mentioned. In this context detailed reference has been made about the Chukha hydro scheme (336 MW) which has been financed, designed and executed by India for Bhutan under an agreement to purchase surplus electricity by Eastern Grid of India on long term basis.

Similarly cooperation between India and Bangladesh in the field of natural gas has also been talked about.

Under the head 'Principle of cooperation' the paper says that based on the experience gained by ADB in the GMS, the following broad principles have emerged for success in moderating planning and execution of projects. These are-

1. **Implementation :** There is a tendency among the cooperating countries to treat cross-border projects as special projects which need more political rather than commercial decision making while this is not so. Whereas the governments of the participating countries are free to take decision whether or not to cooperate in a particular sector, micro project planning and execution should be left to commercial organizations. The paper says that the project deal making itself should purely be commercial if it is to be self-sustaining in the long run. It further says that commercialization coupled with the distancing of the governments from the deal-making also makes the deals transparent, and the sponsors accountable for their commercial decisions.
2. **Policies :** Once it has been decided that a particular project or sector would be a candidate for sub-regional cooperation, the participating countries have to analyse their respective laws dealing with the subject, analyse them with reference to the concerns of other countries. And after discussions with the stakeholders, both inside and outside the country, seek to amend them so as to facilitate sub-regional cooperation.It further says that key to the success of such policies will be that yhey are transparently implemented with basic objective behind their framing kept in view rather than a narrow interpretation based on the letter. Other pitfalls to be avoided are the tendency to make the policies too long-winded and obscure , and not finalizing the policies by having the endless debates, both in the name of comprehensiveness. It says that simplicity and transparency in underlying policies go a long way to generating

interest in projects.

3. **Social Acceptability :** The worst that can happen to any large infrastructure project is to get stalled halfway through its implementation. Often delays are caused by inadequate planning on addressing social concerns related to the project, which are complicated by often mistakenly perceived concerns that the costs are being borne by one country while the project benefits another country. Hence when an infrastructure project is planned, it is better to spend time upfront in ensuring a wider debate among stakeholders and a genuine attempt to mitigate valid concerns.

4. **Sharing of Benefits, Costs and Risks :** Though no sub-regional project can be taken up if there is no benefit to each participating country, the benefits may not be in the same areas. For instance, a project to export hydroelectric power from Nepal to India has different benefits to the two countries. Moreover, since these projects are typically long-term ones, short- term benefits should not be the goal. Finally, the key test of a good project is whether it supplies goods/services at competitive rates, vis-à-vis the rest of the world. The paper further says that sub-regional cooperation is also a vehicle for development, of doing away with conventions and dogmas that exist in any one country and looking at issues with a fresh and open mind. Hence, efforts should be made to establish projects to international standards of efficiency.

Now talking about the project issues the paper says that the experience in the GMS and elsewhere has shown ADB that the following types of issues need to be discussed and sorted out early on in the development of the project so as to ensure smooth and speedy implementation -

(i) Legal framework;

(ii) Structure of taxes and duties;

(iii) Technical and commercial standards;

(iv) Environment and social considerations;

(v) Risk-reward allocation; and

(vi) Pace of development.

Each of these issues is sector and project specific, and also dependent on prevailing conditions in the regions/ countries where the project is situated.

Finally the paper concludes that experience shows that regional cooperation is beneficial but slow to organize. Therefore , the first candidate projects should be those that have high priority in the smaller countries and also have short -term gains that are visible.

South Asian Growth Quadrangle

Emerging Opportunities for Economic Partnership

Scope and Opportunities in the Energy Sector Cooperation

Bird's Eye View

The report was released by SAARC network in the year 2000. It begins by giving reasons why energy cooperation in South Asian Growth Quadrangle is needed. Among them are:

1. Low per capita electricity consumption in the region. It has been hardly 5-15 percent of the consumption of developed countries.
2. A significant portion of the society does not have access to modern sources of energy on grounds of both physical inaccessibility and affordability.
3. Persistent over dependence on traditional sources of energy like firewood, animal dung, crop residues etc. has led to environmental degradations and increasing strains on energy cycle.
4. SAGQ countries' dependence on the import of hydrocarbon for meeting their commercial requirements has gone up very sharply. Petroleum related import still constitutes as high as 20 percent of India's and 7-10 percent of Bhutan , Bangladesh and Nepal's total imports leading to their adverse balance of payments and staggering stress on foreign currency reserves.
5. Fast growing demand for electricity(9 to 11 percent).
6. Demand Supply Gaps : An Asian Development Bank estimate showed that the peak power demand in the SAGQ region would be almost 26000MW (much bigger than the estimated generation).

   Now the document immediately takes up the stand suiting to the private sector by arguing that most of the SAGQ countries will continue to suffer a major shortfall in the electricity generation in the next decade and the only option for them to meet the shortfall lies in roping in the participation of the private sector.The report says that SAGQ countries are capital scarce, hence they can not do without private participation. The restructuring of power sector is therefore necessary. It says that since,except Bhutan, all the SAGQ countries have a highly liberalized economic regimes in place, a large number of Independent Power Producers (IPPs) are engaged in the power projects in the region.
7. The report further says that the foreign companies are keen to invest in the energy sector in the region because of the tremendous potentiality in terms of energy demand and supply as well as the promising markets for their goods and services .It gives the example of India where the exports of energy related goods alone from US were estimated to be 1.17 billion dollars in 1998.
8. The region is rich in water resources, forest, coal and gas which comprise principal sources of energy.

The document says that power shortage in these countries can be dealt with if these countries can evolve a conscious policy of regional investments in the power sector. It says that the equally critical issue is that of inefficient and imprudent use of energy sources. It further says that it gets further enhanced by inefficient and technically unsound distribution network, overstaffing, poor management, weak administration, undisciplined employees and corruption both at utility and consumers levels. For instance , in Bangladesh and Nepal the extent of system loss during the process of power generation, distribution and transmission was as high as 33 percent and 24 percent respectively in 1996. Similarly in India, the commercial losses of the state electricity boards mainly arising out of high transmission and distribution losses, low plant load factor and other operational and other technical inefficiencies reached a hopping Rs. 113.78 billion in 1998-99. It further says that the cooperation in the energy sector in the region particularly with the participation of the private power producers and traders are likely to lead to efficient management of resources.

The report further says that the SAGQ region has one of the richest sources of hydel power in the world. It points out that out of the broadly estimated

hydro-power potentials of 193400MW of the region as a whole, very small proportion (hardly 12 percent) has been harnessed so far. It points out that in Bangladesh hydro-power potential is 5000MW whereas total installed capacity is only 230 MW, in Bhutan the potential is 3ooooMW whereas the total installed capacity is only 344MW , in India the potential is 75400 MW and total installed capacity is just 21900 MW and similarly in Nepal the hydro-power potential is 83000MW while the total installed capacity is 322.7 MW only.

Now the report talks about the ongoing projects as well as the potential projects and identified potential sites in Bhutan.

As for India the report says that in the North East including Sikkim and West Bengal the hydro-potentials remain far more unexploited. It gives reference of an estimate which says that North East India is endowed with hydro-power potentials of 59000 MW in addition to 8000 MW of Sikkim and Bengal. Similar exercise has been done in the case of Nepal too.

The report also explores other areas of regional investment and says that mini and micro hydel projects (MMHP) are the fit cases for both intra-regional and extra-regional investments , particularly in the high altitude areas . It says that there has been a protracted history of MMHP in SAGQ with first such plant built in Darjiling in 1897 and in Kathmandu valley in 1911. It further says that Bhutan has 19 MMHP with a total capacity of 3.4 MW many of which have been handed over to the user communities for operation , maintenance and distribution of electricity. The communities also fix tariffs and collect revenues. It says that in India there are over 160 MMHP, majority of which are in Arunachal Pradesh and in the hills of Uttar Pradesh with a capacity of over 200 MW. Similarly Nepal has over 700 MMHP spread over 59 districts and most of them are owned and managed privately by individual entrepreneurs.

The report further underlines the factors which make MMHPs vital for the SAGQ region. These factors are:

1. Sizeable potential existing in all the higher ranges of SAGQ
2. Easier to design and manufacture locally
3. Sophisticated and expensive instrumentation and control system can mostly be avoided.
4. The operation and maintenance costs of privately owned and operated plants are much lower .
5. Indigenous design and manufacture of such plants contribute towards development of local industrial base including technical expertise which is useful for other development work.
6. The surplus power can be supplied to national grid. And
7. The local people can build , operate and own.

Now the document moves on to the importance of exploring the Natural Gas reserves in the region. It says that the countries in and around SAGQ including China, Pakistan , Thailand, Singapore and Malaysia are likely to have a sizeable shortfall of gas in the next decade or so. Unless some major exploration and drilling operations are undertaken these shortfalls are likely to be of very serious dimensions. They can be met only by imports either via pipelines or LNG. Earlier talking about the reserves the document says that if recoverable reserves of natural gas in Bangladesh (13.6 TCF) and India (707 BCM) is systematically harnessed , it may change the entire energy map of SAGQ.

Moving towards the key issues , the document says that both power projects and power trade are vital as they complement each other. However, it says, there are quite a few issues both political and techno-economic in nature that keep cropping up. It further says that all these key issues including legal

framework, structure of taxes and duties, technical and commercial standards, environment and social consideration, risk reward allocation and pace of development need to be settled before the cross border power flow is really concretised.

The following are some other suggestions listed in the document for facilitating co-operation in energy (particularly in power) sector in the SAGQ region -

1. India can take lead in forming a regional consortium of the members of the SAGQ to help in attracting regional and sub-regional investment partners. This should ,in turn, work towards creating a Regional Power Development Fund (RPDF) with the help of international financial institutions.
2. India can also initiate a SAGQ wide information network to facilitate regular exchange of data on demand-supply gaps in various forms of energy , policy changes. Price and market conditions, technological innovations and inputs , investors and investment opportunities, energy expertise, seismic and other geological and environmental data.
3. India should reach an umbrella agreement with other countries which spells out the procedural and legal aspects of regional cooperation in this field. This should include the harmonization of macro policies in the energy sector among the SAARC member countries.
4. A power trade agreement on the lines of that signed between India and Nepal should be concluded among the member states.
5. A regional grid system should be created to facilitate the transmission of power from one part of the region to the other. And
6. India should share its experience in the arena of determination of power tariff and its acceptability to the consumers; issue of loss to the state exchequer caused by protracted subsidies given by the state to various categories of activities and groups; energy wastage management mainly to curb extravagant uses.

The Greater Mekong Sub-region Hydro Grid

A review of the Asian Development Bank's 2003 Indicative Master Plan

By

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December 2004

Bird's Eye View

The 23-page report is a review of the Asian Development Bank's 2003 Regional Indicative Master Plan on Power Interconnections in the greater Mekong Sub-region. At the very start the report says that the purpose of this review is not to dispute the potential merits of targeted investments in new transmission lines or the potential advantages of cross-border power trade in a region where 90 million people lack access to basic electricity service. It says that the purpose of the review is to examine whether Norconsult provides a credible justification for the GMS power grid, and whether the ADB Master Plan serves the interests of GMS power consumers.

The report introduces the plan by saying that 1.4 million US dollar-plan was prepared by the Norwegian hydro consulting firm 'Norconsult' and funded by the Norwegian Government and the Asian Development Bank. The Plan recommends a series of transmission studies and investments up to the year 2020, and provides policy advice on the development of regional power trade in the Greater Mekong sub-region. It further says that the proposed GMS power grid is a series of high-voltage transmission grid interconnections linked to future large hydro dams on the Lancang/Mekong (Yunnan), Mekong tributaries (Lao PDR and Vietnam), and the Salween River (Burma and China). The Plan also recommends Nordic-style institutional and regulatory reforms for developing competitive power markets and regional power trade. It further intimates that high-voltage (500 kilovolt) lines are designed for transporting large amount of electricity over long distances.

Outlining the negatives of the Plan, the report says that Norconsult fails to demonstrate that the Greater Mekong sub-region grid connected to future large hydro stations is financially and economically viable.

Secondly, Norconsult's focus on centrally planned expansion of a regional power grid, aimed at boosting bulk power trade between the region's largest power utilities, obscures the enormous scale disparity between GMS systems , and between planned large hydro projects and the power needs of GMS consumers.

Thirdly, Norconsult recommends grid investments while sidestepping critical power economics issues; the actual cost of the GMS power grid to consumers; the industrial demand for higher reliability than a central grid can provide; the demand for end-use energy efficiency improvements in Thailand; the advantages of smaller-scale gas-fired turbines and combined cycle plants to consumers; the public opposition to large hydro dams; the failure of GMS hydro developers, including ADB-backed power companies in Lao PDR, to internalize environmental costs associated with large dams , and to respect citizen's democratic and property rights; the reluctance of GMS utilities to open their power markets to competitive power producers, the lack of effective regulatory capacity, and the lack of financial and operating transparency on the part of GMS utilities, the future recipients of ADB loans and grants to build the GMS hydro grid.

Fourthly, Norconsult promotes two incompatible agendas: one is the expansion of a regional grid linking large hydro dams that are viable only with monopoly privileges and taxpayer subsidies; the second is competitive power markets which, if implemented as recommended by Norconsult, would render the proposed GMS grid plus large hydro dams uncompetitive cost-wise and publicly unacceptable.

The report says that if the GMS hydropower grid goes ahead as planned by Norconsult and the Asian Development Bank, with ADB and World Bank subsidies, it would result in the following -

It would

(a) Inflate the profitability of large hydro projects favoured by the region's largest incumbent monopolies instead of accelerating the transition to competitive markets, lower costs, and better service for GMS consumers;

(b) Distort the electricity investment decisions and deprive millions of would- be power consumers of choice in service providers better scaled to meet their needs;

(c) Delay utility reforms and investment in service provision to rural areas;

(d) Increase the risk of monopoly abuse by concentrating ownership of the power generation business into too few hands, since only the region's largest utilities (and international partners) have the necessary technical and financial management capacity to build and operate large hydro projects and bulk power exchange via the regional grid.

The report makes scathing comments on the financial aspect of the master plan by saying that it is inconsistent and uncertain about the costs and benefits of the proposed GMS grid. It says that Norconsult openly admits that it does not have sufficient information to conclude "whether the total benefits are higher than the extra costs associated with power interconnections." At the same time Norconsult warns that investments in high-voltage grid connections "carry a high financial cost (and risk) for limited initial benefits" because not all the planned generating plants wold be built and connected to the grid at once. This would leave the grid initially underused, which means GMS power consumers may end up paying for grid capacity they don't need. The report further says that compounding this financial risk is the financial uncertainty associated with the hydropower projects that the GMS grid is intended to serve.

Talking about its flawed assumptions about reliability, the report says that the Master Plan is narrowly focused on boosting regional power trade via a regional power grid , without seriously considering how that expansion actually be increasing national power system's vulnerability to failure, and thus increasing the very costs and risks the proposed grid interconnections were meant to reduce. Moreover, it says, what its proponents refer to as the 'backbone' of the region's future electricity supply could turn out to be the least-suited option for delivering reliable power. Because, firstly, a transmission grid is no more reliable than the generators connected to it which, in this case, would be remote hydro dams that are extremely vulnerable to disruption and in large investments. It says that power output from large hydro dams can be crippled by natural drought, competing demands for water, technical accidents, and grid failures (caused by power lines overheating, shorting out, or getting knocked out by floods, high winds, falling trees, lightening strikes, landslides, earthquakes, vandals, or terrorists).

It further points out that the greater the reliance on remote large power plants, the more vulnerable the system becomes as a whole. A relay failure in any one part of the regional grid could , if not isolated from the rest of the grid, cause a blackout in another. It says that a failure of the big plant is more serious event than the failure of a small plant and could trigger other failures that could cascade across a whole region. In 2002, for example, failed transmission from the 12,600 MW Itaipu hydroelectric dam in Brazil, the world's largest, cut off nearly 20 percent of the country's electricity for several hours, "blacking out six major cities in five states." (source: Rocky Mountain institute, US). In North America, the growing vulnerability to grid failure has become a major economic and political concern in recent years. According to US energy expert Amory Lovins, the central grid itself is now the main source of increased costs and power quality problems in North American systems, especially now that consumers now using digital equipment require extremely high levels of reliability.

The report further says that another flawed assumption behind Norconsult's justification of the grid has to do with the level of reliability GMS power consumers need.

The report further points out that the master plan fails to consider alternative investment strategies for power supply expansion. It says that Norconsult's and ADB's large hydro bias has effectively precluded serious analysis of options potentially available to GMS consumers. Similarly key power economics questions like the impact of high voltage grid interconnections plus large hydro schemes on electricity rates, the cost of back-up power, and the impact of regional grid investments on GMS countries with the least developed power systems are not addressed. Also no cost comparison of hydro imports via a regional grid vs. local power and distribution investments is recommended for further study.

The report points out that though ADB Master Plan preaches market reform but it promotes the opposite i.e. centrally planned expansion by the region's incumbent

power monopolists. It assumes centrally planned expansion of both generation and transmission by GMS utilities.

The report says that what Norconsult overlooks is the impact of market reform on the financial and political viability of GMS hydro grid. It says that if competition among suppliers and regulatory oversight were introduced , many of the investments recommended by Norconsult would quickly be exposed as unattractive to investors and uncompetitive with other service providers. And if future large hydro schemes are rendered uncompetitive many of the planned regional grid interconnections would become unnecessary.

In fact the report reveals that GMS grid proponents have little incentive to promote reforms because if implemented these reforms would jeopardize their expansion plans.

The report further points out that the Asian Development Bank's promise of the subsidies for the regional grid and the projects connected to it has effectively preempted much needed analysis of rival technologies and strategies for delivering electricity service in the GMS. It says that from a public perspective GMS Electric Forum appears to be a forum for the region's incumbent monopolies and a handful of its international partners and financers. As a result, GMS consumers are denied access to information and analysis about global experience with and potential for DE (decentralised energy) systems in the GMS.

The report says that the Master Plan forms the basis for the ADB's GMS power sector lending to 2020 and was officially endorsed at the ADB-sponsored GMS Electric Power Forum held in Rangoon (Burma) in October 2002. Plans for the GMS power grid have progressed on several fronts since the completion of the ADB Master Plan. At the GMS summit in Bangkok in November 2002 ,GMS leaders signed an agreement to develop the necessary infrastructure, and institutional and regulatory framework for regional power trade.

It says that Thailand's electricity generating authority (EGAT) is a key beneficiary and proponent of the GMS power grid. It also benefits from project planning subsidies provided by international GMS donors. EGAT has plans for upto five large dams on the lower Salween, three in Burma, two along the Thai-Burma border. The report says that linked to its plans for the Salween River , EGAT's ither ambition is to become a regional power trader and investor beyond the GMS to all of Southeast Asia. EGAT has prepared its own master plan for an ASEAN-wide power grid which includes five grid interconnections in the GMS between 2007 and 2016, and another six interconnection projects between Malaysia, Sumatra, Singapore, Sabah/Sarawak, Brunei, and West Kalimantan (Indonesia).

But critics argue, says the report, that the ASEAN grid is at best a wishful thinking. In 2003, Indonesia's energy minister Purnomo Yusgiantoro told Thai newspapers that proposed grid would be too costly for the governments to finance, noting the need for expensive underground cables across the sea. By 2004 the Financial Times declared the " grand project for a power grid designed to link all 10 members of the ASEAN physically and symbolically…..dead, at least for a decade or two." The most terse comment has been of the critic Piyasvasti Amranand, former director of Thailand's National Energy Policy office. He said, ' The government is converting a public monopoly into a private monopoly with no competition and no proper regulatory framework. There will be uncertainty for the consumers, no incentives to improve efficiency, and it looks like tariffs could go up.'

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