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Design by Mark Turgesen • Photography by Sayan Chuenudomsavad (inside cover, ii, viii, x, 3,10,14, 18, 26, 32, 34, 44, 52 and back cover), Robert Linder (vi), Arian Zwegers (28) and MRC Archives (all other photos).

Cite this document as: Mekong Basin Planning: The Basin Development Plan Story. Mekong River Commission (2013).

Contents

List of acronyms	i
Summary	ii
1 Introduction	1
2 The planning context: the physical river and its environment	3
3 The planning context: the people of the river and their history	12
4 Planning history: 1945 to the 1995 Mekong Agreement	18
5 Planning context: evolving paradigms as the 20th century waned	26
6 Basin development planning since the start of the 21st century	34
7 Conclusion: the future of the Basin Development Plan?	44



List of acronyms

ASEAN	Association of Southeast Asian Nations
AusAID	Australian Agency for International Cooperation
BDP	Basin Development Plan Programme (of the MRC)
BDP1	Basin Development Plan Programme Phase 1 (2001-2006)
BDP2	Basin Development Plan Programme Phase 2 (2007-2011)
BDP 2011-2015	Basin Development Plan Programme 2011-2015
Danida	Danish International Development Assistance
ECAFE	Economic Commission for Asia and the Far East (now ESCAP, of the UN)
ESCAP	Economic and Social Commission for Asia and the Pacific (of the UN)
GMS	Greater Mekong Subregion
IMC	Interim Mekong Committee
IWRM	Integrated Water Resources Management
JC	Joint Committee (of the MRC)
Km	Kilometre
Km ²	Square kilometre
Km ³	Cubic kilometre
LMB	Lower Mekong Basin
MC	Mekong Committee
MRC	Mekong River Commission
MRCs	Mekong River Commission Secretariat
MW	Megawatt
NMC	National Mekong Committee
NMCS	National Mekong Committee Secretariat
RBO	River Basin Organization
Sida	Swedish International Development Cooperation Agency
UMB	Upper Mekong Basin
UN	United Nations
UNDP	United Nations Development Programme
US	United States
USA	United States of America
TVA	Tennessee Valley Authority
\$	United States dollar



Summary

The Basin Development Plan (BDP) Story

In their 1995 Mekong Agreement, the Lower Mekong Basin (LMB) Countries of Cambodia, Lao PDR, Thailand and Viet Nam established the Mekong River Commission (MRC) and agreed (Articles 1&2) to *‘cooperate in all fields of sustainable development, utilisation, management and conservation of the water and related resources of the Mekong River Basin...’* The Basin Development Plan (BDP) is a primary instrument for the implementation of that cooperation, *‘used to identify, categorize and prioritize the projects and programs to seek assistance for and to implement at the basin level’*.

This Story describes the BDP within the context of the history of the Lower Mekong region and the history of river basin planning and development. An understanding of the past and the wider context will assist with the determination of future directions for the BDP. The Story concludes by exploring a possible future for the BDP.

The Mekong River

One of the world's great rivers on every scale, the Mekong River has high inter-seasonal variation in flows (varying up to fifty-fold between wet and dry season), fed by the southwest monsoon. The cycling of flooding and drought has created a rich ecology, but also difficult conditions for human settlement, which correlate with poverty and restricted economic growth in other regions of the world. While the River is a source of life and production, it can also be a cause of loss and devastation, unless carefully managed.

Management and development of the River remains limited today, in part due to unregulated river flows. The vast floodplains in Cambodia remain largely undeveloped and only a small proportion of the irrigation, hydropower and navigation potential has been realised in the basin. The River remains mostly in its natural state, supporting rich fisheries and extraordinary biodiversity that development could affect.

The people of the river and their history

Archaeological evidence shows a long relationship of several millennia between organised societies and the River, and correlation between significant monsoon shifts and the rise and fall of civilizations.

However, it is the history of the last 125 years that provides the essential backdrop for this Story. A century of conflicts (colonial, world wars and regional conflicts driven in part by global confrontations) ended in 1989. Although poverty in the Mekong region (particularly in Thailand and Viet Nam) has declined significantly with economic growth in the last 30 years, much of the LMB remains among the world's poorest areas. Some 85% of its population lives in rural areas. Safe water supply and all-weather roads reach only 50% of households, and electricity consumption is only 5% of that of the industrial world. Floods and droughts claim lives and property and cause major economic losses.

An era of stability and normalised relationships has provided a platform for economic diversification, growth and integration, with associated increases in water, food and energy demand. The River has a part to

play, with all national plans incorporating hydropower development and irrigation expansion. While such development is essential, there are social and environmental costs and other trade-offs that need to be balanced and managed.

Planning history: 1945 to the 1995 Mekong Agreement

In 1945, at the end of the Second World War, the River was little understood and undeveloped. The United Nation's engagement began with the creation of the regional commission in 1947 and, in 1952, a report on Mekong flood control and river development. This was to be the first planning report of many over a forty year period which saw the creation of a knowledge base and the preparation of major energy and agriculture development projects, but only limited development on the tributaries. The foundation for Mekong cooperation was laid in 1957 with the establishment of the Mekong Committee (MC) and National Mekong Committees (NMCs), followed in 1959 by the UN appointment of the first Executive Agent and staff to manage the MC's work (the first Secretariat).

In 1970, following 12 years and \$60 million on investigations, the 1970-2000 Indicative Basin Plan proposed tributary and mainstream development in 180 projects. This included a \$2 billion short-term (to 1980) programme, with 0.7 million hectares of irrigation expansion and 3,300 megawatt (MW) of tributary hydropower, followed by a \$10 billion long-term (1981-2000) programme, including 17,000 MW of hydropower, with a cascade of mainstream dams (including the 4,800 MW Pa Mong dam) which would also extend navigation by 800 km.

Action stalled due to political conflicts in the region, although some tributary projects in Lao PDR and Thailand were implemented. In 1975 the MC signed a Declaration of Principles with robust rules, particularly on mainstream development. Renewed internal conflict in Cambodia in 1976 led again to stalled engagement. Lao PDR, Thailand and Viet Nam established the UN Interim Mekong Committee (IMC) in 1977; Cambodia was to be absent for 14 years, restricting further consideration of actions on the mainstream.



By the 1980s, 16 mainstream projects had been evaluated and 5 prioritised, including Pa Mong, whose investigations started in the 1950s, feasibility was completed by the US Bureau of Reclamation in 1971, and priority (for 'Low Pa Mong' with greatly reduced resettlement) was reaffirmed by the IMC in 1987. The 1970 Indicative Basin Plan was completely revised in 1987, with a 1987-2000 investment plan. Cambodia re-engaged following stability in the country and the Paris peace agreement of 1991. Negotiations began in 1994 for a new agreement that would take the Mekong Committee out of the UN system and create a separate inter-governmental organisation under international treaty law. The 1995 Mekong Agreement was the start of a new era of Mekong Cooperation.

Planning context: evolving paradigms as the 20th century waned

Regional and global political realities, including conflict and the engagement of external actors with shifting agendas, created a situation where extensive Mekong River planning was undertaken between 1956 and 1995, but very little Mekong River development resulted. With greater political stability, it is possible that at least some of the planned development would have taken place during this period. The outcomes of such development, both positive and negative, can only now be speculated upon.

In comparison, during this same period, today's industrial nations were investing heavily in water infrastructure. Today the US has about 8,000 large dams and 80,000 dams on the national register. In 1965, US President Johnson advocated a Mekong River programme that would 'dwarf the Tennessee Valley Authority'. Other industrial countries had similar programmes – particularly those with highly variable river regimes, such



as Japan, Australia and Spain. At the same time, major hydropower and irrigation infrastructure was also constructed in developing countries in Africa, Asia and Latin America, typically with international finance.

In the final decades of the 20th century, as the water infrastructure platform in most industrial countries was achieved and

returns on new development diminished, investment slowed and largely stopped. At the same time, the long-run social and environmental costs of this infrastructure became clearer, societal values shifted with growing wealth, and emphasis was placed on achieving environmental objectives. While this is laudable, the situation in most poor countries is very different, and particularly in the LMB due to its unique 20th century history. Nevertheless, there are strong pressures today on the LMB to adopt a different development path to growth to that taken by industrial countries.

The Basin Development Plan

The mandate for the BDP is clearly framed in the 1995 Mekong Agreement. Despite this, it was late 2001, six years after the Agreement, before formulation of the BDP finally began. This was attributed to different perceptions on basin planning among riparians, weaknesses in the MRC Secretariat (MRCS), and differing views of development partners on the BDP.

BDP's first phase (BDP1) focused primarily on planning processes and tools, including a knowledge base and modelling capability, and on non-controversial projects, and on building relationships. These are necessary but insufficient conditions for cooperation and development, which also requires products – actions and outcomes. BDP1 ended after 5 years and the next phase, BDP2, was launched at the end of 2006.

By 2006, the LMB had changed greatly, with water investments in national programmes taking place, due to rapidly growing water, food and energy demand and growing private sector involvement particularly in hydropower and commercial agriculture. This shift from dependence upon multilateral banks and their safeguards underscored the need for strengthened national regulatory frameworks. BDP2 moved beyond process alone, to a focus on water development at national and regional level, without returning to the earlier almost exclusive focus on water infrastructure. Mekong development was happening and it was imperative to ensure that the move to coordinated and cooperative development took



full account of transboundary, social and environmental impacts and led to substantive, positive development outcomes.

The primary product at the end of BDP2 was the Basin Development Strategy. The Strategy was a consensus product that described strategic priorities for basin development and for basin management, specifically in order to move identified development opportunities to implementation. The Strategy was adopted by the MRC member countries in January 2011, 15 years after the Mekong Agreement was signed. This was an important milestone, re-introducing a focus on water development to support poverty reduction and economic growth, complementing and not replacing the focus on water management.

Launched in 2011, BDP 2011-2015 is overseeing the implementation of the Strategy over a 4 year timeframe in cooperation with other MRC Programmes, working with national line agencies, river basin organisations and others. The BDP Programme will lead the work on addressing avoidance/mitigation of adverse impacts of water resources development and exploring a mechanism for the sharing of transboundary benefits, impacts and risks of current and planned developments.

The future of the Basin Development Plan

A primary task for the BDP is to seize the opportunity that now exists to move Mekong Basin development forward, an opportunity that was sought but always missed during more than 40 years of planning in the 20th century. But in seizing this opportunity, the social and environmental costs that rich countries incurred in their paths to growth need to be identified and minimised.

Much of this development can and should be undertaken at the national level, with the BDP acting as the instrument for impact analysis and consultation, and for exploring ways to achieve transboundary benefits through the adaptation and modification of national investments.

However, there are likely transboundary opportunities where two or more LMB countries could develop joint projects that provide substantial incremental benefits that can be shared. The only mandated instrument for

identifying and promoting such opportunities is the BDP. This is an area largely unexplored since the 1995 Mekong Agreement and the time is now right to begin this exploration.

The BDP is explicitly the instrument for cooperation in the development of the Mekong beyond the nation state (*'at the basin level'*), specifically mandated action in the Agreement. During the last ten years the BDP has laid a solid foundation to fulfil this mandate.



1 Introduction



This booklet

This booklet aims to inform a wide, non-specialist audience about river basin planning for development in the Mekong River Basin in general, and about the Basin Development Plan (BDP) Programme of the Mekong River Commission (MRC) in particular. This audience is first and foremost in the Mekong Basin countries, but also in those countries that support the Basin countries, as well as in the wider world wherever there is an interest in the Basin and its future.

The Story of the BDP and the MRC is, in large part but not exclusively, a story of the Lower Mekong Basin (LMB), comprising Cambodia, Lao PDR, Thailand and Viet Nam. The Mekong's upstream countries of China and Myanmar are 'Dialogue Partners' but not members of the MRC.

In telling the BDP Story, the context of this extraordinary Basin is set out concisely and effort is made to describe important facts and concepts that underlie the BDP. In concluding, possible future directions for the BDP are explored. There will be other rational views, particularly when it comes to the trade-offs always present in water management and development. Misperceptions, however, need to be replaced with facts, lest they create mistrust and fears in an environment where trust, understanding and a shared vision are goals in themselves.

The Mekong and the Basin Development Plan

The Mekong River and its Basin are of global importance. In geographic terms it is one of the world's great river basins, but it is also one of considerable complexity. In historic terms, it has seen great civilizations, as well as great conflicts. In economic terms, much of the Basin remains little developed today, some of its inhabitants are among the world's poorest people, and its potential to contribute to development and growth is very great. In environmental terms, it has a rich biodiversity, with a wide range of ecosystems and iconic species of local, regional and global importance.

In political terms, it is a shared asset of countries and cultures that have had a very long and, since the 19th Century, a very difficult past. The LMB countries of Cambodia, Lao PDR, Thailand and Viet Nam now have a new future in which they have agreed to *'cooperate in all fields of sustainable development, utilisation, management and conservation of the water and related resources of the Mekong River*

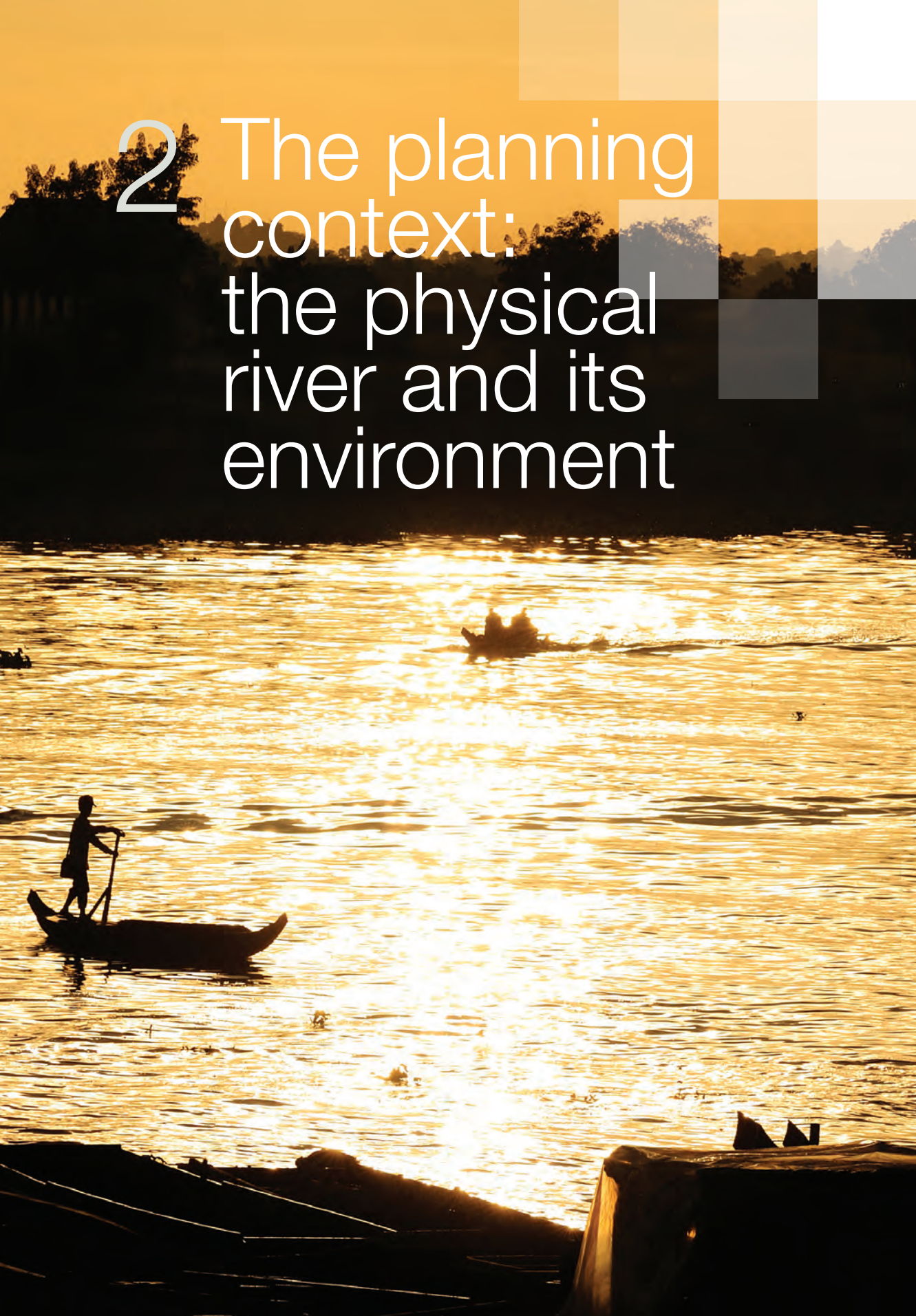
*Basin...'*¹. The Basin Development Plan (BDP²) is a primary instrument for the implementation of that cooperation, *"used to identify, categorize and prioritize the projects and programs to seek assistance for and to implement at the basin level"*. The Plan is to *"promote, support, cooperate and coordinate in the development of the full potential of sustainable benefits to all riparian states"*.³

The development of the Basin Development Plan needs to be set in the context of the geographic, historic, economic, environmental and political challenges of the Mekong River.



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1. 1995 Mekong Agreement, Cambodia, Lao PDR, Thailand and Viet Nam; excerpt from Article 1 (1995).
 2. A distinction should be noted between the Basin Development Plan as a "plan" versus the Basin Development Plan Programme as the MRC entity entrusted with preparing and overseeing the "plan" – the latter is generally referred to in this Story by reference to the entity's phase of work, ie BDP1 (2001-2006), BDP2 (2007-2011) and BDP 2011-2015. Currently there is only one Basin Development Plan produced, being that prepared by BDP2. BDP 2011-2015 will oversee implementation of this "plan" and prepare, by 2015, an updated "plan".
 3. 1995 Mekong Agreement, Cambodia, Lao PDR, Thailand and Viet Nam; excerpt from Article 2 (1995).

2 The planning context: the physical river and its environment





The Mekong River Commission makes no warranties about the data delineated on this map and disclaims all responsibility and liability for all expenses, losses, damages and costs which may be incurred as a result of the data being inaccurate or incomplete in any way and for any reason.

The boundaries are not necessarily authoritative.

A world-class river

The Mekong is one of the world's great rivers. Like other great rivers, such as the Ganges-Brahmaputra, Indus, Euphrates-Tigris, Nile, Congo, Mississippi, Colorado-Rio Grande and Amazon, it rises in high mountains, traverses a floodplain and enters the sea via a wide delta, each landform with its own opportunities and challenges.

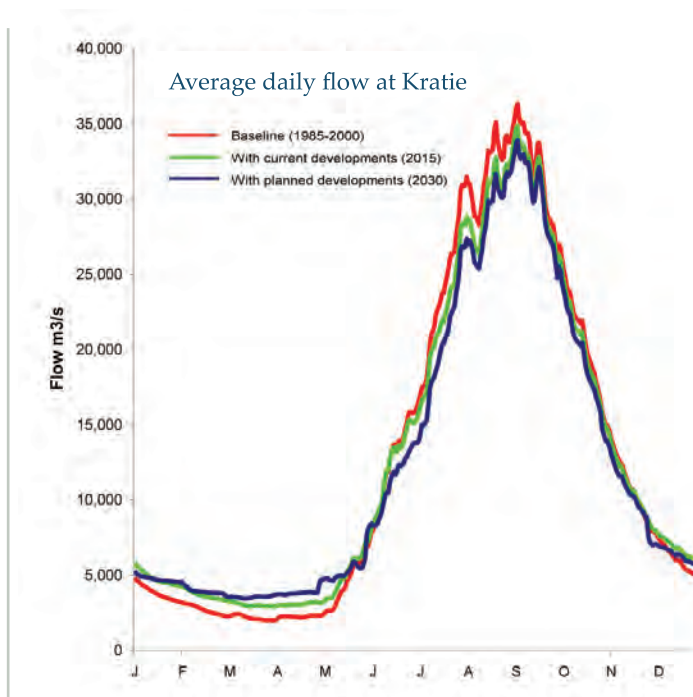
The Mekong is a river of superlatives. Rising at about 5,000m in the Himalayas, it is the world's 8th longest river, flowing for almost 4,900 km through China, Myanmar, Lao PDR, Thailand, Cambodia and Viet Nam into the East Sea (more commonly known as the South China Sea), via a large delta. It has the world's 10th largest flow, with a mean annual discharge of approximately 475 km³, and its basin is the world's 30th largest by area, draining 795,000 km². But the Mekong has the greatest mean annual flow in the world for a river basin of comparable size.

The flow from the Upper Mekong (named the Lancang in China) Basin contributes 16% of the average annual flow in the LMB⁴, but up to 30% of dry season flow. The river is navigable for sea-going vessels up to 5,000 deadweight tonnes from its mouth to Phnom Penh in Cambodia. All other stretches are navigable by smaller inland barges, except for the stretch just downstream and upstream from the Khone Falls, which forms the border between Cambodia and the Lao PDR. Most commercial shipping is conducted in the Mekong Delta and between Chiang Saen, Thailand and Guan Lei, China.

A highly variable and largely undeveloped river

The southwest monsoon creates large intra-annual variations in river flows, flooded areas, and the start and end of the wet and dry seasons, common to most sub-tropical rivers. At Pakse in southern Lao PDR, mainstream river flows can vary in extreme fifty-fold between the wet and dry season. The seasonal cycling of water levels at Phnom Penh causes the large water flow reversal to and from the Tonle Sap Lake via the Tonle Sap river, with the associated flooding and drying creating a rich ecology that underpins the livelihoods of millions of rural people. Wet season flooding, although

4. Contribution as measured at Chiang Saen within LMB; estimated to be 13.5% at the border with China.



bringing many benefits, can also be very severe and destructive. In contrast, drought is common in the dry season, impacting crop production, restricting navigation, and causing saline intrusion in the delta.

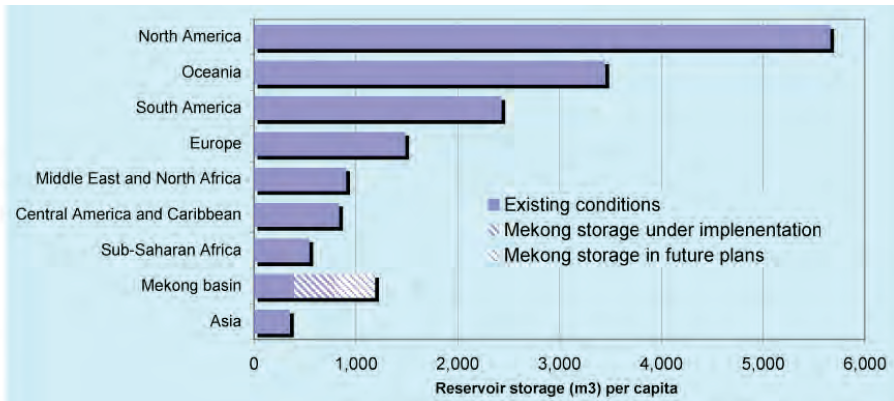
Such large seasonal variations in rainfall and runoff are termed by some as ‘difficult hydrology’, which, without significant investment in institutions and infrastructure, correlates with widespread poverty and restricted economic growth around the world.⁵ Those parts of the world that industrialised early only rarely have this ‘difficult hydrology’, and were typically able to follow a development path in which water infrastructure was rapidly completed and sophisticated water institutions are now able to manage water-related societal objectives.

This situation in the Mekong Basin is very different. Until recently, existing reservoir storage has been less than 5% of the Mekong’s mean annual flow, insufficient to redistribute water significantly between seasons. As a result, the flow regime in the Mekong mainstream has remained close to its natural state, and efforts to reduce the vulnerability to droughts and major floods have primarily been by non-structural measures.

However, current reservoir developments, particularly those in China in

5. Sink or Swim? Water security for growth and development; David Grey and Claudia W. Sadoff; Water Policy 9 (2007), pp 545-571.

Comparison of reservoir storage available per capita



Source: Water Storage in an Era of Climate Change: Addressing the Challenge of Increasing Rainfall Variability. Matthew McCartney and Vladimir Smakhtin, IWMI Blue Paper, 2010, with Mekong data added from BDP data.

the Upper Mekong, are set to raise storage in the basin to 10% of the mean annual flow (with future planned developments increasing this to 15%), resulting in a departure from the long-held natural state whilst creating new opportunities for water use in the dry season.

This is nevertheless in sharp contrast to the much larger reservoir storage in river basins with similarly variable river flow in wealthy countries. The Colorado river in the USA and the Murray-Darling river in Southeast Australia have 250% - 300% of mean annual flow in reservoir storage, harnessing water for growth and reducing water-related shocks so that most (but not all) impacts are manageable.

However, the society-wide benefits of achieving such an outcome must be considered in light of the trade-offs with potentially high environmental and social costs at multiple scales – a consideration insufficiently accounted for in the past by today's industrialised countries. The natural value of the Mekong system remains substantial compared to those in industrialised countries, where in many cases much investment is now being made to restore and preserve lost ecosystems. Furthermore, the natural ecosystem of the Mekong remains important for the large and vulnerable rural population whose livelihoods and nutrition are dependent upon it.

The water resources potential of the Mekong Basin has been largely undeveloped relative to most other international river basins. While the surface waters of the Basin are known to have considerable development

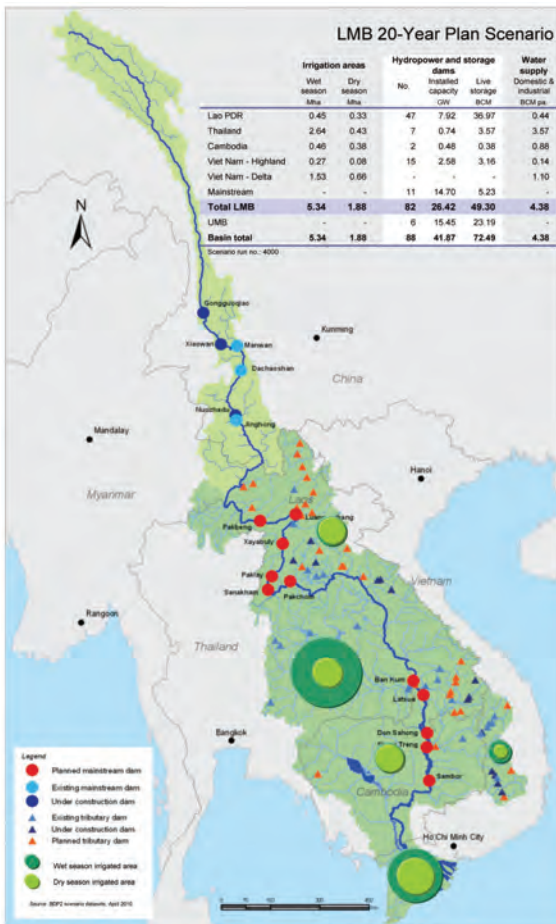
potential, groundwater potential also deserves careful assessment, as its present use in the Basin is minimal, except in Northeast Thailand and Viet Nam where surface water is scarce during the dry season. The challenge is to plan and manage water development carefully, learning from good and bad experiences elsewhere and ensuring optimised outcomes for society and the environment. In the Mekong Basin (as elsewhere), this is not a simple challenge, but it is one that must be faced.

The river's role in key economic sectors

Agriculture is the dominant water-related sector in the Basin, intensively developed in Thailand and Viet Nam and much less so in Cambodia and Lao PDR. Overall, the dry-season irrigated area of about 1.2 million hectares is less than 10% of the total agricultural area in the LMB of 15 million hectares. Expansion of the present levels of irrigation is constrained by limited and largely unregulated dry season flows (new reservoirs in the basin will substantially alleviate this) and the cost of abstracting from the mainstream. Flows reaching the Viet Nam Delta are fully used for economic, environmental and social purposes, including combating seawater intrusion.

The full hydropower potential of the LMB is estimated at over 30,000 MW, with 10% of this developed to date. Low levels of electrification, particularly in

rural areas, growing electricity demand across the region, and increasing private sector interest in investing all mean that much more of this potential will be developed, as it has been in industrialised countries.



Navigation is potentially important but largely undeveloped as an integrated transport sector. Upstream of Phnom Penh, inland barge size is entirely dependent on the season, with access in the dry season between 50 and 300 tons, and in the wet season between 150 and 400 tons.

Water resources have been developed on a small scale for the improvement of wetlands. Aquaculture is increasing fast, particularly in the Viet Nam Delta, where it has risen from 200,000 to 2 million tons per year since 1990. The Mekong today contains the world's largest natural fresh water capture fishery of about 2.3 million tons per year. River-related tourism is already important for national revenue and local income generation and has the potential to grow.

The average annual withdrawals for agricultural, industrial and other consumptive uses in the LMB are about 60 billion m³, or 12% of the Mekong's average annual discharge. Most water is used in the Mekong delta in Viet Nam, where water resources development began over a century ago. Mainstream diversions from the river upstream of the delta are negligible. Dams built since the 1960s for irrigation divert part of the wet-season flow and the very low dry-season flow of Thailand's Mekong tributaries.

A natural river environment under growing pressure

After the Amazon, the Mekong is the second most bio-diverse river in the world. At this relatively early stage of its development, the river has largely been resilient to human-induced pressures. The flow regime of the mainstream is mostly in its natural state, although this is beginning to change with the construction of dams, most notably those in the Upper Mekong. Tributary dams are increasingly impacting on the connectivity with the mainstream.

Water quality is generally good, except in the Delta and some tributary basins with extensive development, where high nutrient levels are a cause for concern.

The river's annual flood pulse continues to support a rich fishery, although



there are reports of declining catches. However, the outlook for the basin's forests is not so positive, with increasing demand for timber and land causing deforestation and soil degradation.

Basin fauna, including 14 critically endangered species, 21 endangered species and 29 vulnerable species, are threatened by rapid developments that will alter habitats and mechanisms which sustain high ecosystem productivity.

The great challenge for the future is to be able to respond to growing pressures arising from population growth, urbanization, industrialization, and the increasing and changing demands associated with growing economies (food and energy security, access to safe water supplies and sanitation, etc). Meeting this challenge requires careful management of the inevitable trade-offs between river development and the environment, ensuring positive outcomes for poverty reduction and growth as well as for conservation and sustainability. These objectives are often perceived to be in opposition by advocacy groups. Well managed, they are converging objectives, as the greatest threat to the environment is sustained poverty and associated marginalisation and exclusion, together with the conflict that likely will follow this.

3 The planning context: the people of the river and their history



Early history and the Mekong: ‘hydraulic societies’

The river and its tributaries have supported complex civilizations for millennia, with growing archaeological evidence⁶ of several thousand years of organised societies with rice culture. There is evidence that the Mekong has been at the centre of great movements of people across the sub-continent. It has long been both a source of production and prosperity, as well as one of destruction and collapse.



The iconic Khmer kingdom of Angkor, at its peak from the 9th to the 14th centuries, depended on monsoon flooding to fill complex hydraulic structures feeding its large

6. See publications of the Middle Mekong Archaeological Project, e.g. Archaeological investigations in northern Laos: new contributions to Southeast Asian prehistory; Joyce C. White, Helen Lewis, Bouasisengpaseuth, B., Marwick, B., and Arrell, K.; *Antiquity* Vol 83 Issue 319 (March 2009).

urban complexes and agricultural systems. Recent research⁷ concludes that decades of weak monsoons with occasional extreme wet episodes contributed to the collapse of Angkor during the mid 14th to early 15th centuries. In addition, a similar period of weak monsoons in the mid 18th century coincides with the collapse of all major regional kingdoms in the Mekong region. This evidence that major long-term monsoon shifts associated with ocean-atmosphere dynamics have had huge impacts in the past offers hints of future risks and the need for science, policy and planning to predict, manage and mitigate such risks.

Recent Mekong history: the colonial and Indochina wars

The Mekong Basin has had a long history of conflicts, which is not in itself unique. However, its recent history of local conflicts interwoven with broader global conflicts of superpowers and ideologies is particularly complex and this provides an important backdrop for this Story.

In the second half of the 19th century, wars of French colonization led to the incorporation of Viet Nam and Cambodia (1887) and Laos (1893) into French Indochina. In addition, confrontation between Britain and France led to Britain controlling Burma (now Myanmar) and aligning with Siam (now Thailand) on the right bank of the Mekong, with France on the left bank. Japan occupied Indochina, displacing France and Britain, from 1940-1945, during World War 2.

Indochinese wars between 1946 and 1989 directly involved, at different times, Viet Nam, Cambodia (Kampuchea 1979-1989), Laos, France (1946-1954), USA (1955-1973) and China (1979). Other countries were also indirectly involved in what was a local stage for global confrontations, initially of colonialism, and then of political and ideological systems in the 'cold war' period.

In 1989, peace came at last to the Mekong Basin and has provided stability and the first opportunity for real and effective cooperation between Cambodia, Lao PDR, Thailand and Viet Nam. While scarring caused by long periods of instability and conflict clearly remains, not least in the

7. Climate as a contributing factor in the demise of Angkor, Cambodia; B. Buckley, K. Anchukaitis, D. Penny, R. Fletcher, E. Cooka, M. Sano, Le Canh Nam, Aroonrut Wichienkeeo, Ton That Minh, and Truong Mai Hong. *Proceedings of the National Academy of Sciences*, Vol. 107, No. 15. (13 April 2010), pp. 6748-6752.

continued physical presence of unprecedented quantities of unexploded ordinance (especially in Lao PDR), development and integration is assisting the healing process. The Mekong River plays an important role in the region, as it always has done and it always will do.



Social dimensions of water resources development in the Mekong today

Despite impressive economic growth over the past decade within the basin countries, with significant advances in poverty reduction in Thailand and Viet Nam in particular, much of the LMB is among the world's poorest areas. Food security and malnutrition pose great challenges.⁸

The total population of the LMB is about 70 million, with population growth of 1-2% in Thailand, Viet Nam and Cambodia, and 2-3% in Lao PDR. Although urbanization is occurring in all LMB countries, about 85% of the basin's population lives in rural areas. Many are subsistence farmers, who supplement what they grow with the fish they catch and the food and other materials they gather from forests and wetlands. This makes the rich ecology of the Basin extraordinarily important in terms of its contribution to livelihoods, particularly of the poor.

Over 25% of the population of Cambodia and Lao PDR has an income below the poverty line, with much higher percentages in many rural areas. Food security and malnutrition pose great challenges. About half of all households have no safe water supply and half of all villages are inaccessible by all-weather roads. In much of the Mekong Basin, electricity consumption is less than 5% of that in the industrial world.⁹

In tackling persistent widespread poverty in their rural areas, Mekong countries have to contend with the devastating effects of periodic severe droughts and floods which claim lives, destroy property and infrastructure

8. State of the Basin Report 2010; Mekong River Commission (April 2010).

9. United Nations Development Programme, Human Development Report (2007/2008).

and cause substantial economic losses. Climate change could increase the frequency and intensity of tropical storms, floods and droughts.

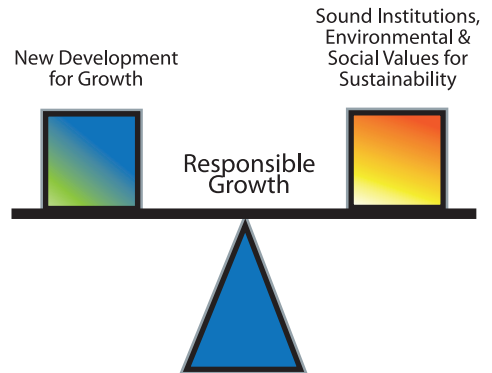
Those areas with the most intensive water resources development - Northeast Thailand and, particularly, the Viet Nam delta - have witnessed strong economic growth during the last two decades. The Viet Nam delta is now one of the world's most productive agricultural and aquaculture areas. While biodiversity has suffered, thriving fisheries in rainfed rice fields, associated habitats and reservoirs, as well as increasing aquaculture production in Thailand and Viet Nam result in the highest fish yields in the basin.

Water development and tradeoffs

Economic growth across the LMB is expected to continue, supported by economic diversification, regional economic integration, and investments in infrastructure and human resource development. Lao PDR and Cambodia seek to graduate from least developed country status, while Viet Nam seeks upper middle-income status by 2030. Increasing populations and living standards and growing economies will accelerate food and electricity demand.

Today, all LMB governments recognise the economic potential of their water resources to contribute to growth, poverty reduction and livelihoods. All national plans include: water supply for drinking and irrigation; flood management; hydropower generation; fisheries; and other uses of Mekong water. In many of these areas, private sector investment is now greater than public sector investment. Hydropower development by the private sector is accelerating, particularly on Mekong tributaries in Lao PDR, where it will become an important source of revenues.

National development plans will bring with them both synergies between water resources developments, and trade-offs,





where benefits for one area or activity create costs for another. For example there can be synergies between hydropower, irrigation and upland watershed management - with some benefits occurring for all. The most significant transboundary trade-offs will typically involve hydropower benefits and inevitable costs caused by the obstruction of fish migration routes and loss of biodiversity.

Identifying and capturing synergies and managing trade-offs, including measures to mitigate or offset the impacts of development, are at the heart of good water resource planning. This requires substantial institutional capacity for decision support analysis and consultation, both at the national and LMB levels, with particular effort at the latter to support principled negotiations.

The scale of the trade-offs that need to be negotiated can be dramatically reduced through innovative approaches, including institutional and governance mechanisms such as community participation, asset ownership and benefit sharing and technical solutions such as flexible and multi-objective design and offset arrangements.

4 Planning history: 1945 to the 1995 Mekong Agreement¹⁰

Earliest planning: the “Mekong Project” to 1957 and the Mekong Committee

At the end of the Second World War in 1945, the Mekong River was undeveloped and its hydrology little understood, with about 0.6% of its flow used for irrigation and water supply and no installed hydropower. The next half century saw massive planning efforts, but little river development.



Opening of Mekong Committee office in Bangkok by Dag Hammarskjold (left), Secretary-General of the United Nations, 1959

The UN Economic Commission for Asia and the Far East (ECAFE – now ESCAP), established in 1947, set up a Bureau for Flood Control in 1949, charged in 1951 with studying floods in international rivers. In 1952, the Bureau presented a first report on LMB flood control and water resources development, proposing intensive studies to

10. The Mekong Committee: A Historical Account (1957-89); section 4; Mekong Secretariat (1989).

fill knowledge gaps. However, as was to happen often in subsequent years, the political situation in Indochina prevented action. In addition, China did not participate, as it was not a member of the UN, and Burma (Myanmar) did not express interest in doing so.

The situation changed with the emergence of independent Cambodia, Laos and Viet Nam in 1954. The US Bureau of Reclamation began studies in 1955, leading to the influential 1956 “Reconnaissance Report – Lower Mekong Basin”, which emphasised the need for extensive data gathering and for studies on agriculture, fisheries, navigation and education. This was a first ‘Mekong basin planning’ document.

Following a 1956 ECAFE mission working with the four LMB governments, in 1957 ECAFE adopted a report “Development of Water Resources in the Lower Mekong Basin”, in parallel with a Joint Declaration of the four LMB countries that “studies be continued jointly to determine.... in what measure the various projects... can be of use ...”. The ECAFE report broke new ground by advocating an institutional framework of the four countries for cooperation in data collection, planning and development. The timing was right and the Joint Declaration led to a meeting of country experts that recommended a “Coordination Committee”.

This was followed by a meeting of country representatives in Bangkok in September 1957 that adopted the “Statute of the Committee for Coordination of Investigations of the Lower Mekong Basin”. The Mekong Committee (MC) was thus established. With its members having plenipotentiary authority, the MC remained the central institution for LMB cooperation, and for supporting its member states whose capacity was limited, for the next 37 years, with a particular period of difficulty described below.

The journey to the first Basin Plan, 1957-1970

As the UN’s first engagement in river basin planning, considerable effort was focused on moving the Mekong agenda. In 1957, France, Japan and the USA committed initial funding. In the same year, National Mekong Committees (NMCs) were established as the link to national policies and programmes. In 1959, a first Executive Agent was appointed, responsible for technical and administrative management of the MC’s work.

The UN provided staff to the Agent, which was the foundation of the future Mekong Secretariat. The MC increased its scope over time, with amendments allowing it to receive and administer funds from donors and to acquire title to property (1962).

In 1965, the official title of the MC changed to “Committee for Coordination of Comprehensive Development of the LMB” – a significant shift beyond “investigations”. A 1958 mission by General Raymond A. Wheeler of the US Army Corps of Engineers described “the great potential of the lower Mekong for service to the riparian countries in the fields of navigation, hydro-power generation, irrigation and other related water uses”.

Following Wheeler’s advice, an Advisory Board was established, initially comprising 3 high-level international engineers, expanding to 10 members by 1969, incorporating a range of agricultural, social, financial and economic expertise. Board members attended MC meetings, undertook field visits, reviewed major reports, and gave advice.

“I regard the Mekong River Project as one of the most significant actions ever undertaken by the United Nations”

UN Secretary General U Thant

CBS broadcast in 1965

“Taming the Mekong”

With growing recognition of the need to balance technical with socio-economic aspects of development (reflecting a global trend after the heavy post-war infrastructure push), Gilbert White, a renowned ‘environmental

geographer”¹¹ led a 1962 Ford Foundation Mission. His report “Economic and social aspects of lower Mekong Development” concluded that the Mekong scheme “has a great potential for transforming the life of peoples of the basin”. Monitoring networks were extended and databases built, with development targeting the tributaries in the short-term, while mainstream development - more difficult, risky and costly - was expected to follow.

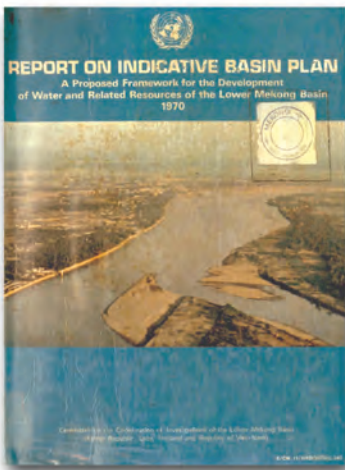
Work began on defining 3 mainstream projects totalling 15,000 MW, yielding 91,000 GW annually into an interconnected grid. In 1966, the US Bureau of Reclamation began the Comprehensive Feasibility Report of the flagship 4,800 MW Pa Mong mainstream multi-purpose project 20 km upstream of Vientiane. In 1966 an award for international



11. White, known as the father of floodplain management, wrote “floods are an act of God; flood damages are largely an act of man” in his book “Human adjustment to floods”; University of Chicago (1945).

understanding was presented in Manila to the MC for “...purposeful progress towards harnessing one of Asia’s great river systems, setting aside divisive national interests in deference to regional opportunities”. By 1969, several tributary projects were completed or underway.

However, alongside this international expert activity, the countries lacked financial strength, adequate data and essential skills. Added to this was the ever-present challenge of reconciling regional with national development goals, plans and actions. In addition, there was growing concern that development was slow and piecemeal, and that what was needed was an overall basin plan. In response to their concerns, in 1970 the MC commissioned the preparation of the “1970 Indicative Basin Plan” by a team of international consultants.



Integrated basin planning: the 1970 Indicative Basin Plan, 1970-1977

The 1970 Indicative Basin Plan proposed a 30 year (1970-2000) development programme, building upon 12 years work and \$60 million invested in information gathering and analysis. The Plan, termed ‘indicative’ as the need for revision and updating was recognised, proposed integrated and multi-sector mainstream and tributary investments in

180 projects. Power demand was projected to increase from 1,990 MW in 1970 to 23,000 MW in 2000 and large increases in agricultural production were projected through expanded irrigation and drainage.

The Plan set out a short-term \$2 billion programme (to 1980) including 700,000 ha of irrigation expansion and 3,273 MW of new power generation capacity, primarily through independent tributary projects which could be developed within national programmes. The Plan also sets out a \$10 billion long-term programme for 1981-2000, comprising a cascade of mainstream dams. In addition to flood control benefits and major expansion of power and irrigation development, this cascade would



A power network between Laos and Thailand

expand navigation by about 800km, flooding out rapids with reservoirs and adding locks. Recognizing the potential for irrigation expansion, the MC established an agriculture sub-committee and an agriculture division in the Secretariat and obtained funding for five experimental farms across the four LMB countries. Substantial funding was also obtained to support implementation of the Plan. However, with the Viet Nam conflict intensifying and spilling over into Cambodia and Laos in the 1970s, instability again prevented progress.

Nevertheless, whilst several independent tributary projects were implemented, particularly in Thailand and Laos, movement on the mainstream required regional cooperation and agreement, which was not possible except between Laos and Thailand. The Nam Ngun hydropower project set the example, inaugurated in 1971 by Laos and Thailand.

An important agreement was reached in 1975, with the signing of a Joint Declaration of Principles¹² that is characterised by a robust set of rules, particularly regarding the mainstream (Articles X to XX¹³). Then, later in 1975, exceptionally difficult times returned.

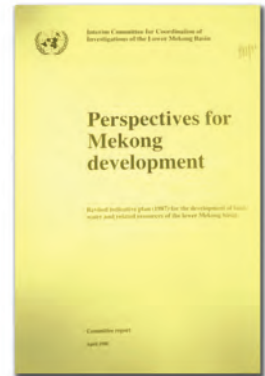
Troubled times again: the 'Interim Mekong Committee' (IMC) and the 1987 Indicative Basin Plans, 1978 -1992

No MC meetings were held in 1976 and 1977 as no representatives were appointed by Cambodia, Lao PDR and Viet Nam, due to the aftermath of conflicts and consolidation of the new regimes in these countries. Funding dropped dramatically; only the Netherlands maintained support in 1976.

12. Joint Declaration of Principles for Utilization of the Waters of the Lower Mekong; Committee for Co-ordination of Investigations of the Lower Mekong Basin; Khmer Republic, Laos, Thailand and the Republic of Viet Nam (1975).

13. Joint Declaration of Principles; 'Mainstream waters are a resource of common interest not subject to major unilateral appropriation by any riparian State without prior approval by the other Basin States through the Committee'; Article X (1975).

In 1977, Lao PDR, Thailand and Viet Nam established an Interim Mekong Committee (IMC - meeting first in 1978), due to the absence of Cambodia, which was to stay away for 14 years. The IMC's mandate was limited to the three countries and could not include mainstream matters. Subsequent years were difficult, with funding problems, redefinition of roles, and several reorganisations. At the heart of this was the (perennial) tension between national and regional development and the role of planning.



A 1984 UNDP review report placed emphasis on comprehensive development plans and integrated planning approaches, resulting in restructuring of the Secretariat. The planning directorate was abolished in 1988 due to “the execution of projects based on the narrow scope of interpretation” and in 1989 a programme coordination unit was established to coordinate multiple disciplines “to ensure sound basin planning”. The question of “riparianisation” of Secretariat staff became an important issue, but the availability of riparian national experts was limited and the IMC wanted to maintain the international nature of the Executive Agent, as it considered that this would best serve its interests.

During all this time, much work was done to update studies and undertake new ones in many areas, including in fisheries, navigation, watershed management and the environment – with an environment unit established in the Secretariat in 1976. A major change was the restricted ability to move mainstream development forward, long perceived to have the most significant potential for developing irrigation, navigation and hydropower and for managing low flows and floods.

Nevertheless, by the 1980s, 16 mainstream projects had been evaluated, and in 1980 five of these were given priority. The largest project was still the mainstream Pa Mong dam, whose investigations started in the 1950s. The US Bureau of Reclamation's feasibility study was completed in 1971. In 1987, the IMC re-prioritised the project with modifications ('Low Pa Mong') to reduce resettlement numbers substantially (which were high and rapidly increasing).

The 1970 Indicative Basin Plan was completely revised in 1987, based on updated analysis of food and energy demand and including a 1988-2000 investment plan and a long-term perspective. All this work was undertaken during difficult times, with only three countries at the table.



To 1995: the Mekong Agreement and the MRC

The signing of the Cambodia peace agreement in Paris in 1991 paved the way for Cambodia's re-entry into the Mekong Committee, re-established then as the committee of all four LMB countries, and the subsequent change in status from the MC under the auspices of the UN to a separate intergovernmental body. This was not as straightforward as might be assumed. The long history of conflict, coupled with diverging political systems and asymmetric development had left considerable mistrust and concerns over constraints on sovereign actions.

There was pressure to remove the rules introduced by the 1975 Joint Declaration, particularly regarding the mainstream (see footnote 12). With the strong support of UNDP, negotiations began in 1994 for a new agreement, leading to the *Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin* of 5 April 1995 (the 1995 Mekong Agreement).¹⁴

This Agreement sets out in Articles 1 to 10 the Objectives and Principles of Cooperation. While retreating somewhat from the stricter rules of the 1975 Joint Declaration, the 1995 Mekong Agreement provides a sound set of values, upon which the sustainable development of water and related resources of the basin can be cooperatively and effectively built to support growth and regional cooperation. Adhering to these values leads to good development and is also good politics and good business – delivering good projects on time and on budget (by minimising the objections and disputes that result in major cost and time over-runs and related political costs).

The Agreement established a new architecture comprising the Mekong River Commission (MRC) and the MRC Secretariat (MRCS). Like all river basin organisations, the MRC is the 'guardian' of the values established in the Agreement, while honouring the sovereign equality and territorial integrity of its member states. Described in Article 2, the Basin Development Plan is the Mekong Agreement's fundamental vehicle for cooperative action by the LMB countries, opening a new era for planning in the Lower Mekong.

14. http://www.mrcmekong.org/download/agreement95/agreement_procedure.pdf



H.M. King Norodom Sihanouk (left), the then President of Cambodia's Supreme National Council, jointly signed on 4 January 1992 an Accord with UNDP Phnom Penh represented by Resident Representative, Mr. Edouard A. Watterz (right) and the IMC (as executing agency) to rehabilitate key hydraulic and irrigation structures in five provinces following severe Mekong River flooding.

MRC Archives



5 Planning context: evolving paradigms as the 20th century waned

Drawing some conclusions from the Mekong Committee period

The 40 years of Basin planning, from the time of the first substantive report by the US Bureau of Reclamation in 1956 to the Mekong Agreement in 1995, was a time of great difficulty and change, creating a Mekong planning environment that influenced all actors and activities.

- First, both armed and ideological conflicts ebbed and flowed across the Basin, reflecting histories and many deep-rooted differences within and far beyond the region, at the peak of the cold war.
- Second, the LMB governments rationally had national agendas, which cannot be separated from the political realities of the time. The absence of Cambodia for 14 years seriously constrained the MC's work.
- Third, the many funders also obviously had agendas of their own. This was a first and flagship engagement in an international river basin of the UN and its agencies, with major support over decades and an imperative to demonstrate success. Many bilateral donors

were engaged at different times and on different activities, at times providing assistance through the MC to countries that they otherwise could not fund. Political realities, both risks and opportunities, will always have been a factor, large or small, in the choices that donors made regarding the actors and activities they supported.

- Fourth, international experts, both Secretariat staff and consultants, some of whom were water resources leaders of their time, undertook most of the substantive work of the Mekong Committee. It is clear from their reports at the time that there was concern that, while substantial progress was made in building monitoring networks, harvesting and analysing comprehensive, multi-sector data, and planning water resources development, only very limited actual development was implemented.
- Fifth, towards the end of this period growing recognition of the likely major social impacts of planned projects such as Pa Mong dam on the mainstream led to reconsideration of such developments. A 1994 report advocated run-of-the river hydropower mainstream projects, a strategic shift which has significantly influenced current private sector proposals.

Had the political situation been more stable in the LMB, it is possible, even probable, that many more of the infrastructure projects prioritised by the Mekong Committee from the early years would have been implemented, including mainstream developments, as happened across the industrialised world and, to a lesser extent, the developing world at that time. We can only speculate about the 'what if' outcomes, positive and negative, of this very different outcome.

20th century water planning in industrial countries: first development, then management

The early period of Mekong cooperation (1947-1995) coincided with the post-war era that saw the zenith of investment in major water infrastructure development in now-rich industrial countries.



There are about 80,000 dams in the USA, of which about 8,000 are large dams.¹⁵ For example, the Colorado River was extensively developed throughout the 20th century, predominantly for irrigation, under an interstate compact in the USA and the 1944 Treaty with Mexico. River flows in the downstream section have almost disappeared, as has the Colorado delta

in Mexico, once one of the world's greatest desert estuaries. Dams were still being constructed until late in the 20th century, and virtually no flow reached the delta from 1963 to 1981 during the filling of Lake Powell behind Glenn Canyon dam.¹⁶

“(The TVA is)... the best ambassador that the United States has ever had in the Middle East and Africa and Asia. If we want people to follow us, we have to lead. ... It is one of our nation's greatest assets, not only for what it has accomplished for the Tennessee Valley and for the nation, but also for its great contribution to the free world's efforts to win the minds of men.”

President John F Kennedy
on the Tennessee Valley Authority

(<http://www.tva.gov/heritage/jfk/index.htm>)

In 1933 the Tennessee Valley was desperately poor, with poverty statistics that would compare with the poorest parts of the world today. The Tennessee Valley Authority (TVA), established in 1933 by President Roosevelt to modernise the region as part of the 'New Deal', constructed 48 dams for flood control and hydropower generation. President Johnson sought to transfer the TVA model to the Mekong Basin, but his plans were stalled by conflict.¹⁷

The 1969 Columbia Basin Treaty between USA and Canada was a response to the need for flood protection (floods in 1948 caused extensive damage in Vanport, Oregon) and increased power generation. The Treaty provided for three large dams in British Columbia, Canada, and one in Montana, USA,

with construction completed in 1973. Following community campaigns triggered by the lack of consultation and poorly mitigated social impacts, the Columbia Basin Trust (CBT) was created in 1995 to promote social, economic and environmental well-being in the Canadian portion of the Basin.

15. 2005 US National Inventory of dams.

16. A Delta Once More: Restoring Riparian and Wetland Habitat in the Colorado River Delta; D. Luecke, J. Pitt, C. Congdon, E. Glenn, C. Valdes-Casillas, M. Briggs; Environmental Defense Fund (1999).

17. Peace Without Conquest, 'President Lyndon B. Johnson's Address at Johns Hopkins University'; *The vast Mekong River can provide food and water and power on a scale to dwarf even our own TVA... A dam built across a great river is impressive.* See <http://www.vietnamwar.net/LBJ-1.htm> (April 7, 1965).

The story is similar in all other industrial countries. Australia (2010 population 21 million), characterised by high rainfall and runoff variability, has built 499 large dams (by 2002), 75% of which were built after 1950.¹⁸ Japan, characterised by high flood risk and high hydropower potential, has built 447 large dams for flood control and 1,162 hydropower plants.¹⁹ France developed over 90% of its economic hydropower potential early in its expansion of power generation, before shifting to generation primarily from nuclear power stations.

Modernization, high economic growth and wealth in these countries have also brought changes in society and its values, including much greater public awareness of environmental issues and concerns. As a consequence, more stringent environmental safeguards have been introduced and investment is being made in retrofitting environmental measures. There is much to be learned from other countries from the early benefits they gained and costs they incurred from large-scale water resource development and the manner in which environmental issues are now being addressed.

“The Bureau played a major role in the development of the most impressive water management infrastructure in the world, an infrastructure that is vital to bringing water and power to people of the West. We’re very proud of these achievements. But these are new times, and we face new challenges. Our mission has evolved from the construction of dams to management & maintenance. As water management has evolved, today, much of our focus is on improving the safety, security, and efficiency of the facilities we already have, as well as meeting environmental obligations.”

John W Keys III, Commissioner
US Bureau of Reclamation, Jan. 2006

20th century water planning in major river basins in pre-industrial (developing) countries

At the same time as feasibility studies were being completed for water infrastructure investments on the Mekong, both large and small, similar activities were taking places in all other developing regions of the world. A marked difference is that many of these investments were financed and benefits were realised – as were both expected and unexpected costs.

Examples in South Asia, include investments associated with the 1960

18. <http://www.ancold.org.au/images/files/Table1.pdf>

19. http://www.jcold.or.jp/e/dam/pdf/Dams%20and%20Hydro_En.pdf

Indus Treaty between India and Pakistan, resulting in Tarbela and Mangla dams in Pakistan to provide the storage to feed the link canals needed to sustain flows in the Indus tributaries (Ravi, Sutlej and Beas) that were allocated to upstream India. The Bhakra dam on the Ravi in India's Punjab Province is of the same period.

Major dams built in the 1950s-70s on African rivers with highly variable flows, primarily but not exclusively for power generation, include: on the Zambezi River, the Kariba dam, completed in 1959, now cooperatively operated by Zambia and Zimbabwe, and the Cabora Bassa dam in Mozambique; on the Volta River, Akosombo dam in Ghana (completed in 1969); and on the Nile River the Aswan High dam in Egypt (1970). There are numerous examples in Latin America.

A similar path would almost certainly have been followed in the Mekong Basin, if conflict had not made such development impossible.

Water resources management around the millennium

In the two to three decades leading to the millennium, there was a marked slowing of investment in water infrastructure in most, but not all, industrial countries (large-scale dam construction continues in Spain, for example, where rainfall and runoff are limited and variable).

The most economic projects had been completed; benefit streams were achieved and incremental benefits from new infrastructure were declining. At the same time, the long-run social and environmental costs of installed infrastructure became much clearer and societal values shifted with growing wealth.

The imperative therefore grew (increasingly enforced by regulation and promoted by advocacy groups) to ensure that infrastructure investments were balanced with institutional development and environmental conservation. The concept of Integrated Water Resources Management (IWRM) grew during this period, was reinforced at the International Conference of Water and the Environment in Dublin in 1992, and was articulated by the Global Water Partnership in 2000 (see sidebar on pg 31).

Nevertheless, different actors today interpret IWRM in different ways and there is much debate – and emotion – on the benefits and costs of existing and planned water infrastructure, on the role of institutions, and on environmental trade-offs, all interwoven with the broader debate on sustainable development. Water planning in industrial countries during the 20th century has been described as having moved from ‘scientific efficiency’ (ie major engineering works), to ‘economic efficiency’ (i.e. sound benefit-cost ratios), to ‘planning with constraints’ (setting limits to further growth), as a consequence of a significant change in societal values.²⁰

The fact remains that, on the one hand, the stock of water infrastructure in most industrial countries was built with the objective of supporting growth and today is substantial and mature. On the other hand, the water infrastructure stock in most developing regions remains small, despite the fact that rainfall and runoff variability is typically higher than in industrial regions, and societal values are often very different, reflecting much greater levels of risk.

This can result in different perspectives and priorities of politicians, planners and technicians from developing and developed regions, leading to difficulty in having a constructive dialogue on planning objectives and potential outcomes. The record suggests that this diversity

Integrated Water Resources Management

IWRM is a process that promotes the coordinated development and management of water, land and related resources, in order to maximise economic and social welfare in a balanced way without compromising the sustainability of the ecosystems.

IWRM is not an end in itself but a means of achieving three key strategic objectives of Efficiency (attempt to maximise the economic and social welfare derived not only from the water resources base but also from investments in water service provision); Equity (in the allocation of scarce water resources and services across different economic and social groups) and Sustainability (as the water resources base and associated ecosystems are finite).

Global Water Partnership, 2000

20. “Replacing both the scientific efficiency model of the early 20th Century and the more recent economic efficiency model is an approach that I can characterize only as planning by constraints. The process emphasizes regulation and focuses on water quality, rather than quantity, issues. Rather than maximizing economic efficiency or optimizing the opportunity to meet public objectives, it sets limits to growth. To what extent it remains basically an anthropocentric process, in which sustainable development is justified economically as well as morally, or reverts to a biocentric ethic which grants to other living things a moral worth equal to that of the human population, is a great question. Certainly, any process that grants inherent moral worth to nonhumans establishes a system of competing claims that ultimately sets limits on human population, patterns of consumption, and technological development. Any equitable solution to these problems of competing claims with nonhumans would require the application of a system of ethics and a notion of justice that substantially modifies the value system of western civilization.” In: “Federal Water Resources Planning” by Martin Reuss, Office of History, U.S. Army Corps of Engineers (2003).



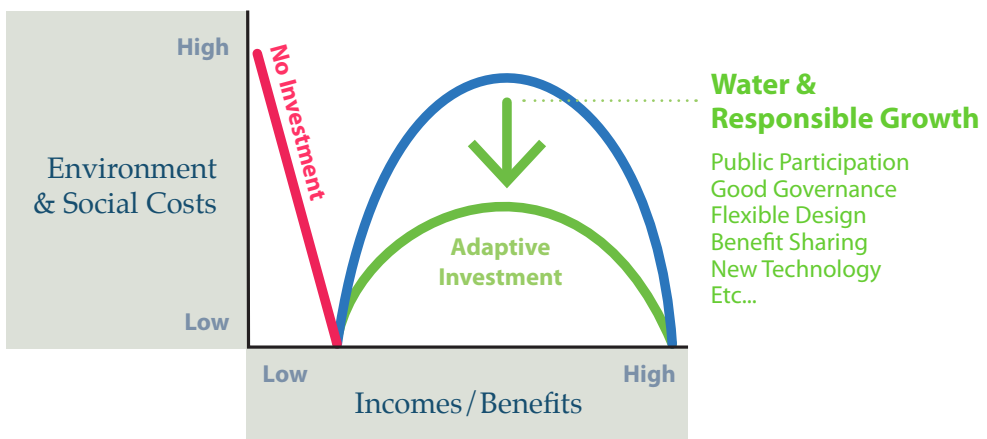
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of perspectives exists in the Mekong Basin, within the Secretariat itself and between the Secretariat and the member countries, as well as between the MRC and its supporting donors, and is a reality to address in the basin planning process.

The challenge ahead may be illustrated by the 'Environmental Kuznets Curve'²¹. This hypothesises that as a country develops and industrialises, environmental damage increases at first due to greater use of natural resources and the priority given to increases in material output and income. However, as incomes grow, and aspects of the environment increasingly become defined as private or public property, the ability and willingness to enhance environmental quality increases. Most industrialised countries followed the blue curve, leading to large environmental costs, and have now advanced to the right hand side of the curve, where environmental and social costs are minimised. Most LMB countries are represented more to the left hand side where environmental and associated social costs are increasing due to greater use of natural resources. The challenge for the LMB countries is to take an environmentally less damaging development path than the industrialised countries (the green curve) through 'adaptive investment' based on lessons from the industrialised countries, good governance, new technologies, and appropriate planning. This includes good project identification and design that integrates mitigation and benefit sharing measures from the outset.

KUZNETS CURVE & ADAPTIVE INVESTMENT



21. The Environmental Kuznets Curve, A Primer; Bruce Yandle, Maya Vijayaraghavan, and Madhusudan Bhattacharai, (May 2002).

6 The Basin Development Plan (BDP)



The mandate

The mandate for current basin development planning is provided clearly in the 1995 Mekong Agreement, which requires the formulation of a Basin Development Plan. In the “*Definition of Terms*”, the Basin Development Plan is defined as: *‘The general planning tool and process that the Joint Committee would use as a blueprint to identify, categorize and prioritize the projects and programs to seek assistance for and to implement the plan at the basin level’*. The BDP is guided by the fundamental objectives and principles in the Agreement. The first 3 of the 42 Articles of the Agreement are particularly relevant:

Article 1: *Areas of Cooperation. To cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin including, but not limited to irrigation, hydro-power, navigation, flood control, fisheries, timber floating, recreation and tourism, in a manner to optimize the multiple-use and mutual benefits of all riparians and to minimize the harmful effects that might result from natural occurrences and man-made activities.*

Article 2: *Projects, Programs and Planning. To promote, support, cooperate and coordinate in the development of the full potential of sustainable benefits to all*

riparian States and the prevention of wasteful use of Mekong River Basin waters, with emphasis and preference on joint and/or basin-wide development projects and basin programs through the formulation of a basin development plan, that would be used to identify, categorize and prioritize the projects and programs to seek assistance for and to implement at the basin level.

Article 3: *Protection of the Environment and Ecological Balance. To protect the environment, natural resources, aquatic life and conditions, and ecological balance of the Mekong River Basin from pollution or other harmful effects resulting from any development plans and uses of water and related resources in the Basin.*

The BDP is an instrument to support the achievement of the Basin Vision of “An economically prosperous, socially just and environmentally sound Mekong River Basin”, which was adopted in 1999 and reaffirmed by the Prime Ministers of the four Lower Mekong Basin Countries in April 2010 during the first MRC Summit in Hua Hin, Thailand.

BDP: a slow and uncertain start

A first meeting of the MRC BDP sub-committee was held in June 1995, two months after the signing of the Agreement. The subsequent four years saw a planning workshop and the preparation of country reports (1996), and, later, the preparation of a project proposal, appraised by Danida and Sida (1997). The planning workshop drew from experience around the world, concluding that basin planning in a single country was difficult enough and that there were few experiences of planning across international basins.



A pivotal report²² prepared by consultants in 1999 provided the conceptual framework for the ‘Mekong Basin Development Plan – which came to be known as BDP Phase 1 or BDP1. This report described the challenges faced in ‘getting to BDP1’. These included the inability to agree on the interpretation of the Agreement and the need for ground rules and procedures that would facilitate cooperation and reduce fears over the ‘motives and plans of other riparians’. The report attributed the limited progress over four years since

22. BDP Conceptual Framework; Draft Report by Jaako Poyry Consulting with Denconsult, Nellemann, Nielsen & Rauschenburger (May 1999).

the Agreement to weaknesses in the MRCS which ‘was in a state of deep frustration’ and to the lack of a basin knowledge base – ‘despite over \$40m in donor assisted projects since 1995’ (and tens of millions of dollars spent in data gathering over earlier decades). In addition, the differing views of the BDP donors and the reorganisation of the MRCS in 2000 contributed to the delays.

At the heart of the proposed conceptual framework was scenario analysis, including extensive stakeholder consultation, at a sub-basin level. This would lead to strategies for each sub-basin that would be the basis for a ‘long list’ of projects and programmes. However, the conceptual framework largely ignored the national planning process, including large water infrastructure projects, “with which the BDP will not interfere but coordinate” (pp. 32 of the above report). A great deal of emphasis was placed on the process of, and tools for, planning.

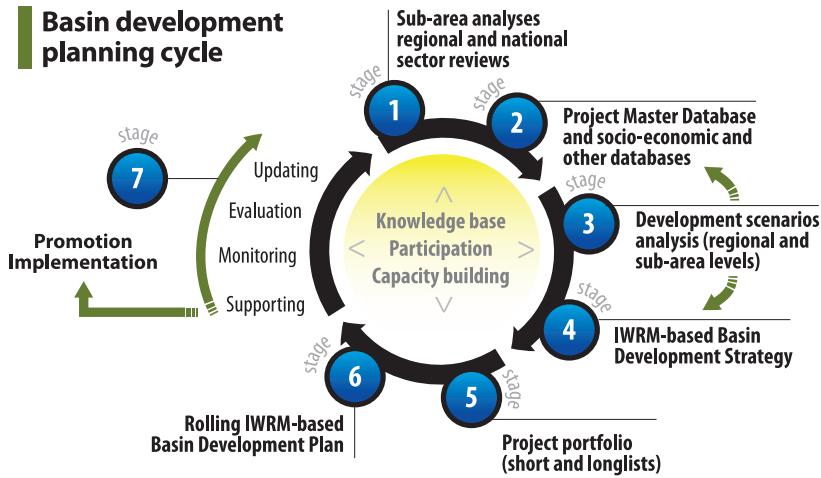
After lengthy funding negotiations, BDP1 commenced in October 2001 and held a regional launch workshop in February 2002, over 6 years after the Mekong Agreement was signed.

BDP1 (2001-2006): building a process

The first phase of the Basin Development Plan laid the foundations for cooperative planning, bringing country-level institutions and staff together in a set of ‘parallel, interwoven processes: a planning process, development of planning tools and knowledge base; and related capacity building’²³. The planning process had five stages: analyses/studies at sub-area and regional level; scenario analyses of development options and constraints; formulation of agreed ‘strategic directions for IWRM in the LMB’; establishment of a MRC database of development projects; and an agreed shortlist of priority development projects/initiatives (see illustration of the BDP development planning cycle).

BDP1 ended on 31 July 2006, after almost 5 years. It is clear that BDP1 was very process-oriented and the Completion Report highlighted the lessons learned from this. On the one hand, this resulted in a network of stakeholders that were involved in a participatory planning process, together with the

23. Basin Development Plan: Completion Report for Phase 1, 2001-2006 (September 2006).



design of planning tools and routines (such as for project identification, impact assessment, screening and ranking etc) and the preparation of extensive documentation, including national sector reviews and ten sub-area reports. BDP1 had also developed a set of Strategic Directions that were adopted by MRC and have subsequently guided the BDP process, together with long and short lists of projects that might be taken up under a basin plan.

On the other hand, this new approach faced many challenges. National water resources management and planning was at different stages across LMB countries and scenario analysis was a novel concept that was variously interpreted and took time to comprehend. Stakeholder engagement resulted in much longer timescales than planned.

Coordination and information flows between national and regional planning processes were limited (an ever-present problem since the start of Mekong cooperation – and common in all regional programmes). Coordination between the BDP and other MRC Programmes was also limited, and there was little alignment between BDP planning ‘sectors’ and MRC Programme themes. Capacity limitations and limited experience with the processes introduced by BDP impeded quality management. Most of the identified long-list and short-list projects were not part of the national planning process. Finally, to justify the BDP planning cycle, the importance of going beyond planning to implementation was recognised.

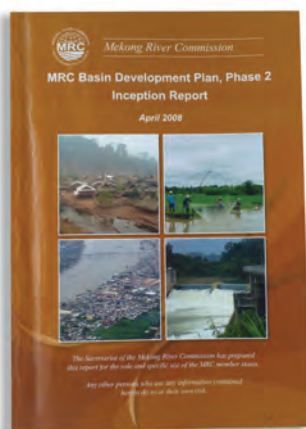
Looking back, it is clear that BDP1 built processes, relationships and tools. While these are a necessary condition for and valuable contribution to

cooperation among LMB countries, they are in themselves not sufficient conditions. There is always a challenge in balancing process with product. In situations where cultures diverge and relationships are weak, ‘small rules’ of process and procedure (as opposed to the ‘big rules’ of agreements and treaties) build predictability, trust and relationships; but they risk becoming an end in themselves and a barrier to action and outcomes. A second phase, BDP2, was always envisaged as a consolidation of the results of BDP1 – and it was clearly needed.

BDP2 (2007-2011): adapting to a changing Mekong

BDP2 was launched with three immediate objectives: a ‘rolling Basin Development Plan’; an expanded knowledge base and effectively utilised assessment tools; and capacity built at national and MRC levels for planning and for mediation of trade-offs.

The intention was to have BDP consolidated as a core, long-term activity of MRC and it was clear that the BDP needed to adapt to meet a rapidly changing LMB. Development on the Mekong was taking place, to some extent regardless of the MRC and its processes and plans. Large storage dams were being constructed on the Upper Mekong – Lancang in China; stability across the region was re-invigorating growth with consequent demands for energy, food and water; inward investment and growing liquidity in the local private sector meant readiness to invest in hydropower and irrigation development. Growing awareness of the potential scale of environmental and social trade-offs was generating international and regional civil society concern.



It was therefore essential to recognise that development was anyway taking place and that limited information meant that there were many perceptions and fears, both within countries wanting to advance specific investments and perceiving attempts to undermine this, as well as within countries perceiving potential negative impacts of other countries’ actions.

At the same time, the BDP1 process of stakeholder engagement was now well established and clearly

recognised as the key to ensuring LMB ownership of the BDP process and commitment to the BDP product. Nevertheless, there were still semantic and substantive differences; for example some MRCS documents continued to refer to the BDP as a process and not a plan or a product.²⁴ It was clear that the LMB needed and wanted a product that would catalyse cooperation and action on basin development and management.

BDP2: from a process to a product

Building upon BDP1's processes and tools, BDP2 sought from its early stages to advance a sustainable development agenda in the LMB, taking a comprehensive view of national plans and sub-basin and basin level opportunities.

A first step was to build a 'Project Master Database' including all national plans for water-related development, including major planned hydropower and irrigation investments. This required considerable input from the National Mekong Committee Secretariats (NMCS) and was itself a cooperative effort of information sharing and transparency. With a picture of all potential national investments, basin-wide development scenarios were constructed by working together, and economic, social and environmental objectives and criteria were debated and agreed.

The scenarios were assessed against these criteria, both using expert systems and participatory processes. This resulted in a broad consensus among member countries around an indicative 'development opportunity space', within which potential (national-level) developments were considered to be mutually beneficial, with potentially acceptable transboundary impacts. This was not an endorsement of individual projects, which need to go through economic, social and environmental assessments to meet national regulatory requirements, as well as transboundary notification in accordance with obligations under the Mekong Agreement.

This was, however, a major step forward. For the first time, LMB countries were building a common understanding of each other's plans for water



24. The Story of Mekong Cooperation; 'The Basin Development Plan of 2002 is a basin-wide planning process rather than a specific list of projects.' MRC (October 2002).

resources development and had reached initial conclusions together on likely transboundary impacts. They were addressing each other's concerns and developing a shared understanding of the opportunities and risks of water resources development. Most important, they agreed to strategic priorities and actions to guide future decisions on basin management and development.



BDP2: getting to the Basin Development Strategy

BDP2 moved the MRC focus beyond knowledge acquisition and water management to include a focus on water development, primarily at

the national level. This was not a return to a past focus almost exclusively on water infrastructure as a path to growth. It was a recognition that much of the productive potential of the Mekong will be developed regardless, and that optimal cooperative development, including water infrastructure, that takes full account of transboundary social and environmental impacts, is a much better path to growth than uncoordinated, unilateral, unconstrained and suboptimal river development.

While this move was clearly mandated by Articles 1 and 2 of the 1995 Mekong Agreement, it was nevertheless a difficult move, not in consonance with other MRCS programmes whose focus was more on management and conservation mandated by Articles 3 and 7. Cooperation and coordination with the BDP Programme within the MRCS was sub-optimal for some time until a balance was struck during the preparation of the Basin Development Strategy in 2010.

The challenge for BDP2 was to get to a product that would define a strategic agenda for the LMB that would incorporate national plans and promote their adaptation to enhance regional gains and reduce regional costs. This product was the Basin Development Strategy.

The Strategy was a challenge to deliver. It sought to bring together 15 years of effort since 1995, reflecting consensus among the parties and recognition of the imperative of balancing both Mekong development and Mekong

management, and providing a way forward for future cooperation.

The Strategy specifically addresses the opportunities for, as well as the risks of, developing the considerable hydropower potential (including on the mainstream), the irrigation potential and the related river regulation potential for salinity, flood and drought management, as well as several other water-related development (fisheries, navigation, ecosystems, tourism). The Strategy describes strategic priorities for Basin development and, its ‘essential companion’, Basin management. The implementation of the strategic priorities will improve basin planning and management and will facilitate moving development opportunities to implementation.

The Basin Development Strategy: an important milestone

The MRC Council of Ministers adopted the Basin Development Strategy in January 2011, following several intensive rounds of drafting, consultation and revision during 2010. In his preface to the document, the 2010-11 MRC Chairman (Viet Nam’s Minister of Natural Resources and Environment, Dr. Pham Khoi Nguyen) summarised the achievement as follows: *‘For the first time since the signing of the 1995 Mekong Agreement, the MRC Member Countries have developed shared understandings of the opportunities and risks of the national plans for water resources development in LMB and agreed on a number of Strategic Priorities to optimise*

Basin Development Strategy Strategic Priorities

A. For Basin Development

- (i) Address the opportunities and consequences of the ongoing developments including development in the Lancang-Upper Mekong Basin.
- (ii) Expand and intensify irrigated agriculture for food security and poverty alleviation
- (iii) Improve the sustainability of hydropower development
- (iv) Acquire essential knowledge to address uncertainty and minimise risk of the identified development opportunities
- (v) Seek options for sharing the potential benefits and risks of development opportunities
- (vi) Adapt to climate change
- (vii) Integrate basin development planning considerations into national systems

B. For Basin Management

- (i) Establish basin objectives and management strategies for water-related sectors
- (ii) Strengthen national level water resources management processes
- (iii) Strengthen basin management processes
- (iv) Develop environmental and social objectives and “baseline indicators”
- (v) Implement a targeted IWRM capacity building programme

the development opportunities and minimize uncertainty and risks associated with them. This provides incentives for the timely implementation of the agreed procedures under the 1995 Mekong Agreement.'



The Strategy represents an important milestone in the history of Mekong cooperation. It represents a revised role and focus of the MRCS, moving it from an almost exclusive focus on acquisition of knowledge and on best practice in water management to include, once again, a sharp focus on water development to support economic growth and reduce poverty. There is considerable evidence that this is what the

MRC member countries want, need and must have.

This move to development complements, and not replaces, the focus on management. This balance is, however, always a difficult one, as there are views on both sides to be heard and trade-offs to be made. Managing this balance, with a view to sharing benefits more widely, is at the heart of good water resources management and needs to be the central role of MRCS support to its member states. The Strategy provides a roadmap for action that is the blueprint for BDP 2011-2015.

BDP 2011-2015: moving to implementation

Launched early in 2011 with a 4 year timeframe, BDP 2011-2015 will oversee implementation of the Strategy, which requires delivery by LMB countries as well as MRC Programmes on each of the strategic priorities for Basin Development and for Basin Management.

The BDP Programme will itself implement some of the strategic priorities, including addressing avoidance/mitigation of adverse impacts of water resources development and exploring a mechanism for the sharing of transboundary benefits, impacts and risks of current and planned development.

Building on China's earlier participation in annual BDP2 stakeholder

forums, as well as in regional modelling workshops with MRC’s Initiative on Sustainable Hydropower, engagement with Upper Mekong Basin countries will be strengthened through consultations and working groups in the broadening of the basin-wide scenarios and the preparation of the 2015 State-of-Basin Report. Strategy implementation started in 2011 with the preparation of detailed action plans, aligned with national sector planning cycles and work plans.

In conjunction with implementation of the MRC procedures, BDP 2011-2015 will continue to move Mekong cooperation beyond knowledge acquisition and planning towards basin management and development and beyond dependency on external funding to a basin programme that is embedded in national planning systems and owned and funded by the member countries.

MULTI-STAKEHOLDER ENGAGEMENT PROCESS





7 Conclusion: the future of the Basin Development Plan?

BDP: seizing opportunities missed – but getting it right

From a water resources perspective, the LMB is in some ways unique. The river's mainstream is one part of the world where water resources development scarcely occurred during the 20th century. This development took place all over the world, certainly in all the countries that are wealthy today, and even to some extent at least in almost all other poor regions of the world, such as elsewhere in Asia, in Africa and in Latin America. The case can be made that this is a consequence of the history of Indochina, where global, regional and local conflict throughout most of the 20th century precluded significant international cooperation and substantial national and international investment in water infrastructure across much of the LMB.

This cooperation and investment has been planned and discussed since the 1950s, but had barely commenced by the end of the second millennium. By then, the rich world had developed a new paradigm for water resources – one of 'planning by constraints'²⁵, reflecting a major shift in values, where re-engineering and re-operation of existing infrastructure became central. This changed every facet of societal endeavour with regard to water

25. See footnote 20 on page 31.

resources and provides a key lesson for the Mekong to factor in mitigation measures from the outset.

Universities, especially in developed countries, now teach water management, not development²⁶. The general public perception is typically that the net benefits of water infrastructure are low unless proven otherwise. The financial costs of publicly-funded water infrastructure have escalated massively, due to new standards and safeguards recognised as essential for sound development. Yet it is important to remember that rich countries completed most of their infrastructure investment prior to this value shift and without these standards and safeguards.

It is poor countries, which typically have the most 'difficult hydrology', requiring costly and complex solutions, and the lowest capacity to invest, that now face these high costs. Funding is often needed from international financial institutions whose rules are governed by the new values of already developed countries today which did not do then what needs to be done now.

The high financial burden of alternative (potentially much better but also much more costly) water development paths should not lie with poor countries alone, but need to be shared with richer countries. This can be done through grant financing of mitigation measures and with international financial institutions through concessional funding, specifically recognizing the joint imperatives of substantial development needs and high social and environmental standards.

The MRC needs to seize the opportunity that exists now, possibly for the first time ever, to move a tangible Lower Mekong sustainable development agenda forward. But, in doing so it needs to set clear social and environmental objectives and minimise the negative outcomes that richer regions of the world have incurred. The BDP is clearly the MRC's instrument to do this, identified and mandated in the 1995 Agreement.

BDP: sovereignty and cooperation

The overarching agenda of a nation state will almost always be a sovereign

26. Practice and Teaching of American Water management in a Changing World; John Briscoe; Journal of Water Resources Planning and Management, Vol. 136, No. 4, (July/August 2010), pp 409-411.



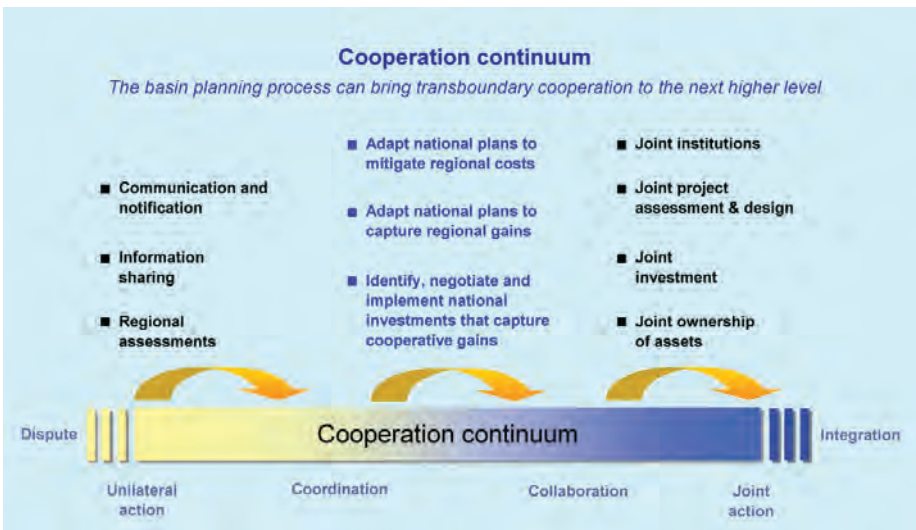
agenda. The linkages between national planning and implementation and regional planning and implementation will inevitably demonstrate some tension – as have been seen in the Mekong Basin in the past, continue today and can be expected in the future. A cooperative agenda will be adopted only if it serves the sovereign agenda to do so; thus cooperation will, *de facto*, become part of the sovereign agenda, not the other way around.

Commodity trade, power trade and regional transport corridors are examples of regional cooperation that provide relatively obvious and quantifiable benefits to individual nation states. The path to accession to regional cooperative agreements in these areas, while never easy, is therefore relatively clear. For this reason, they are the focus of ASEAN and GMS efforts.

The benefits of cooperation in transboundary river basin development are less easily recognised due to the complex analysis needed, with development often perceived to be a zero-sum game ('what you have, I cannot have'). Not surprisingly, ASEAN and GMS programmes do not include transboundary waters. Indochina – like most developing parts of the world – is characterised by low reservoir storage and large natural differences between wet and dry season flows. This is compounded by complex interactions between the river's regime, the related ecosystems and dependent livelihoods. Transboundary river basins like the Mekong represent a major management challenge, requiring high levels of knowledge and capacity for reliable management and development, and leaders need predictability in determining policy directions.

In many of the world's major river basins, insufficient knowledge of the basin as a whole leads to misperceptions among policy makers, resulting in

mistrust, unilateral sovereign action and reduced potential for cooperation. Yet managing and developing a river at the basin level can almost always be a ‘positive-sum game’, with more food, energy, biodiversity, navigation, better water quality and less flood and drought. In the LMB, the BDP is explicitly the instrument for cooperation in the development of the Mekong beyond the nation state (*‘at the basin level’*) and is well positioned to analyse and promote the positive-sum outcomes of transboundary cooperation.



BDP: a cooperation continuum

All water development within the Lower Mekong Basin by any party and at any scale is, by definition, development of an international watercourse. Such development can be viewed within a ‘cooperation continuum’²⁷. The above diagram shows four levels of transboundary cooperation.

First, national developments by a sovereign state, without consultation, are *unilateral* developments, regardless of the nature and scale of impacts, if any.

Second, cooperation at its simplest level requires that such development should be *‘consultative’* – i.e. the subject of information exchange (viz. communication and notification), as required by customary law (*‘good neighbourliness’*) and obligated under the 1995 Mekong Agreement.

27. Adapted from: Cooperation on International Rivers: A Continuum for Securing and Sharing Benefits; C. Sadoff, D. Grey, *Water International*, Vol. 30, No. 4 (December 2005), pp 420-427.



Third, national developments may provide transboundary benefits if *coordinated* with other riparian states – such as river regulation for hydropower or for flood and drought mitigation, and water quality and biodiversity improvements.

Fourth, there are *collaborative* projects, either where national projects are planned together to obtain mutual benefit, or where *joint* projects are undertaken and benefits are shared.

Globally, there are examples of all of these types of cooperation in transboundary basins, reflecting needs and opportunities.²⁸ It is not the case that one type of cooperation is better than the other. Instead it is a question of exploring options for consultative national developments (which create domestic benefits and cause little international harm), almost always first priority, and then for coordinated and collaborative actions across boundaries, where benefits for all parties exceed costs and where these benefits can be shared fairly.²⁹

BDP2 has resulted in a very significant step whereby LMB countries have for the first time shared national plans, and reached common conclusions of their transboundary impacts. BDP2's Basin Development Strategy clearly seeks to coordinate national plans to enhance regional gains during the implementation of BDP 2011-2015. In terms of the 'cooperation continuum', Mekong cooperation is clearly *consultative* and is increasingly *coordinated*. The challenge for BDP is to explore the potential for *collaborative* and/or *joint* projects, bringing two or more countries together to seek mutual

28. e.g.: Lesotho Highlands Development Programme, Orange River (Lesotho, South Africa, storage & hydropower); Columbia Basin Treaty (Canada, USA, flood storage & hydropower); Zambezi River Authority (Zambia, Zimbabwe, hydropower); Senegal River Basin Organisation (Guinea, Mali, Mauritania, Senegal, river regulation & hydropower).

29 See, for example: The benefit-sharing principle: Implementing sovereignty bargains on water, Political Geography; Alam, U., et al., Volume 28, Issue 2 (February 2009), pp 90–100.

benefit, moving beyond cooperation on knowledge acquisition and on sharing and adapting national plans towards transboundary cooperation on water development and management.

BDP: from integrating national actions into transboundary actions

Individual LMB countries have sovereign rights to the Mekong system within their borders, within the rules of customary law and of the existing treaty regime. Within these rules, any group of two or more countries can agree to cooperate in management and development of the river within their collective borders. However, the MRC is the only institution with the mandate³⁰, the interest and the capacity to:

- bring together national data, plans and actions into a LMB-wide view;
- build and manage a LMB knowledge base;
- plan and implement LMB-wide transboundary management actions; and
- identify LMB-wide development opportunities and cooperation options and promote their implementation.

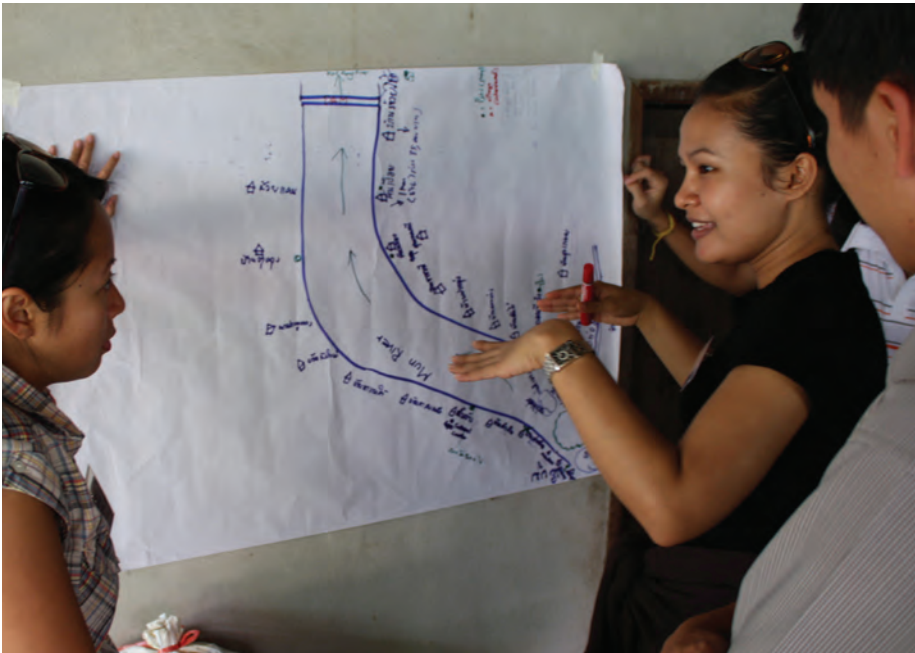
The MRC is also uniquely placed to facilitate cooperative actions of two or more countries, as there are no other institutions with the obvious capacity and clear mandate to do so. The BDP is precisely identified in the Agreement as the means *to promote, support, cooperate and coordinate in the development of the full potential of sustainable benefits to all riparian States.*

Yet, the BDP is just one MRCS Programme among many other sector programmes, each with individual goals, staff and budgets and with limited collective internal coordination or cooperation. Missing from the BDP and other programmes is the explicit analysis of potential joint, transboundary investments in management and development – the very essence of opportunities missed over the past 60 years and the vision expressed in the 1995 Mekong Agreement. These are as yet largely

30. 1995 Mekong Agreement; *'...emphasis and preference on joint and/or basin-wide development projects and basin programs through the formulation of a basin development plan...'*, excerpt from Article 2 (1995).

unexplored, with the options on the table derived primarily from national plans, not from regional assessments that ‘take the borders off’ to identify regional opportunities. Such a broadening of BDP’s assessment is clearly aligned with the vision of “an economically prosperous, socially just and environmentally sound Mekong Basin”.

The 1995 Agreement creates and empowers the MRCS as a permanent technical and advisory body of the MRC. In terms of basin development, the MRCS needs to be an impartial facilitator, taking a strategic basin view and supporting its member countries as they develop and evaluate their interests and options, individually and collectively, and as they negotiate trade-offs between their positions. This support should go beyond negotiation support to specific, tailored capacity building and guidance, so that options are understood and internalised.



Looking to the future: a 'corporate Basin Development Plan'?

The preparation and implementation of a comprehensive 'rolling' BDP, with broader and deeper goals, could become a 'corporate' focus of the MRC and its committees and functionaries. A 'corporate BDP', updated and adopted regularly, might include the following components (many of which are already free-standing MRCS activities) within a unified and integrated MRC Programme:

- Knowledge and information, to inform transboundary planning and investment, to explore cooperation options and to ensure common understanding;
- Capacity building, to ensure a Basin-wide 'level playing field' of strong national institutions;
- Systematic multi-stakeholder consultation, to ensure effective communication, to sustain relationships and trust, to consider transboundary opportunities and cooperation options, and to support negotiations across the Basin;
- Coordinated national development plans and actions, to seek transboundary benefits and minimise transboundary costs of sovereign actions;
- Transboundary management and mitigation plans, investments and actions, involving two or more states, to optimise sustainable LMB management;
- Transboundary development plans and investment support, involving two or more states, to develop 'the full potential of sustainable benefits to all riparian States' and to promote equitable benefit sharing solutions; and
- Transboundary negotiation support, to facilitate 'deals' among LMB countries as an impartial facilitator, as well as deals between LMB countries and UMB countries in order to realise the Basin Vision. Deals could involve a wide range of potential shared benefits, costs and risks, within and 'beyond' the river.

The BDP Story: a new beginning

From a prehistoric past, through great regional empires, to a wrenching 20th century of external and internal conflict, to the present, the Story is one of a Basin where water resources planning has yet to deliver – but is now potentially poised to deliver – the sustainable development that the Mekong River offers and the people of the Mekong need.

The future looks much brighter, although there are significant risks to manage. LMB countries have growing and integrating economies, liquidity in the region's private sector is seeking investment opportunities, and civil society has a growing voice that fosters accountability. Much time and effort has been spent by the MRC on planning, building knowledge systems and capacity, and developing consultative mechanisms that create common understanding and trust. Through the implementation of the Basin Development Strategy, national water institutions are generally moving national Mekong agendas in a consultative manner beyond the mere notification required by the 1995 Mekong Agreement.

Many river basin organisations around the world have a very lean international staff focusing only on transboundary issues and opportunities, drawing upon staff from national agencies to undertake technical tasks within special-purpose task forces. There is an opportunity now for the MRCS to transfer those functions best undertaken at national level (such as data collection and archiving as well as location-specific studies) to national agencies. This could result in a 'leaner' Secretariat with specific and strengthened international functions, for which there is no other mandated institution.

The MRC has a very clear mandate and obligation *to promote, support, cooperate and coordinate in the development of the full potential of sustainable benefits to all riparian States and the prevention of wasteful use of Mekong River Basin waters, with emphasis and preference on joint and/or basin-wide development projects and basin programs through the formulation of a basin development plan*³¹. During the last ten years the BDP has laid a solid foundation to fulfil this mandate over the short to medium term, and to sustain this mandate over the long term.

31. 1995 Mekong Agreement; Article 2 (1995).





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