The Mekong River begins its journey in the Tibetan Himalayas, 5000 metres above sea level. Fed by melting snow it tumbles down through the steep mountain gorges of south-western China, gathering power from streams along the way. Where the countries of Burma, Laos and Thailand meet, an area known as 'the Golden Triangle', the river meanders east and south through the highlands of Laos, before carving a 900 kilometre border between Laos and North-East Thailand. In the southern tip of Laos the river sprawls over the Khone Falls and continues to descend through a hundred-and-twenty kilometres of rapids in northern Cambodia. Upon its arrival in Phnom Penh it is joined by the Tonle Sap River, the link between the Mekong and the 'Tonle Sap' or Great Lake. Right after this meeting the Mekong eases its burden down and branches into the Bassac River. Side by side the Mekong and Bassac flow towards the South China Sea but, before reaching it, the two rivers make a final luxurious sprawl to become the 'Nine-tailed Dragon' of the delta in South Vietnam.

The 4200 kilometre Mekong is the longest river in South-East Asia and, in terms of sheer volume of water carried annually to the sea, 475,000 million cubic metres, the river is the tenth largest in the world. The Lower Mekong, scene of the stories in this book, is the 2400 kilometre stretch flowing from the Golden Triangle to the South China Sea. It drains nearly all of Laos, North-East Thailand, nearly all of Cambodia and the delta in South Vietnam. The climate in this part of the world is tropical and the river's annual rise and fall is influenced by two monsoons. The south-western monsoon brings rainfall to most areas four to six months of the year, from May to October.

For this book the Mekong was not travelled in the way one might expect, allowing the course of the river to dictate events and impressions. Imposing and absorbing as the river can be, much of life along the banks and further inland is missed if one keeps to the mainstream. Tributaries, mountain streams and forests are all family of the matriarch; events reverberate back and forth. That is why sometimes readers will find themselves on the bank of a tiny stream high up in forested mountains, as far away from the Mekong as fingertips are from the heart; and at other times in the middle of a marsh that cradles the Mekong floodwaters. They will be sitting in fishing boats and they will be taken to government offices. They will look at a cassava crop on cracked and dried-out soil in North-East Thailand, and at the third rice harvest of the year in the river delta where the Mekong has no beginning or end.

Grand designs
In the 19th century the French ruled three of the lower Mekong countries, Laos, Cambodia and Vietnam, which collectively are still referred to as Indochina. The English ruled Malaysia, Burma and India. The Kingdom of Siam, now known as Thailand, was wedged in between the French and English colonies; by virtue of circumstance and compromise it managed to retain its sovereignty.

The struggle for national independence of the Indochinese countries dates back to the 1930s. The elites of each country were often educated in France and influenced by the likes of Marx, Lenin and Chinese Chairman Mao Tze Tung. At home the language of revolution emanated from the capitals, urban dots in a landscape of mountains, forests, flood plains and rivers. In the aftermath of World War II the French were defeated and forced to withdraw from Indochina, but 'the West' was not prepared to relinquish its influence in this part of the world. In the black and white frames of the Cold War the countries of Indochina, long regarded by the West as outposts
Thailand had been groomed as an ally of the United States, exploited its natural resources, in much the same way as Japan would consume Thailand. Since the early 1950s, France and England had exploited their colonies to fuel their industrializing economy. In the context of boosting agricultural exports the 'Green Revolution' was embraced, a package of high-yielding varieties of rice plus cultivation requirements, developed by the Philippines-based International Rice Research Institute. The new 'miracle' rice seeds doubled and even tripled rice production wherever they received generous applications of chemical fertilizers, pesticides and controlled, perennial irrigation. Development planners of the 1950s claimed that the Green Revolution could transform the rice-growing countries of South-East Asia into 'world food baskets' second only to the Great Plains of the United States. One of the prerequisites for this agricultural revolution was considered to be the harnessing of the Mekong River.

American dam builders had been eyeing the Mekong since the 1940s, when dam building had come into full swing on major American rivers like the Colorado, the Columbia and the Mississippi. As the dam building industry grew, tapping resources at home, it also tapped foreign aid to design river management schemes abroad, based on the US model. The Mekong blueprint is one such example, defining river basin development as a cascade of 'multi-purpose' dams to provide hydro-electricity, flood control, irrigation, improved navigation, and even tourism.

The most influential man in the development of the early Mekong plans was Raymond Wheeler. He was a retired general of the United States Army Corps of Engineers, and led a team of western engineers assessing the Mekong's potential. They recommended not just a series of dams but also the development of agriculture, fisheries, mining and transport. From the American perspective the annual flooding of the Mekong was the biggest obstacle to modernizing agriculture in the Basin. The floods which every year covered millions of hectares of land in a sheet of water, essential for many forms of traditional rice cultivation and for fisheries, were to be eliminated. Instead water would be stored in a series of large reservoirs behind dams and meted out as needed for irrigation of modern export crops year round. The dams, equipped with power stations, were also intended to provide cheap electricity which would drive progress.

In 1957, following the Wheeler mission to the Lower Mekong countries, the United Nations set up the Mekong Committee, officially entitled the 'Committee for Coordination of Investigations of the Lower Mekong Basin'. Its mandate was to promote, coordinate, supervise, and control the planning and investigation of water resources development projects in the Lower Mekong Basin. The governments of Laos, Thailand, Cambodia and Vietnam established their own national Mekong Committees which appointed members to the central Committee. A secretariat was set up in Bangkok, to operate under the auspices of the United Nations. The secretariat was put in charge of consultancies, fund-raising and public relations. Under the rules of the Committee, decisions about damming the Mekong were to be unanimous, with each member country having the power of veto. However, there was to be no statute to bind the members to any international contract.

Once the Committee was set up, engineers from the United States Bureau of Reclamation, the agency that built the Hoover dam in the Colorado River in 1935, plunged into eight years worth of designing the Mekong cascade. The Pa Mong dam, twenty kilometres upstream from the Laotian capital Vientiane, was to be the first dam on the Mekong. Over one hundred metres tall, the dam was meant to regulate two-thirds of the river's flow and was to generate 4800 megawatts. The annual floods were to be held back in a 3700 square kilometre reservoir which would irrigate 20,000 square kilometres of farmland in North-East Thailand and Laos. The planners figured that Pa Mong, together with several other large dams, would relieve 3500 square kilometres of land in Vietnam from flooding, while another 8000 square kilometres in Cambodia and Vietnam could be drained and irrigated.

In its first five years of operation the Mekong Committee was spending roughly US$ 120 million a year, money that was provided by the United States and other western countries including the Netherlands, France, Sweden, Australia and Japan. Confident that the dams could be built for several billion dollars within twenty years, the Mekong Committee promoted the cascade as the key to regional peace and cooper-
Committee from 1986 to 1990. The then Prime Minister of Thailand, Chatichai Choonhavan, coined the phrase 'from battlefield to marketplace', to describe his government's shift from a policy of Cold War hostility towards its neighbours to the promotion of Thailand as the gateway for investment and trade in Indochina. At long last, the 'bamboo curtain' was rising.

Power persuasion
Thailand now had a strong impetus for the Mekong dams. The country was industrializing fast and had an insatiable appetite for electricity. The Electricity Generating Authority of Thailand (EGAT) was forecasting a tripling of demand by the year 2005 and an additional 50,000 megawatts by the year 2035. The dams that EGAT had built over the past 25 years were contributing to about one-fifth of the nation's electricity output. But EGAT was running out of dam sites, and running into public opposition to further dam construction.

With the help of the Mekong Committee, the Thai authorities hoped to persuade the neighbouring countries to cooperate in harnessing the Mekong and its tributaries beyond Thai borders. By 1991 donations to the Committee had climbed to US $35 million. A Canadian engineering firm was hired to give the plans for the Mekong dams a face-lift, to be ready for approval by the Mekong Committee as soon as Cambodia could be officially reinstated. Based on EGAT's projections, the consultants recommended the Thai-Laotian Mekong dams as a complement to the planned expansion of coal and nuclear stations in Thailand.

Since half the hydropower potential in the Lower Mekong Basin, 18,000 megawatts, is found in Laos, Thai officials have been wooing Laotian leaders for several years. To date, the government of Laos seems to be weighing the promised fortune in electricity exports against dependence upon Thailand, and against the burden the dams would impose upon the Laotian people. A cause for concern is the loss of farmland along the Mekong and tributary valleys which would be drowned by the dams. And as Laos is a landlocked country, the Mekong is vital for trade, communications and fisheries, all of which would suffer if the Mekong were blocked by dams.

Meanwhile on the Upper Mekong, the Chinese have beaten the Mekong Committee to the Mekong. The 1250 megawatt Manwan dam in Yunnan province is nearing completion and fifteen more dams are planned. The Chinese dams render the
Mekong Committee in its present form obsolete, a relic of Cold War times when China and the Upper Mekong were rubbed off the maps. But twenty percent of the Mekong's flow drains from Chinese territory; what China does with the Upper Mekong will have an impact on the river, and on the performance of any dams built downstream.

The prospect of dependence on China for regulation of the Mekong has sent shivers right down to the delta. The Vietnamese fear that tampering with the Mekong upstream could reduce the river's flow and dry out the delta, Vietnam's rice-growing heartland. In theory the dams could be operated to avoid a water crisis in the delta. But whether the Chinese or Thai authorities can be relied upon to remember their downstream neighbours is another question. After several decades of squandering water and forests, Thailand is now facing water shortages and the reservoirs of its two largest hydro-electric dams in the North are running dry. The Vietnamese government is worried about Thailand’s plans to pump water from the Mekong in the dry season directly into North and North-East Thailand. And if the Mekong dams were in place, the pressure to exploit the water behind them would only increase.

As Thailand and Vietnam grow thirsty for the Mekong, Cambodia could become the loser caught in the middle. A dam at the mouth of Cambodia’s Great Lake, first proposed by the Mekong Committee in the 1960s, would allow drainage of the lake to irrigate the delta and push back the sea water when the river is low. This proposal and other projected Mekong dams in Cambodia have been scorned by Cambodian officials, because they would destroy the fisheries that thrive in a free-flowing Mekong and Great Lake. Despite this the Mekong dams often crop up in development plans for Cambodia.

Undaunted, and expecting a full-fledged Mekong Committee in early 1992, the Mekong Secretariat announced to the world that it stood on 'the threshold to the future': 'The years of quiet unglamorous research, involvement in non-mainstream projects, and the building of infrastructure leaves the Mekong Committee and the member country committees in Cambodia, Laos, Thailand and Vietnam ready to play leading roles in the rebuilding and development of Indochina.'

The Mekong currency
And so it happened, nearly half a century since first proposed by the American dam builders, that the idea of damming the Mekong regained currency in the 1990s. The revival of the idea provided an important motive for the making of this book.

Over the past half century, the ‘development decades’ of the post-colonial era, high dams have been built to generate hydropower, and often to provide flood control and irrigation. In the Lower Mekong countries as in other parts of the world these dams are a symbol of the drive for industrialization and national independence. At the same time many of them are giving more trouble and less value than expected. Controversy rages in many Third World countries, where the wealth generated by large dams usually flows to urban and industrial elites and influential landowners, at the expense of rural communities.

In Egypt for example, the now twenty year old Aswan High dam stopped the annual flooding of the Nile, which had deposited fertile silt on the fields and had kept the valley productive for thousands of years. Today Egyptian farmers have to use hundreds of kilogrammes of chemical fertilizer to keep just one hectare of irrigated land in production. Millions of dollars are spent annually in the effort to stem the erosion of the Nile delta, which is deprived of silt. When the Aswan dam was finished, ecological changes in the Nile estuary caused the sardine industry to collapse almost overnight. And the silt piling up in the reservoir could eventually change the course of the river entirely. A comparable amount of silt, 135 million tons, is expected to enter the Pa Mong reservoir in the Mekong annually.

The Hoover dam, built in 1935 on the Colorado River by the United States Bureau of Reclamation (USBR), is one of the world’s original superdams. With the Hoover dam and the network of dams and canals that followed, the American West was colonized and irrigated, enriching corporate landowners and giving life to desert cities and industry. It is the USBR model of colonizing river valleys that inspired the creation of the Mekong Committee. But the success story hides the fate of the native Americans who lost their hunting and fishing grounds. Moreover, latter-day Californians are now saddled with one of the most profligate and expensive waterworks in the world. Half the water from the Colorado River is now used for irrigation and where the river meets the sea it is a lifeless trickle.

In Pakistan, a series of large dams built on the Indus River has deprived the delta of fresh water and silt deposits which kept the Arabian Sea at bay. As a result, the 3000 square kilometre
Chinese government has forcibly resettled about ten million people to make way for dams; up to forty percent of them remain impoverished, without adequate land or shelter. In central Java 5000 families are losing their rice fields to the Kedung Ombo irrigation dam, first proposed by Dutch engineers in the 1930s. The government claims that 20,000 families living downstream of the dam will benefit from the irrigation water. Those upstream receive a pittance in cash and a barren scrap of land if they are lucky. When, in 1991, 600 families were still protesting their eviction, President Suharto's response was that 'development requires sacrifice'. By damming the Mekong and its tributaries, development will be brought to the 50 million people living in the Lower Mekong Basin, so the dam builders say. The currency of this development is megawatts and money. The Mekong Currency is the story of the river's wealth, its currency of silt, floods and fisheries, replenished and distributed to millions of people every year. It is a story of the river's currency working for people, and of people working with this currency. From tributary trickles in the Laotian highlands to the wide delta waters in Vietnam people are fishing, working the fields, travelling in boats, swapping goods and news, rebuilding their lives after years of war and upheaval. Judging from the past, development as proposed for the Lower Mekong Basin could be at the expense of such communities. Here, people have continually adapted methods of cultivation and fishing to the seasonal temperament of the waters, distinguishing between the beneficial and damaging floods, and making provision in their lives for the vagaries of weather and water. Finding new paths in the Lower Mekong Basin should begin with these farmers and fishers, whose livelihoods are sustained by the Mekong, who know the river's currency best and value it for all it is worth.

delta has shrunk to 250 square kilometres and has been poisoned with salt. Its remaining tamarisk and coastal mangrove forests, vital to fisheries, are endangered. Silt is proving the bane of large dams. The two largest dams on the Indus River which produce forty percent of Pakistan's electricity could be inoperative in less than two decades because of silt build-up in the reservoirs. In China the Sanmenxia dam on the Yellow River has been completely rebuilt twice and still has to be taken out of operation every year to flush the yellow silt from the reservoir. The Hoa Binh dam in northern Vietnam, the largest hydro-electric dam in South East Asia, could be crippled by silt in 25 years. In the muddy waters of the Mekong, dams may not be the source of renewable energy as promised after all. Perhaps the biggest thorn in the side of dam builders in this part of the world are the people who live and farm in the river valleys slated to be drowned. By all accounts the record on resettling people to make way for dams is one of failure. From 1960 to 1970, 15,000 farming families were left landless as a result of failed resettlement schemes in North-East Thailand. The 58,000 people displaced by Vietnam's Hoa Binh reservoir in 1988 used to grow two rice crops a year in the Da River valley. Now they are hungry, trying to scratch food from denuded mountain sides surrounding the reservoir.

In the Narmada River valley of India thousands of farming families are protesting the Sardar Sarovar dam which, if completed, would displace more than 100,000 people. In China more than one million people face eviction from their homes along the Yangtze River to make way for the Three Gorges dam and its 600 kilometre long reservoir. If completed, the 17,000 megawatt dam would be one of the world's largest hydro-electric complexes. Like the Mekong cascade, it was a pet project of the USBR in the 1940s. Since the 1950s the