

nications technology, particularly in Cambodia, Lao P.D.R., and Vietnam, underscores the extreme penalty exacted on these countries from the wars and postwar isolation they have endured. The ADB report says that there are *no direct links* between any of the three countries; rather, calls between any two of the three countries must be placed through a third location, such as Australia or Hong Kong, China. Before the collapse of the Soviet Union, which had been the major source of aid to these countries, a call from Phnom Penh to London, for example, would be passed through operators in Moscow. The objective of the GMS telecommunications plan is, simply, to build the first-ever standardized, integrated subregional grid.

The Mekong River Development Plan

by Marcia Merry Baker

A map of the proposed "Mekong Cascade" system of mainstream dams and reservoirs is shown, as of 1990, (Figure 9 and Table 1). These illustrations are reproduced from an *EIR* feature on the area, "Mekong Development Plan: It Is Time To Awaken the 'Sleeping Giant,'" from March 29, 1991.

The Mekong Cascade is the core part of developing the Mekong River Basin (see Figure 2, p. 24), and details were worked out decades ago. However, the major projects have been held up not only by warfare, but principally by opposition from international financial institutions and powers opposed to development. The latest Asian Development Bank proposals for the region conspicuously *omit any map of dams*, and barely make mention of any of the obvious large-scale projects.

In 1983, at a conference in Bangkok, Thailand, Lyndon LaRouche outlined several "Great Projects" for the Mekong and other regions, for developing the vast resources of the Pacific and Indian Ocean Basins. For the Mekong region, these concentrated on control of the huge river.

River Basin Development Projects: The Mekong Cascade is an integrated system of dams and reservoirs that would regulate the lower 2,000 kilometers of mainstream flow of the greater Mekong system, providing power, flood control, irrigation, and many other benefits. As of 1990, total project costs would have been in the range of \$20 billion.

The Mekong is Asia's third-largest river. In terms of annual flow, it is the eighth-largest river in the world. It begins as a snow-fed river, rising in the

Tanghla Range of northern Tibet, in China, at an elevation of 5,000 meters, where the Yangtze River also originates. But the lower Mekong Basin is in the monsoon belt, and its flow is dominated by huge annual rainfall variation. Almost every year, enormous volumes of excess water cause damage to crops, dwellings, and economic functions. Alternately, there is a serious flow reduction in the dry season. Building infrastructure to coordinate water catchment and storage, and to begin to regulate flow, can provide the basis for fabulous long-term growth in the region.

At Phnom Penh, the Mekong becomes connected to Cambodia's natural catch-basin, the Tonle Sap, alternately (depending on the season) feeding or being fed by the Great Lake. After the point of conjunction with the Tonle Sap River, the main stream divides into two forks, and as these twin streams continue south and enter Vietnam, they in turn fan out over a vast, fertile delta, emptying into the South China Sea through numerous mouths.

Along with the dams shown in the Mekong Cascade, which can regulate flow out to sea, other projects can help hold back saltwater intrusion into the Mekong Delta. A Delta embankment system for dealing with seawater inflow, was

FIGURE 9
Proposed 'Mekong Cascade' System of Dams and Reservoirs



TABLE 1

The 'Mekong Cascade,' 1990 Specifications

Project*	Reservoir elevation	Reservoir area (sq km)	Net storage (mil. m)	Installed capacity (MW)	Annual energy (GWh)	Lowflow increase (m/s)	Cost 1990 (mil. \$)
High Luang Prabang	355/320	780	15,390	3,200	16,210	850	2,560
Pak Lay	275/255	370	5,580	2,500	12,730	430	2,190
Pa Mong	210/192	610	7,310	2,250	10,700	470	2,000
Bung Kan Regulator Dam	NA	NA	NA	NA	NA	NA	NA
Ban Koum	125/123	400	620	2,400	11,230	120	2,260
Stung Treng	80/75	5,000	18,900	5,400	25,840	1,460	4,100
Sambor	40/38	1,160	2,500	3,200	16,200	260	2,850
Subtotals		8,320	50,300	18,950	92,910	3,590	15,960
Tonle Sap	10/3	61,360	54,470	NA	NA	2,500	2,600
Totals		69,680	104,770	18,950	92,910	6,090	18,560

*Numbers such as 355/320 indicate elevation in meters above MSL (mean sea level) of reservoir full supply level (FSL) and low water level (LWL) respectively.

one of the designated "world" projects of the Japan-based Global Infrastructure Fund over 25 years ago.

History of Plans: On three separate occasions since World War II, when peace seemed close at hand—upon the signing of the 1954 Geneva Accords, in 1972-73 as the Vietnam War was winding down, and again in 1990—plans for harnessing the Mekong River have been put forward to foster regional stability and cooperation. But as of the end of the century, the projects still need backing.

In May 1947, the UN Economic Commission for Asia and the Far East (ECAFE), headquartered in Bangkok, began a study, "Preliminary Report on Technical Problems Relating to Flood Control and Water Resources Development of the Mekong—An International River," which was published in May 1952. Many engineering possibilities were posed, and subsequent work identified priority sites and multi-purpose projects, reviewed by experts, including from India, Japan, France, and the United States. ECAFE expert P.T. Tan and an international team produced specific dam proposals in 1956. In 1958, a UN Technical Assistance team issued an evaluative report, overseen by Lt. Gen. Raymond Wheeler (ret.) of the U.S. Army Corps of Engineers. The "Wheeler Report" formed the basis for much of the work done on the Mekong through the 1960s.

An Interim Mekong Committee, originating in 1957, has overseen studies, planning, and implementation. Its Mekong Secretariat is in Bangkok. A comprehensive plan for 1970-2000 was commissioned by this committee, whose 600-page report identified 180 development projects, of varying size and priority. But, the pressure of recent years has been to *scale down* or abandon major projects.

Vast Benefits: As of the early 1990s, consumptive use of Mekong Basin waters for irrigation and water supply amounted to less than 1%. At 254 megawatts of installed capacity, the degree of exploitation of hydroelectric power

then was also only in the 1% range. Thus, the benefits of the river development projects for energy and irrigation potentials are immense. The installed capacity of the five power projects shown in Table 1 is 18,950 MW. Controlled water flow can allow fabulous increases in per-hectare output of rice and other crops, double-cropping, and millions of tons of increase in annual agricultural output.

Southeast Asia Needs Nuclear Energy

by Marcia Merry Baker

Shown on p. 34 is a photograph of the Guangdong Nuclear Power Station, in Guangdong, China, published on the cover of the March-April 1998 *Nuclear Plant Journal*. The plant, a two-unit pressurized water reactor, from the French company Framatome, with each unit rated at 985 megawatts-electric, is owned and operated by Guangdong Nuclear Power Joint Venture Co.

In the U.S. Atoms for Peace plans, developed in the 1960s, nuclear power plants were seen as the "motors" for "nuplexes": nuclear-power-centered new cities, with complexes of agriculture, processing, and various modern economic activities. Although the nuplex idea fell victim to the anti-nuclear, anti-development movement, it is key for nations that intend to develop.

China has launched an ambitious program to expand its nuclear power base, including research into advanced nuclear plant design. In 1997, construction began on three new nuclear power plants in China. In the same year, South Korea brought a nuclear plant on line, and started construction for