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Contested Mekong Waterscapes: Where to Next?

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Introduction

The Mekong region has gone through massive human and material transformations (Rigg, 1997; de Koninck, 2005). Even as wars, expanding land frontiers, urbanization and industrialization have profoundly remodelled landscapes and societies, rivers and wetland ecosystems have remained persistent defining elements of rural livelihoods and agricultural waterscapes. Large-scale water resources development, although locally significant, has long remained short of the grand projects of 'harnessing' and 'taming' the Mekong River and its tributaries pushed forward by various regional organizations, governments and investors during the second half of last century. Regional conflicts and an obvious poor fit of many grand projects to local conditions and actual water/energy needs have thwarted large-scale investments (Kirmani, 1990).

Rising demands for energy, recent soaring fossil fuel and agricultural prices, and improved relations among China and other countries in the region have contributed to a renewed groundswell of interest in hydropower and irrigation projects. As earlier chapters show, many old projects are being dusted off; earlier concerns with environmental and social impacts are being addressed, or dismissed, with a fresh rhetoric of mitigation, trade-offs and best practices. Development banks and governments liken poverty alleviation to investments in infrastructure, while powerful new actors – private companies and banks from the region – have entered the scene and are reshaping patterns of water governance. The long imagined grand waterscapes of the Mekong region are once again being promoted, pursued and contested.

Powerful coalitions are bent on instilling a sense of inevitability well incarnated in the statement that 'development cannot wait'.[1] Investments in health and education, as well as water and electricity infrastructure, are desirable and necessary to improve the lives and living conditions of people in the Mekong region. However, experience illustrates that 'the subsidized construction of massive infrastructure is most unlikely to provide the optimal result in this respect for the poorer sections of the populations' (Phillips et al, 2006).

To different degrees according to place and time, the riparian countries of the Mekong all present tales of land, water and natural resource concentration: dam construction and reservoir water bodies displace residents; exclusionary forest zoning and watershed classifications dispossess ethnic minorities; dams that impact upon fish migration and natural flood regimes disrupt fisheries in rivers and wetlands; more powerful and organized groups redirect and seize opportunities and benefits derived from flood protection measures and irrigation schemes.

Unchecked states, bureaucracies and attendant private or political interests almost invariably fail to achieve a balance between economic, social and environmental dimensions of development; and it is hard to avoid the conclusion that more balanced outcomes have largely resulted from various forms of contestation.

Sewell and White (1966) once pondered why the human dimensions of water management were seldom considered or studied 'before the bulldozer moves in'. They found reasons 'rooted partly in engineering practice, partly in lack of funds and trained personnel, and partly in lack of analytical techniques'; in other words, regrettable (but hopefully transient) deficiencies in scientific tools and the understandable eagerness of the engineering profession to get the job done led to a predominance of infrastructural considerations over human concerns. This final chapter, largely drawing on the preceding chapters, broadens Sewell and White's question and answers by reflecting on patterns of water governance in the past half century. We identify a much wider set of interests in water resources development and management – from financiers and politicians, owners and operators of new infrastructure, to consumers, academics and organized community and civil groups or international non-governmental organizations (NGOs) of various stripes – and distil some of the key features of water politics in the Mekong region. We highlight how the governance and transformation of waterscapes in the Mekong region could move along a more fair and sustainable direction.

Water governance in the Mekong region

Understanding impacts

The issue of social and environmental impacts has bedevilled many projects; a lot of politics revolves around how these impacts are identified, framed, assessed, valued, mitigated and compensated. Social and environmental impacts are usually

identified by (often mandatory) impact assessments. These studies are often not made available to the public, sometimes undertaken after construction has started, and premised upon an approach of mitigating impacts. Impact assessments tend to be seen as a 'bureaucratic "hoop" to be jumped through in order to start construction, not as an authentic mechanism to decide whether or not the dam should be built' (Friesen, 1999). States are often content to take impact assessments as just another perfunctory step towards project approval or completion.

Salinization problems and conflicts over floodplain management around the Rasi Salai and Hua Na dams on the Mun River in Thailand have generated debates about environmental impact assessments (EIAs) and critiques about the ways in which substandard assessments are used to 'green wash' projects (see Chapter 10). For example, the first EIA performed for the Songkhram Irrigation Project in 1992 by consultants was rejected by the National Environmental Board (NEB), after finding that these were exact copies of EIAs that had been done earlier for another large-scale water diversion project, the Khong-Chi-Mun (Breukers, 1999; see Chapter 7). Likewise, the 1993 preliminary EIA of the Theun-Hinboun Project in Laos by Norconsult was rejected by the Asian Development Bank (ADB) because of its poor quality (Barney, 2007), while the independent assessment of the Chinese navigation project commissioned by the MRC in 2001 found that the EIA was 'substantively inadequate and in many places fundamentally flawed' (Hirsch and Mørck-Jensen, 2006). Problems like these have led local groups to engage in grassroots research in order to mobilize local knowledge and to produce 'people's EIAs' (Manorom, 2007; see Chapter 13).

In carrying out assessments, pre-existing benefits are frequently downplayed. In the Nam Songkhram wetlands (Chapter 7), people rely on diverse natural resources that provide both food and income. Many of these benefits are not evident in enumerations of cash incomes or macro-economic analyses measuring poverty levels.

Likewise, social and economic impacts are frequently glossed over. Differences between the number of people expected to suffer impacts both at the stage of the feasibility study and subsequently are often very large. In the case of the Pak Mun Dam, for example, the first studies had identified 243 households, while concerned people inventoried 1649 and the final compensation was extended to at least 1821 households, or even 6200 households if compensations for lost fisheries are included (see Chapter 3). In many cases, people receive 'too little too late', if anything. Compensations come under two guises: direct financial compensations, or indirect economic opportunities or subsidies to develop other activities.

Early water projects in the region, many of them carried out in a context of war or political tension, have been planned and implemented as indisputable acts of national security. Inaugurated in 1971, the Nam Ngum 1 Dam in Laos displaced 800 families who did not receive compensation. In northern Vietnam, between 50,000 and 60,000 mainly ethnic minority people, the majority of whom continue to suffer impoverishment, were removed to make place for the Hoa Binh

Dam, initiated in 1971 at an estimated cost of US$1.5 billion (Hirsch, 1998). In northeast Thailand, populations resettled during the construction of the Ubol Rat, Lam Pao or Nam Oon dams suffered many hardships.[2] Hori (2000) reckons that dam projects were saddled with many 'severe problems with compensation for land' that were based on low market values, with delayed payment not adjusted to account for inflation, and moneylenders and middlemen taking advantage of the situation to lend money at high rates.

Financial compensations are often minimal and quickly absorbed in the purchase of goods. But if they are quite generous – as in the case of the Pak Mun Dam, where high sums were eventually proposed to affected people – they may buy people's support for the project. This, in turn, can result in splitting protesters, and even in a desire by others to also be 'affected' and receive payments for land that exceed market values (see Chapter 3).

Other forms of compensation include financial subsidies or support for economic activities such as irrigation for intensification or diversification of agricultural production. Irrigation, however, does not necessarily benefit those who have lost their land. Promises of profitable cash crop production (which are also heavily resorted to at the time of the feasibility study and seldom materialize as planned) often amount to wishful thinking. The Theun-Hinboun Hydropower Project in Laos initially lauded by the Asian Development Bank (ADB) as a project with 'little for the environmental lobby to criticize' eventually resulted in widespread impacts upon fisheries, river embankments and riparian agriculture. Activities launched as compensation and mitigation measures have largely failed despite hikes in the project budget (Blake et al, 2005; FIVAS, 2007). Nearby at the Nam Theun 2 Dam (NT2) in Laos, the viability of a proposed cash-crop agriculture programme for resettled villagers has been questioned due to the poor quality of soils, experimental cropping methods and hypothetical markets. Another promise is that of aquaculture within reservoirs. In the Water Grid Project in northeast Thailand, promises were clearly self-serving desktop exercises. Consultants in charge of project design simply took for granted that 'farmers would have to greatly change their farming practices in order to shoulder water fees … [and] switch from rice cultivation to other cash crops, which consume less amounts of water than rice' (*Bangkok Post*, 2004b). The problem of marketing was solved by merely 'recommending' a contract farming system with agribusiness companies 'to ensure that farmers can sell their produce at reasonable prices'.

Such assumptions typically make light of social and ecological complexity and production-cum-marketing risks that characterize much of smallholder production. In practice, many farmers do not have the skills, the knowledge, the capital or the labour force to engage in new activities with strong links to unstable markets (Cornford and Matthews, 2007), let alone the frequent cases where market opportunities remain elusive. Construction companies are usually well equipped to face technical challenges; but transforming 'aggregations of houses, community facilities, cleared patches of still-smoking vegetation and disrupted families into

self-managed and self-sustaining communities, viable in all dimensions' (McDowell et al, 2008) is another story altogether (see Chapter 4). Without ongoing pressure and scrutiny, such immense challenges frequently lead to failure; meanwhile, the project proponents and their consultants pack up their bags to move on to the next project.

International development banks or bilateral cooperation organizations sometimes have to withdraw or refrain from associating with sensitive projects. The Tasang Dam on the Salween River in Myanmar/Burma has been part of a master plan for a Mekong region power grid; but the ADB backed away after 'serious socio-environmental concerns' were identified and the project did not pass the ADB's filters (see Chapter 5). Despite occasional complacency with shoddy EIAs, development banks foster a culture of impact assessment[3] that, however, find limited echo with governments in the region. While governments have passed *ad hoc* legislations that reflect changing societal values, these are often to fulfil lending and other requirements of banks and donors and 'do not generally measure up to contemporary international standards' (Hirsch and Mørck-Jensen, 2006).

Modes of engagement

How governments engage with the wider public in planning and implementing water projects varies tremendously from country to country in the Mekong region. Degrees of openness and transparency and the availability of channels for public participation and dissent are an initial measure of the quality of water governance. Practice differs from one case to the other, ranging from secrecy, forced displacement and overt suppression of dissent, buying-out or co-opting by representation in *ad hoc* committees or rewarding with well-paid consultancies, to genuine attempts to accommodate and incorporate diverse inputs from society.

As an example from one extreme, the construction of the Tasang Dam carried out under the military regime of Myanmar has constantly faced accusations of human rights abuses and potential widespread environmental damage (see Chapter 5). Over the past ten years, the Myanmar army is believed to have relocated more than 60,000 villagers from areas adjoining the dam and the inundation zone (SSEO, 2006); forced labour, rapes and killings are being linked to the regime's intimidating preparations to build the dam (EarthRights International, 2005).

Planning processes often unfold behind closed doors. The memorandum of understanding (MoU) signed by the Electricity Generating Authority of Thailand (EGAT) regarding the build–operate–own Hutgyi Dam in Myanmar states that 'each party shall strictly keep confidential any and all technical, legal and commercial data and information' (see Chapter 5). Likewise, in China, despite new regulations in 2003 providing for public input on the EIAs for large projects such as the Nu-Salween River dams, authorities in the development companies and the National Development and Reform Commission insist that the Nu is a

transboundary river and therefore detailed hydrological data on the river are of national security concern and the EIA cannot be made public (see Chapter 5).

In Thailand, the planning of large-scale irrigation schemes in the northeast ('Green *Isaan*', 'Khong-Chi-Mun', or 'Water Grid' projects) have been shrouded in secrecy with occasional media releases and official declarations creating confusion rather than clarity around implausible targets and dubious assumptions (see Chapter 10). Water planning in the Songkhram Basin (see Chapter 7) and several weirs constructed on the Chi-Mun mainstream and tributaries have also been imposed without space for deliberation. The Pak Mun Dam sticks out as an exception (see Chapter 3), where contestation – after construction – compelled the scrutiny of the dam by outsiders, including a team from the World Commission on Dams (WCD) and Thai academics. But political space itself may be a temporary phenomenon. Efforts in 2004 by Thailand's minister of natural resources and environment to reform the EIA procedures in the face of rapid economic growth and to promote participation from the public were not rewarded, and perhaps resulted in his subsequent removal and replacement by a politician supportive of the Water Grid Project (see Chapter 10).

Other multilateral actors involved in water resources development have tried to take the 'participatory imperative' more seriously. The 2000 annual report of the Mekong River Commission (MRC) acknowledges that it is 'important that decisions on development include a "bottom-up" process and are not confined to a "top-down" approach. The voice of the people directly affected, and of other stakeholders such as community groups or NGOs, must be heard.' In 2005 the MRC (2005) issued a strategy document on stakeholder consultation and public participation strategy. The 2006–2010 plan, however, partly reflects the efforts of several donor states rather than the conviction of riparian governments, which 'see participation as, at best, a tool of antidevelopment northern environmental groups or troublesome local NGOs and, at worst, as worthless' (Sneddon and Fox, 2007). The MRC's uneasiness at engaging with non-state actors is perceptible in that it refers stakeholder participation back to the National Mekong Committees (NMCs) arguing that they can best implement it. But many civil society organizations have been unable to engage with the state-centric NMCs beyond a very basic level (see Chapter 14).

The public does not always wait to be consulted. If sufficient safe spaces are available, the actions of advocacy groups in civil society can be an important driver of decision-making processes. Moreover, public mobilization may be a prerequisite to compensation. After construction of the Theun-Hinboun Hydropower Project, for example, it gradually emerged that the project reduced fishery catches by between 30 and 90 per cent along the three rivers it affected, and impacted upon the livelihoods of 30,000 people living downstream and upstream of the dam (see Chapter 2). It is only after independent external investigations and pressure from the International Rivers Network and the Association for International Water and Forest Studies (FIVAS) that the ADB acknowledged that the project impact area

should be expanded, and established a ten-year US$4.7 million mitigation and compensation plan (Barney, 2007). In the case of the Pak Mun Dam (see Chapter 3), villagers had to fight for each compensation (houses, land and lost fisheries) and their 2000 blockade of the dam appears to have done what many months of sit-in demonstrations outside Government House since 1994 could not: it conveyed to EGAT senior management that they needed to take much more active measures to address local concerns and resolve the conflict.

The lack of transparency in the planning process and in the operation of infrastructures nurtures *ad hoc*, emotional and often self-serving interpretations of events. A good illustration of this was the higher than usual flooding that occurred in the Mekong River in August 2008, which triggered a rapid response from a coalition of local and international organizations typically opposed to mainstream dams (see Chapter 11). These organizations were quick to assert that the serious flood conditions were, in part, a result of operations of dams in Yunnan Province of China, while the MRC stood in defence of China, saying there was no evidence that upstream dam operations had any impact upon the severity of the flood (Wipatayotin, 2008). It followed up quickly with more detailed analysis (MRC, 2008). Poor analysis of, and lack of access to, credible information tend to beget suspicion and conflict.

The NT2 dam in Laos, although not yet completed, has been heralded as a success story and an example of 'doing dams right' by the World Bank (Porter and Shivakumar, 2008). The World Bank and other NT2 proponents have claimed that the project achieved public acceptability in Laos through consultation processes that occurred throughout the project development period and that social and environmental impacts have been adequately addressed through 'skilful management, effective communications and technical expertise' (Porter and Shivakumar, 2008). Despite unprecedented attention and funding devoted to mitigating socio-environmental impacts, it is apparent that constant scrutiny by NGOs and other outsiders has led donors and developers to improve standards. As a senior staff from the Italian–Thai company involved in NT2 admitted,[4] the technical alternative with regard to the tailrace channel, which greatly lessens the impact of the dam's releases upon the Xe Bang Fay Basin residents, would not have been implemented had NGOs not provided pressing advocacy on the negative impacts of the project.

The World Bank and others touted the transparency and participation of the process, and pointed to the stacks of studies assessing NT2's environmental and social impacts (see Chapter 4), while *The Economist* (2005) claimed that local people had been consulted until 'they were blue in the face'. While the NT2 project can be credited with several innovative aspects, such as the presence of independent monitors, a revenue management framework and a commitment to public reporting largely adhered to, shortcomings are also apparent as several social and environmental commitments are either loosely or not completely adhered to (see Chapter 4).

More crucially, such efforts at improving governance, meant to pave the way for improvements in the planning of subsequent dams,[5] may have brought about the opposite result: since NT2, the governments of Laos, Cambodia and Vietnam have started bypassing international development banks in favour of private operators and bilateral agreements. Thus, rather than conduct a transboundary study required by the ADB that ultimately could have required them to pay compensation to the affected villagers, Electricity of Vietnam (EVN) ultimately acquired funding from Russian sources to go along with the Sesan 3 Dam (Hirsch and Wyatt, 2004). EVN has also welcomed other foreign assistance and funding sources with limited social and environmental conditionalities, including Chinese companies (for the Lao Cai Hydropower Station), the Indian Export-Import Bank (which provided a loan for the Nam Chien Hydropower Plant), and Russian financial and technical support (e.g. Son La and Sesan 3 Dam projects) (see Chapter 2).

Finally, not all public responses to interventions in rivers for hydropower, irrigation and flood management are organized and explicit. Perhaps more often than is realized, individual local water users and people at risk adapt to changed flows, burdens, ecosystem conditions and opportunities. The aggregate response of many farmers, irrigation districts or city wards can significantly change the effective way in which water is governed. Benefits, burdens and risks can be redistributed without a word being said or placard hoisted. The significance of individual agency can be illustrated with responses to flood interventions. Bangkok, more than any other city, has acquired its flood protection system largely by fragmented accumulation (see Chapter 11). After major events, different parts of the city take action, acquiring pumps and building canals, river walls or dikes. Within the larger metropolitan bureaucracy, different districts 'game' each other's flood protection operations. The result in both cases is that actual movement of flood waters is often complex. Adding new measures in such a complex system invariably creates side-effects for others on the wrong side of the wall, end of the tunnel or receiving end of a drain (see Chapter 11). Each new intervention triggers a series of compensatory responses, both operational and infrastructural.

Interests and ideologies

Large-scale public investments provide opportunities for private gains to powerful players that typically include local/national politicians, bureaucrats, firms and funding partners. These groups are often associated in 'iron triangles' (Woodall, 1993) or 'iron rectangles' (Molle, 2008b) – systems of vested interests that encourage bribery, bid-rigging, the exchange of favours, or simply overestimation of benefits and neglect of costs in order to secure a steady flow of projects. Collusion between business, politics and bureaucrats in the water sector is a commonality shared by virtually all countries (Repetto, 1986), is thus not specific to the Mekong region, and has been well documented in countries such as Japan (Feldhoff, 2002) and the US (Reisner, 1986; McCool, 1987).

In the Mekong region, associations of groups with vested private interests are best documented in the case of Thailand (see Chapter 10). Chai-Anan Samudavanija (1995) underlines how 'in the name of "economic development" the military and bureaucratic complex acquired additional financial sustenance through sponsoring infrastructure construction in rural areas' and points to the corruption associated with these projects that has helped the various patron–client networks maintain their political authority. Bruns's (1991) study of water resource development in northeast Thailand shows evidence of how 'irrigation projects are large and visible rewards that politicians can offer in exchange for support'. Members of parliament are active in lobbying the Royal Irrigation Department (RID) for projects either at the request of their constituencies or in self-interest.

Pondering over the announced megaprojects, Ekachai (2008) concludes that 'the construction business, the local godfathers-cum-politicians and the bureaucracy will get richer from these mega-projects. Not the villagers. Not Mother Nature. But that is not the government's concern.' At its worst, such collusion in schemes involves notorious godfathers, as shown by the relationships between high-ranking officers and mafia leaders from Khon Kaen who assisted in the Green *Isaan* Project (Phongpaichit and Piriyarangsan, 1996). Myanmar's largest construction company, Asia World Co, was founded in 1992 by Lo Hsing Han who also controls one of the largest armed drug trafficking gangs in Southeast Asia (see Chapter 5).

Powerful and well-connected politicians or companies easily capitalize on large-scale water projects. In the lower Songkhram Basin, SunTech Group Ltd, which had acquired close to 10,000ha of floodplain land at very low prices (Blake, 2008) and used state subsidies for eucalyptus plantations and for establishing a modern vegetable canning factory, saw possible projects in the lower basin as an unexpected opportunity to receive compensation for land after its undertaking completely failed (see Chapter 7). Flood protection schemes also allow officials or wealthy individuals to influence plans so that their land ends up protected by dikes; they can also buy land targeted for flood security and resell it for profit (see Chapter 11). In eastern Bangkok, public pressure from groups affected by floods has led to river walls along 80km of the river at a high cost of 0.1 million to 0.3 million baht (US$6000) per metre, a type of investment that provides benefits to many private interests.

Overlap between private interests and political functions is also apparent in the case of the Thai MDX company, which is steered by a former minister of foreign affairs and a minister of commerce once bent on opening neighbouring markets to Thai companies. Convergence of bureaucratic and private interests is not new. During the Vietnam War, the endless and costly dredging works undertaken in the Mekong Delta at public expense were frequently met with scepticism about whether aid was merely enriching French and American interests (see Chapter 8), including American construction firms such as RMK-BRJ[6] (now part of Halliburton). In the present era, concerns have surfaced about the influence of politically connected contractors, as well as planning and engineering departments

in Hanoi and Ho Chi Minh City, in infrastructure development plans in the Ca Mau Peninsula (see Chapter 8). In some cases, private interests may emancipate themselves from bureaucratic control to the point that in late 2006 the Chinese Minister of Water Resources referred to the 13-dam cascade planned on the Nu-Salween River as a case of 'predatory development'.

Chomchai (1994) notes the pressure exerted, as early as the 1950s, by international aid organizations to formulate development plans and 'mobilize maximum foreign assistance', while Kirmani (1990) sees the Mekong Project as 'a classic example of external effort, external management and external planning with little involvement of the beneficiaries'. Aid is sometimes part of fishy deals, as illustrated by the Green *Isaan* Project, for which Margaret Thatcher's government was ready to grant US$100 million and loan US$500 million if agreement was found on a planned major package of military equipment purchase (see Chapter 10). The interests of development banks and their pervasive 'lending culture', where staff incentives are aligned with the maximization of loans, are also influential in the decisions to invest. While banks pretend to have policies driven by borrowers' demands, it is readily apparent that their policies are often supply driven and internally defined. This is illustrated by an ADB official who stated that 'ADB has decided to prioritize water investments … the President has decided to double – up to $2 billion a year – investments in the water sector' (Drooj, 2006).

In sum, the pivotal drivers of large-scale water resources development lie within webs of interests that associate the most powerful political, bureaucratic or business groups or sectors of society together with foreign companies or international organizations. Decision-making appears to be highly political, in the broad sense of the term, and only marginally based on technical or economic fundamentals.

But water resources development is also predicated upon viewpoints, values and ideologies (Molle, 2006; see Chapter 10). The vision of nature as a threatening environment that must be 'harnessed' or 'tamed' through massive injection of capital, technology and concrete has fuelled much of the 20th-century 'hydraulic mission' and is still a very pervasive mental framework (see Chapter 1). This is apparent in grandiloquent language, such as the promotion of 'megaprojects' expected to 'eradicate poverty'; the ideology of 'big is beautiful' is also perceptible in minor details, such as the names of some construction companies in the region – for example, the Malaysian Mega First Corporation Berhad, which is involved in the Don Sahong Hydro Energy Project in Laos (see Chapter 14).

Extreme flood events provide opportunities to call for and strengthen control strategies. After the 1966 floods in the Mekong Basin, the executive secretary of the United Nations Economic Commission for Asia and the Far East (ECAFE) declared that the flood had 'deepened the determination of all of us engaged in the Mekong effort to convert the wasted and destructive powers of the Mekong untamed into a giant tamed and harnessed to the uses of mankind' (Jenkins, 1968). Likewise, the study by NEDECO/TEAM (1983) on the Songkhram Basin came up with a plan to tame the 'unruly' Nam Songkhram River. Another central

argument (see Chapter 7) – albeit ubiquitous and not specific to the region – is that 'water flows to the Mekong unused' (Roongrueng, 1999), a typical statement insensitive to wider ecosystemic functions of the water regime, as well as to pre-existing people's livelihoods, echoed in 1995 by the foreign minister of Thailand, who found it 'a pity to let the Mekong River, with its abundance of water resources, just flow to the sea' (cited in Friesen, 1999; see Chapter 10).

Such approaches and views of nature have their root in colonial practice and in the iconic model of basin-wide 'comprehensive development' of the Tennessee Valley Authority (TVA), applied to northeast Thailand by the US Bureau of Reclamation in 1965, where almost every single tributary to the Chi and the Mun rivers was planned to be dammed in its upper course (Floch et al, 2007); the same model has been projected at the Mekong Basin scale. The culture of full control was strengthened by many visits from the Mekong Committee and Thai technical departments to the TVA, the Bureau of Reclamation and the Columbia River Basin Development Headquarters (Darling, 1962; Hori, 2000; Biggs, 2006).

The 'great potential' of this 'majestic river' was praised early on by Wheeler's (1958) study and engineers would marvel at the 'potential' of all the 'promising dam project' sites they would identify and at the 'tremendous potentialities for power production, irrigation, navigation and flood control' that C. H. Schaaf, the first executive agent of the Mekong Committee, saw lying in this 'sleeping giant'. The heyday of heroic and enthusiastic engineering is epitomized in Hori's (2000) account of the early Mekong development plans when 'the Japanese team's grand vision of development in Cambodia' included the Stung Sen Dam, whose 'grand scale … amazed ECAFE'.

These dreams did not remain unchallenged. US geographer Gilbert White and his colleagues (White et al, 1962) warned that the Lower Mekong countries could not 'stand the luxury of monolithic concrete structures whose immediate return is inflation of national ego'. When concerns related to the social and environmental impacts of the proposed Mekong Development Scheme emerged, the US Agency for International Development (USAID) also commissioned a study on the 'social feasibility' of the Pa Mong Dam (Ingersoll, 1969). But the report did not receive much attention from the Mekong Committee. As reported by Ingersoll (1969), C. H. Schaaf responded that 'he had wanted no criticism of the Mekong River project: it was good, all good, nothing but good'. Despite greater emphasis on social and environmental issues, it is apparent to many observers that the developmentalist vision of resources use in the Mekong is well and alive, entrenched in narrow conceptions of sovereignty, and has been only marginally swayed by contestation (Friesen, 1999; Fox, 2000; Hudson-Rodd and Shaw, 2003; Goh, 2004; Hirsch and Mørck-Jensen, 2006).

Discursive practices

A good deal of the debates and conflicts around water development or management decisions are linked to various, often antagonistic, discourses. These discourses (and associated options, ideas, values and narratives) can be observed in confrontation at meetings, public hearings and multi-stakeholder platforms, as well as in written texts and the media. The discursive dimension of power, although often ignored, is a key element of governance. Several chapters in this volume have evidenced different components of discursive power – from weaving narratives, labelling peoples and conjuring up meta-justifications – in debates over water resources development and management in the Mekong region.

Narratives are 'a story with a beginning, middle and an end' (Roe, 1991). They define a problem, explain how it comes about, and frame it in a way that suggests particular courses of action while ignoring others (Keeley and Scoones, 1999). Likewise, positive narratives associate a desirable outcome, often reduced to an alluring rosy picture or a catchy motto, with obvious solutions, generally provided by a benevolent state bent on distributing the fruits of growth and development. Narratives and the visions and solutions they promote are frequently legitimized by association with powerful 'nirvana concepts' (e.g. good governance and integrated water resources management) that are by nature consensual and serve as a means of closing debates (Molle, 2008a). Projects such as NT2 are being repackaged as environmental management projects or, rather, 'not as a project *per se*, but as a vehicle through which to make a considerable progress in the effort of poverty reduction' according to Shengman Zhang, the World Bank's managing director in 2003.

Regional politics have promoted the 'Mekong spirit', described by U. Nyun, executive secretary of ECAFE during the 1960s, as 'the great goodwill, the friendly spirit of collaboration, the abundant enthusiasm which animates Mekong work', and conveyed an ideal of solidarity, cooperation and mutual help expected to keep the committee members 'above ideological and political disputes' (Menon, 1972). According to the all-purpose phrase of the committee founding document, activities were carried out 'for the benefit of all the people of the basin, without distinction as to nationality, religion or politics'. This 'Mekong spirit' rhetoric has endured over time and has helped to shape the eventful history of regional politics and development of the Mekong River as a success story, and fuelled a powerful narrative of converging goodwill and cooperation (Goh, 2004; Cornford and Matthews, 2007).[7]

The desirability – and inevitability – of developing the Mekong are the obvious feelings conveyed by most of the literature: 'A simple enumeration of the needs that could be satisfied by harnessing the water of the river gives an idea of the necessity to develop the Mekong Basin.' Hydropower generation, irrigation, flood protection, navigation and even fisheries (which need to be 'increased and diversified to produce the proteins needed by the population') are within reach to

improve incomes and 'ensure a political environment that offers better hopes and a larger stability' (CCILMB, 1970). After recalling Li Ping's irrigation development of the Chengdu plains in the third century BC, which transformed '5000km^2 of semi-desert into one vast market-garden', another CCILMB (1972) report describes the Mekong development plan as 'several thousands times more ambitious than Li Ping's and, in fact, one of the largest water resources development schemes ever devised'. Visions of wealth and plenty associated with development, capital investments and water resources development have been distilled by leaders such as Subin Pinkayan, the former Thai minister of foreign affairs and minister of commerce, who once announced he wanted to turn the Southeast Asian mainland into Suwarnabhumi, or a 'golden land' (see Chapter 5). In the 1960s, then Prime Minister of Laos Prince Souvanna Phouma announced that the Nam Ngum Dam would irrigate 100,000 acres (40,468ha), transforming them into 'orchards and gardens' (Jenkins, 1968). Laos is now poised to become 'the battery of Asia', or even 'another Switzerland crossed by roads and railways, a country of services and hydropower'.[8] No doubt, all of these grand prospects and plans aiming to exploit water and other resources are legitimate; but casting expected benefits in such a glaring light often serves to justify and impose projects indiscriminately (as shown by experience worldwide), rather than establishing improved decision-making processes.

In the eyes of water engineers and power planners, the limited exploitation of the Mekong River system's hydropower potential – in a region undergoing rapid economic growth – is a global rarity (Ratner, 2003; see Chapter 2). When negative impacts are acknowledged, they are generally framed in a discourse of trade-offs and mitigation. Already in 1972 the Mekong Committee boasted 'the methods it employs to make sure that the benefits of development will be maximized and the costs – including ecological costs – are minimized' (CCILMB, 1972). Three and a half decades later, the Mekong Water Resources Assistance Strategy (MWRAS) strategy claims that livelihood restoration programmes for affected communities can mitigate negative impacts from the projects, and the compensation schemes or alternative opportunities offered to these communities might even result in 'win–win' situations (see Chapter 2).

If losses are unavoidable, these are, nevertheless, framed as an inevitable 'sacrifice' for the common good of the nation and undervalued. For example, drawing attention to the 'almost cataclysmic changes in the ecology' that would result from basin development plans, Tubb (1966), a United Nations Food and Agriculture Organization (FAO) fisheries official concluded, however, that such development could and should not be avoided because of the 'greater economic value' of planned water uses. The importance of capture fisheries is constantly diminished by an enduring narrative of doom (see Chapter 12). The narrative suggests that poor people fish, and that people are poor because they fish; that resources are declining and facing 'the tragedy of the commons'; and that natural fisheries can be aptly replaced by modern techniques of aquaculture and 'alternative

sources of income (as provided by irrigated agriculture) and development generally (as facilitated by the availability of power)' (World Bank/ADB, 2006). The possibility of potential negative impact upon the capture fisheries is not necessarily denied, nor even downplayed; but the inevitability of trade-offs, with their connotations of 'balance', is reaffirmed (see Chapter 12). Another pervasive framing is that of floods as a threat and catastrophe (see Chapters 7 and 11).

Where the inevitability of negative impacts is not easily accepted, problems and solutions can be framed with visions of threats and doom. 'Water crisis looms', says a study on the Water Grid Project (*Bangkok Post*, 2004b), while the *Bangkok Post* (2008) discusses the hypothesis that at some time in the future Thailand would not be able to feed its own people, and a senior official justifies water transfer to the Phetchaburi Province that runs the risk of 'becoming a "desert" because the province received less rainfall than the amount of water evaporating from its soil' (*Bangkok Post*, 2004a). Promotional material printed for the Khong-Chi-Mun Project included drawings of *Isaan* as a piece of cracked soil traversed by unused rivers (see Figure 10.4 in Chapter 10).

Such framing of development issues in the Mekong region generates counter-framing. For example, researchers involved in the Nam Songkhram Basin (see Chapter 7) try to undermine the negative framing of flooding by stating that 'the local people consider it a disaster when there is no flooding'. The negative vision of wetlands as 'swamps' is likewise opposed by labelling wetlands as 'nature's supermarket' where you need no money to 'shop' for the large variety of different resources they provide (MRCS/WUP-FIN, 2007). Critics of the Pak Mun Dam countered narratives of doomed capture fisheries by demanding that the government open the gates of Pak Mun to restore fisheries and livelihoods; they subsequently produced their own study showing positive restoration effects (see Chapter 3).

Another common discursive practice is labelling, which consists of simplifying the complexity of some particular categories of people, the range of interests they represent, and the diversity of both their experience and their resource endowment (especially the environmental constraints that they may face) (Sutton, 1999). In particular, some groups are frequently associated with labels that bear a strong positive or negative undertone. 'Farmer' is usually used as a positive label when mobilized to justify new water projects. 'Farmers' associated with an image of *Isaan* that emphasizes drought, parched soils and migrating rural population are a handy way to justify bringing more water to the region, irrespective of the fact that, on average, farming now only represents a portion of rural household incomes (and often a minor one). The labelling of *Isaan* as a poor and drought-prone region (see Chapter 10 and Bell, 1969) has featured prominently in all projects to divert the Mekong River.

Right until the last decade of the 20th century, the emotive term 'communist' has been used to demonize and disqualify protest or dissent (Sretthachau, 1999). In the Pak Mun Dam controversy (see Chapter 3), during the early 1990s the police described people who distributed leaflets, wrote letters and attended demonstrations

as 'communists', or more commonly categorized them as a 'minority' or as 'paid' agents (*Bangkok Post*, 1991). Likewise, in certain Thai official discourse, NGO has become a dismissive term: some officials distinguish 'bad' NGOs (those who engage in pressure politics and civil disobedience) from their 'good' (non-political) counterparts. Bad NGOs are sinister: they incite villagers (who are normally placid) to engage in sophisticated and disruptive 'mob' protests, so goes the dominant framing (Missingham, 2003; Foran, 2006).

A third form of discursive practice is to make appeals to justifications and goals with which almost everybody agrees. Meta-justifications are frequently mobilized to justify a particular project: they usually associate a sense of urgency with a general objective that can hardly be challenged, such as 'development can't wait!' and 'poverty eradication'. Invoking higher-level overriding benefits tends to make local counterclaims parochial, 'selfish', non-legitimate or 'backward'. Further misrepresentations of the debate consist in overemphasizing expected benefits (rural income will increase, farmers will grow two crops, etc.) without consideration of costs, thus avoiding discussions about alternative investments either in the water/agricultural sector or in the wider economy.

A particular strand of meta-justifications includes arguments that stress national security, or food self-sufficiency objectives, that inherently refer to the state's prerogatives and core duty. 'Securitization' of development objectives has been particularly prominent during the Cold War (see Chapter 10). Again, while such objectives may be desirable, they are frequently mobilized to justify both sound and poor projects indiscriminately. In Laos, internal resettlement is a key policy: it is justified by the government's expressed goals of 'poverty alleviation', 'rural development' and 'nation-building'. Ethnic minority populations living in mountainous areas are frequently seen as 'holding the country back' from achieving 'development' (Baird and Shoemaker, 2007). The government's alleged goals of opium eradication, swidden agriculture reduction, and improvement of accessibility to government services, tinged by security and 'nation-building' concerns, eventually translate into forced cultural integration and massive internal displacement with severe social impacts.

People have learned – in the case of Thailand, after several decades of democratizing struggles – to challenge such sweeping development or security narratives. The Assembly of the Poor (AOP, 2000), for example, underlined that the 'sacrifice for the country's development', explicitly requested by the government, 'involved destruction of our lives and communities' and was unimpressed by promises of a brighter future, adding that 'we were never poor until the day that you appeared in the name of "development"'. As for the Pak Mun Dam, while the project was predicated upon the need to electrify northeast Thailand for development, its contribution in 2008 – if working at its design capacity, which it was far from achieving – would have lowered instantaneous electricity peak demand by a mere 0.6 per cent, equivalent to providing electricity for two large shopping malls in Bangkok (see Chapter 3).

Shifting water governance

The preceding sections convey a rather bleak picture of the governance of water resources development in the Mekong region. We have identified a whole gamut of politics, attitudes and discourses, ranging from 'hardcore' developers insensitive to social-environmental issues, on one extreme, to, on the other extreme, activists opposed to any infrastructure, often seen as emblems of the transformation of nature into capital to benefit an elite (Parnwell and Bryant, 1996). Avoiding either extreme, this book has reflected on why current water governance is lopsided, and how debates and decision-making processes could be improved so as to ensure economically, socially and environmentally sound outcomes.

Five complementary and interdependent paths to improved water governance can be found in this volume. Each path attracts a different political traveller according to varying inclinations and professional backgrounds. The first path is that of knowledge production: that of conventional science, but also of alternative knowledge registers and narratives. The second path is centred on concepts of negotiation and deliberative democracy, and seeks to bridge antagonistic viewpoints, foster social learning, and reach agreements or build consensus. The third path focuses on establishing rules, standards and norms in order to frame and constrain behaviours and to limit externalities. The fourth path is that of advocacy, where a more direct political struggle is seen as the most effective way of empowering marginalized groups, voicing their concerns and tilting the balance of power. Last, in the particular case of the international rivers of the Mekong region, efforts at improving transboundary management of resources may also shape and improve the evolution of waterscapes in the region. These paths are reviewed here in more detail.

Co-producing knowledge

A first aspect of knowledge production is the generation of conventional science. Experts who are called to assess a particular project or to recommend adequate policies draw on a body of knowledge that is perpetually in the making. For example, whereas few Mekong river fish were regarded as migratory during the 1960s (Hori, 2000), specialists now estimate 'that over 70 per cent of the total fish catch in the Lower Mekong Basin is dependent on long-distance migrant species' (Dugan, 2008). The ecological impacts of dam development in the basin are not well captured by conventional crude hydrologic models; investigating impacts on the Tonle Sap ecology (Chapter 9) or coupling ecological models of primary productivity with the 'flood pulse' (Lamberts and Koponen, 2008) provides further and badly needed insight on expected changes.

But many times, as shown earlier in the discussion of the politics of knowledge (see also Chapters 12 and 13), distorted common wisdoms do not only reflect a

possible imperfect knowledge, but also the particular narratives that are propelled by interest groups and that mirror power structures. It is therefore necessary to work on counter-narratives that re-establish a better balance in perceptions and understanding of reality. The myths and misperceptions about the projection of floods as disasters, or of fisheries as a doomed resource, must be combated with new knowledge that sometimes has to emancipate itself from the usual channels of scientific production, as shown by the example of the Tai Baan Research (see Chapters 7, 11 and 12). In some cases, it is the very existence of a denied fact that must be established through investigation, as in the case of NGOs documenting the impact of the Yali Falls Dam in Cambodia (Öjendal et al, 2002; Hirsch and Mørck-Jensen, 2006).

In other cases, the very scientific narratives called in support of a project are partially or flatly erroneous. Thailand's Prime Minister Samak Sundaravej, for example, recently refloated the idea of building the controversial Kaeng Sua Ten Dam on the Yom River in upper northern Thailand 'to protect Bangkok from flooding' (*Bangkok Post*, 2008), although consultants already demonstrated in the 1980s that the dam would have a completely marginal impact upon flooding in the lower part of the Chao Phraya Basin. Myths regarding the relationships between upland forest uses and downstream floods and droughts have also justified the expansion of state enclosures (national parks, forest or wildlife reserves, etc.), afforestation schemes, and the removal of ethnic communities in the uplands of northern Thailand; these myths have now come under greater scrutiny and been increasingly challenged by scientific research (CIFOR, 2004; Forsyth and Walker, 2008). The link between large hydropower development and poverty alleviation has also been cemented in development discourse in the region and notably in China (see Chapter 5), and alternative proposals have to deal with demonstrating the frailty of that link.

The 'risk society' described by Ulrich Beck (1992) associates the emergence of multiple ecological crises with the contestations of formal authority by social movements. The status of knowledge is now contested and risks that were perceived to be safely managed by experts have become subject to public debate. The Mekong River Commission (and, to some extent, development banks) have responded to these trends by repositioning themselves as knowledge brokers; but their scenarios, impact assessments and other cost-benefit analyses have also generated intense debates. Hence, those who travel the path of knowledge production invariably face self-serving arguments, narratives rooted in bogus science and tunnel visions. While exposing harmful untruths is a matter of urgent necessity, all knowledge brokers work in highly politicized contexts that necessarily have a bearing on the knowledge that they produce.

Debating alternatives

The negotiation path is predicated upon the observed possibility that actors engaged in controversies might not just negotiate based on predefined positions, but may actually somehow learn from each other, accept trade-offs and losses, gradually change their positions and viewpoints, and arrive at shared decisions or agreements, if not consensus (Dryzek, 2000; Warner, 2006; Karl et al, 2007).

At both local and basin scales, states' views are often enforced with little discussion; few opportunities exist for defining modes of co-management. In the coastal part of the Mekong Delta, for example, the authorities have gated the outlets to the sea in order to conserve fresh water inland and to foster rice multiple-cropping. But this decision undermined brackish water shrimp farming in the area and led to protests and structures being destroyed (Hoanh, 2003; see Chapter 8). This, in turn, forced the authorities to discuss with local villagers and enabled the definition of an agreement that allowed both rice and shrimp farming through adequate operation of gates. In the case of the NT2 Dam in Laos, as mentioned earlier, discussions with affected populations and NGOs allowed a technical alternative that minimized impact upon villagers in the Xe Bang Fai Valley to be found at an equivalent cost.

Decision-making is thus an (often long) process of social learning where the room for manoeuvre of actors and interest groups becomes constrained by public exposure of their interests, strategies and discourses, which may then be contested and scrutinized. Accessible policy conferences, public hearings and multi-stakeholder platforms all provide opportunities to advance in this direction (Warner, 2006; Dore, 2007).

Forums such as the Exploring Water Futures Together dialogue held in Vientiane in 2006 (IUCN et al, 2007) and the MRC's Hydropower Forum in 2008 brought together a diverse group of stakeholders, including elite policy-makers, developers, development bankers and advocates on behalf of vulnerable people. At their best, such events give space and legitimacy to suppressed narratives, such as the narrative of how the impacts upon fisheries from the planned dams to be sited on the mainstream Mekong River cannot be mitigated, as recent scientific research shows that the diversity of Mekong fish species and their migrations makes it impossible to mitigate impacts using fish passes or aquaculture.

It can be extremely difficult to persuade elite actors to participate in such multi-stakeholder events. But positive interactions build rapport and trust that could catalyse more sustained interaction.

Promoting standards

One particular pathway that potentially helps to charter the boundaries within which the different parties may act is to seek agreement on codes of conduct, or 'standards'. The World Bank and the ADB have, for example, defined guidelines

for project planning and implementation that standardize procedures and establish policies on issues such as data disclosure, social and environmental impact assessments, resettlement and compensation of people displaced by dams.

In the energy sector, international standards in electricity planning, such as integrated resources planning (IRP), are now common in many developed countries (see Chapter 2). Energy planning in the past has been biased towards overestimating future demand in energy projections, leading to energy surpluses and over-investments in new capacity that are socially and economically wasteful (but lucrative to developers). The planning processes currently in place, both at the national and regional levels, fall well short of these standards. In Thailand, IRP is well known; but incentives to adopt it are not compelling. Plans conducted according to IRP principles would include more demand-side energy-efficiency measures. These would lower energy sales and construction of capacity, but are not 'attractive' in a context where utilities are allowed to recover their costs plus fixed rates of return on their investments. Not surprisingly, IRP in North America is typically a requirement imposed upon utilities by regulatory bodies.

But in contexts where regulatory regimes are still weak, self-regulation frameworks deserve mention. The Equator Principles, for example, are a set of guidelines aimed at private financiers of large infrastructure projects, particularly projects over US$10 million that are 'project financed'. Project finance is a method of raising large amounts of capital from both equity investors and lenders, including both commercial and development banks. Loans are typically secured by cash flows from a project company (a new organization that is legally separate from the investing parent firms). In the event of financial distress, lenders have limited recourse to the assets of the project company, but no recourse to the assets of the parent firms (Vaaler et al, 2008). This feature means that investors and sponsors have strong incentives to get projects built and operating on time, and weaker incentives to consider negative external effects (see Chapter 4).

The Equator Principles provide general guidance to investors for project evaluation, including initial risk screening; whether impact assessment is required and, if so, what standards to use; public disclosure; independent review; and compliance monitoring. The principles are based on existing guidelines and safeguards of the International Finance Corporation, in turn modelled after those of the World Bank. While these principles have been criticized as green 'window dressing', it is also apparent that many banks engaged in project finance have not signed up to the Principles, suggesting that complying with them imposes additional costs (Scholtens and Dam, 2007). Instead, signatories to the Principles tend to be larger banks with active Corporate Social Responsibility programmes. As of 2008, the Equator Principles were still new to the Mekong region. No regional banks had signed up. Further analysis of projects funded by Equator signatories (such as the Theun-Hinboun Expansion Project led by ANZ Bank) is necessary to tell if the Principles produce better projects.

These standards, predictably, are neither used nor accepted by all parties. Private- sector hydropower developers from Thailand, Vietnam, China, Malaysia and Russia, often backed by influential political players, government bureaucracies and financiers from their own countries, which have recently entered the dam building arena, are determined to build hydropower dams or irrigation schemes without becoming entangled within burdensome environmental and social dilemmas that have often dogged projects in the past. As a result, Mekong country governments may be tempted to make deals with such developers,[9] while development banks may be tempted to weaken their own standards to stay the course and to remain 'competitive' (see discussion on the ADB in Chapter 2).

Even actors attempting to adhere to standards often end up retaining information or ignoring events. For example, as part of its decision to proceed with NT2, the World Bank commissioned a study based on IRP principles (Greacen and Palettu, 2007). The study (du Pont, 2005) showed that feasible demand-side management, energy conservation measures and renewable energy generation in Thailand would exceed the output of NT2 and would provide energy to the customer at a cost approximately 25 per cent less than NT2 (see Chapter 4). However, the bank did not publish du Pont's study until after its board had approved NT2.

The low attractiveness of these standards is linked to the additional costs and time delays that they impose on planners and project developers. The maximization of profit works to edit out of the picture these nagging social or environmental impacts that will come in the way of bulldozers and building concrete infrastructures. What are the incentives for operators to adhere to constraining standards, especially in a context where those who adhere lose a competitive edge with regards to those who don't? Just as in the case of polluting industrial activities, profit and competitiveness are tightly linked to the non-consideration of the externalities generated.

In general, 'best practices' or standards address issues of concern to wider society through eliminating or minimizing externalities and sharing project benefits (see Chapter 2). Such practices may thus reduce political risk – for example, from protests or legal measures that could delay project construction or add unforeseen additional costs. Governments may also have an interest in selecting developers with a sound reputation to avoid political turmoil or social protests that could tarnish their reputation. However, commercial or strategic short-term interests often override the consideration of precautionary measures. Where corruption is high or local protest stifled, project developers perceive low political risk and feel less inclined to implement best practices. Past dam projects, unfortunately, confirm that compensation schemes and other concessions from dam builders and governments have generally been secured only after substantial mobilization or protest (see Chapters 3 and 4). Overall, weak regulatory regimes seem to require more direct political action in order to improve governance outcomes.

Contesting decision-making

Contexts with prevailing top-down, state-centred decision-making and weak political representation of marginal categories of population – not to mention cases where political freedom is restricted – are prone to producing projects where social and environmental impacts are discounted or ignored. Advocacy, whether organized around grassroots movements, networks of urban-based NGOs or transnational coalitions, is the path often chosen by those who suffer immediate losses of livelihoods and are left to their own devices (Young, 2001).

Advocacy coalitions in the Mekong region have been fast to move at challenging the alleged benefits of dams. The Pak Mun Dam story (see Chapter 3) is exemplary of several dimensions of political struggles around water development projects: this case study shows that compensations have been secured after repeated, protracted, costly and painful demonstrations and initiatives. Compensations and dam management adjustments were repeatedly promised and then denied, and sustained mobilization was necessary to ensure these mitigation measures. In other cases, including the Theun-Hinboun Dam Project (see Chapter 2) and the NT2 Dam Project (see Chapter 4), where the money spent on impact mitigation and the effort at ensuring transparency have arguably notably exceeded those of earlier projects, it is apparent that the constant pressure and scrutiny of outsiders have helped to raise the degree of adherence to standards or decent practices.

Yet, advocacy coalitions have their weaknesses. Grassroots movements, such as the Assembly of the Poor, that formed around the Pak Mun struggle may be undermined when the state organizes local opposition groups, engages in hostile media discourse or compensates free-riders. NGOs also have different priorities, with some more focused on conservation or biodiversity, and others more livelihood or human rights oriented. The IUCN, for example, supported the NT2 dam because it saw the revenue it would create as a means of establishing and maintaining protected areas in the Nakai Plateau around the proposed reservoir (Bakker, 1999). Other organizations, such as International Rivers or TERRA, opposed it on grounds of the expected destruction that it would bring to the local environment and to the impacts upon the livelihoods of local villagers around the dam site (see Chapter 4). While NGOs often accurately represent marginalized and vulnerable people, their advocacy narratives can drastically simplify complex development conflicts (see Chapter 3).

Perhaps the greatest hurdle that these actors face lies in promoting their messages of conservation, preservation and socio-environmental responsibility in areas where conditions of extreme poverty frequently prevail, without being seen as opposed to 'development' (see Chapter 4). Where the 'balance point' precisely lies between projects that clearly benefit private interests rather than collective ones, on the one hand, and total paralysis, on the other, is hard to establish; in many cases, debates seem to pit developers unprepared to admit that a particular project may be unsound against activists who take expected impacts as a reason for opposing

any project. While the scope for energy savings or greener energy generation is substantial, meeting long-term projections in energy demand is likely to include projects that do have impacts.

Transboundary governance

While knowledge production, negotiations or political struggle often unfold at the national level, the linkages between the Mekong region countries through their dependence upon the same river system also opens up opportunities for improving water governance at a regional or basin level. There are now several overlapping institutions that have potential to contribute to improving transboundary governance.

The 1995 Mekong Agreement established a Mekong River Commission Secretariat and basic common principles and procedures. In the years since, member countries have struggled to negotiate specific and meaningful rules for water utilization, project notification and the coordination of development plans (see Chapter 14). For the most part, members have successfully maintained a situation where they can pursue their own interests unfettered as much as possible by concerns of other states. But it is also a situation in which individual and collective influence over decisions and activities by upstream China is modest. The MRC and its secretariat, in particular, have often had to tread a thin line between strong competing interests of member countries and those of donor countries and multilateral agencies. They have also had to commit to promoting participation while not threatening the long-term agenda of member states (Sneddon and Fox, 2007).

It is apparent[10] that countries are reluctant to give up sovereignty and that national interests prevail over transboundary interests (Hirsch and Mørck-Jensen, 2006). The 1995 Mekong Agreement, largely weakened to accommodate Thai interests and prerequisites (Ratner, 2003; Goh, 2004), is lacking 'legal teeth' to enforce its provisions (Dore, 2003). The representation of the Mekong River as a legal structure, as implied in the 1995 agreement, privileges the state and practices of sovereignty and confines transboundary management to an issue of allocation rules limited to the main stem of the river (Fox, 2000). In any case, there are no easy or consensual metrics to assess the effectiveness of the MRC. Sneddon and Fox (2006) caution that successful 'cooperation' might well result in ecological alterations and resource degradation for local people who depend upon river basins for their livelihoods. The MRC, ultimately, is 'owned' by its member states and cannot be expected to act against their agendas. It was first weakened by a post-Cold War context that provided fewer incentives for states to cooperate (Ratner, 2003) and is now at risk of being increasingly sidelined because of the irruption of private banks and investors making direct deals with governments in the region.

Other intergovernmental frameworks for cooperation, such as the Greater Mekong Sub-Region (GMS) initiatives established and facilitated by the ADB,

have not yet played a central role on water, although they have become increasingly important in related energy and transport sectors. Hydropower-related initiatives illustrate the potential of multilateral actors to support development and acceptance of standards – for example, for investment projects.

Civil society networks have also made some effort to go beyond national boundaries and to tackle regional governance problems. One of their advantages is that they are often less intimidated by dominant actors or beholden to prevailing options and agendas. Thai-based and international organizations, however, still dominate many of these initiatives. These are also limitations in terms of continuity of effort as such cooperation is often not strongly institutionalized. Even so, the contributions of non-state actors and the networks that they drive and support are becoming an emergent feature of water governance in the Mekong region.

The five interconnected pathways towards shifting Mekong water governance deserve the attention of both practitioners and scholars. Both can help to shed light on possible approaches in specific Mekong contexts, as well as to develop a more fundamental understanding of how these pathways are activated, subverted or sustained (Foran, 2007).

CONCLUSIONS

The future of the waterscapes of the Mekong region has been, and will continue to be, contested. However, the recent history of water governance gives grounds for both concern and hope.

On the one hand, vested, powerful interests continue to dominate decision-making around major hydropower and irrigation infrastructure projects. They do so by keeping key information about plans secret or hard to access, project procedures closed, and by labelling queries, debate and opposition as 'anti-development' and undermining legitimate concerns on impacts by reference to uncertainties. Sophisticated technologies of mapping, modelling and assessment, and even stakeholder consultation, are often turned around and made to serve project sponsors. With little transparency, much of the debate is reduced to ideological rhetoric and positioning.

The promises of benefits from flood protection, dams or irrigation schemes are often not realized. The devil that dwells in development projects' details usually writes the next phase of the story: 'alternatives jobs' do not materialize as expected; the markets for cash crops and aquaculture products proposed as alternatives are nowhere to be found; resettlement takes longer than planned due to delays in new house construction or to villagers refusing to budge; flow alteration incurs severe impacts upon fisheries, recession agriculture or embankment stability; etc. In other words, the social and environmental complexity that is glossed over at the planning stage suddenly erupts and strikes back: the state 'tunnel vision' that had oversimplified the real world (Scott, 1998) is laid bare; the time- and cost-cutting logic of investors works against identification and compensation of impacts.

This, perhaps, explains why the repeated assurance that development actors have 'learned from past mistakes', or that all necessary safeguards are being enforced, sounds hollow. Even when standards have been established and are supposed to be adhered to, capital-intensive projects inserted in contexts where affected populations have limited political clout, environmental values are not well recognized, and poor governance and corruption are pervasive and tend to generate costs and risks that are unequally distributed. Claims of processes that screen poor investments or generate 'good dams' end up being hard to uphold and involve a degree of wishful thinking.[11] Experience tells us that irrigation projects that promise hundreds of thousands of hectares in Cambodia or Thailand, even if eventually not developed on the scale announced, must be considered with much circumspection.

On the one hand, all well-wishing stakeholders may feel compelled to adhere to a vision whereby 'a river of promises is to be transformed into a river of prosperity', new vast paddy irrigation schemes convert water into 'white gold', and hydropower dams are 'powering progress' and 'kick-start[ing] development'[12] in order to 'lift people from poverty and promote sustainable development for all'.[13] On the other, no comfort is offered by recalling sorrowful episodes of the recent past, including the loss of lives and destruction of livelihoods in the Sesan Valley in Cambodia after the construction of the Yali Falls Dam in Vietnam; the late recognition – under public pressure – of the impacts generated by the Theun-Hinboun Dam; the disruptions and mayhem wrought by the Pak Mun Dam for the production of around 0.2 per cent of Thai electricity generation; and the flurry of dam and irrigation projects under consideration and that are being planned again with insufficient mechanisms to assess impacts, crowd out unsound projects or come up with just compensations. Indeed, it makes one uneasy to compare the US$1 million first reserved for mitigation and compensation by the Theun-Hinboun Power Company, with annual revenues of around US$60 million, and the US$2 billion in revenue to the Government of Laos (let alone the return to investors) over 25 years expected from the NT2 dam with the US$90 million earmarked for all social and environmental compensations and mitigations (see Chapter 4).

'Local' issues or problems are downplayed by picturing them against national strategies and interests and then 'scaled out' by framing regional development and cooperation as an overriding goal and irresistible transformation towards prosperity (Mitchell, 1998; Sneddon and Fox, 2006). Basin hydrologic models depict macro-level changes in the flow regime, but not local impacts and ecosystem productivity. Regional cooperation agreements focus on the main stem of the Mekong River and leave wider systemic relationships with tributaries, as well as land and water use, to the responsibility of individual states.

In a recent interview, reflecting on the hydropower explosion, a regional analyst and campaigner for International Rivers acknowledged that pleasing everyone is just not possible: many projects will be undertaken and impacts will have to be dealt with. Some impacts are amenable to mitigation, but not all. To avoid the

'race to the bottom' suggested by the new deals made between governments in the region and banks or construction companies with poor or no social/environmental commitment, it is necessary to constantly and tirelessly reopen and challenge the 'black box' of decision-making, redress power imbalances, and contest the production and mobilization of particular registers of knowledge.

Examples exist of governments, business and communities pursuing, with varying degrees of enthusiasm, iterative and fair approaches to evaluating projects and alternatives. Such examples underline the diverse knowledge sources and understandings that need to be brought together to comprehend livelihoods, ecosystem services, burdens and risks at multiple levels. They also underline the importance of maintaining arenas for deliberation in which people can challenge and express dissent about projects in both their grand conceptions and specific details. As schemes become more elaborate, the needs for public scrutiny and contestation correspondingly increase. Before the waterscapes of the Mekong region are irreversibly transformed, it is crucial that a diverse range of alternatives are fully explored by those who must continue to live within them.

NOTES

1 An ADB official at the Exploring Water Futures Together dialogue in Vientiane, 2006.
2 As illustrated in the film *Tongpan* directed by Paijong Lai-sakul (1977). See also Sluiter (1992).
3 'More often than not the ADB has forced the government to undertake an EIA' (King, 2006).
4 Pers comm at the Vientiane Mekong Dialogue in July 2006.
5 NT2 promoters argued that the project's preparation was a model for future hydropower development and could be used to strengthen the Lao government's capacity to manage new hydropower projects (see Chapter 4).
6 The Raymond Morrison Knudsen-Brown Rootes Jones (RMK-BRJ) company did 97 per cent of the works undertaken by the American army in Vietnam.
7 See, for example, Wheeler (1970), MRC (1995) and Le-Huu and Nguyen-Duc (2003) for unsullied views of Mekong cooperation efforts.
8 The chairman of the Lao National Economic Committee, in 1995, quoted in Goh (2004).
9 Regulation begets bypass strategies, as shown, for example, by the logging bans in China and Thailand that have merely displaced logging activities to poorer neighbour states with looser control (Lang, 2002).
10 Although this is the dominant view of analysts, several accounts stick to the image of the success story mentioned earlier. Le-Huu and Nguyen-Duc (2003), for example, consider that 'the Mekong Committee and current MRC have provided a forum for the four member countries to work out the best solution so that no development is missed or unnecessarily delayed'.

11 The World Bank's December 2004 *Country Economic Memorandum* pointed to the weak governance environment in Laos and noted that without significant governance improvements upfront, hydropower revenues will not result in good development outcomes (see Chapter 4). Likewise, the ADB noted in its technical assistance paper for NT2 that 'the government's capacity to implement large-scale complex hydropower projects still remains a major concern'. According to one diplomat based in Vientiane, the Laotian government is 'pretty good at starting then stopping' its promised reforms, and passing but not implementing regulations to get more foreign aid (Richardson, 2002).
12 'So that we can compete with other countries': an official with the Prime Minister's Office, quoted in Richardson (2002).
13 The primary goal of the GMS programme, as stated at the GMS Summit Meeting in 2002.

REFERENCES

AOP (Assembly of the Poor) (2000) *Siphok panha sammacha kon chon* [*Sixteen Problems of the Assembly of the Poor*], AOP, Bangkok

Baird, I. G. and Shoemaker, B. (2007) 'Unsettling experiences: Internal resettlement and international aid agencies in Laos', *Development and Change*, vol 38, no 5, pp865–888

Bakker, K. (1999) 'The politics of hydropower: Developing the Mekong', *Political Geography*, vol 18, pp209–232

Bangkok Post (1991) 'Bank chiefs hear both sides of dam issue', *Bangkok Post*, 19 October

Bangkok Post (2004a) '"Plodprasop proposes new pilot project". Bid to end row over Water-Grid project', *Bangkok Post*,14 April

Bangkok Post (2004b) 'Water crisis looms, says grid study: Diversion from across border will be needed', *Bangkok Post*, 13 June

Bangkok Post (2008) 'Samak to revive old dam project: PM on collision course with environmentalists', *Bangkok Post*, 6 June

Barney, K. (2007) *Power, Progress and Impoverishment: Plantations, Hydropower, Ecological Change and Community Transformation in Hinboun District, Lao PDR*, YCAR Papers no 1, Political Ecology Series, York,Toronto

Beck, U. (1992) *Risk Society: Towards a New Modernity*, Sage, London

Bell, P. F. (1969) 'Thailand's northeast: Regional underdevelopment, "insurgency", and official response', *Pacific Affairs*, vol 42, no 1, pp47–54

Biggs, D. A. (2006) 'Reclamation nations: The US Bureau of Reclamation's role in water management and nation building in the Mekong Valley, 1945–1975', *Comparative Technology Transfer and Society*, vol 4, no 3, pp225–246

Blake, D. J. H. (2008) 'The multi-dimensional commons of the lower Nam Songkhram River wetlands, Thailand', Paper submitted to The 12th Biennial Conference of the International Association of Study of the Commons, 14–18 July 2008, University of Gloucester, Cheltenham, UK

Blake, D., Carson, B. and Tubtim, N. (2005) *Review of the Environmental Management Division*, Theun-Hinboun Power Company, 2 March, 2005

Breukers, S. (1999) 'Who defines the "problem", who defines "development"? The case of the Songkhram Irrigation Project', *Watershed*, vol 4, no 2, pp87–97

Bruns, B. (1991) *The Stream the Tiger Leaped: A Study of Intervention and Innovation in Small Scale Irrigation Development in Northeast Thailand*, PhD thesis, Cornell University, NY

CCILMB (Committee for Coordination of Investigations of the Lower Mekong Basin) (1970) *Rapport sur le Plan Indicatif du Bassin*, Bangkok

CCILMB (Committee for Coordination of Investigations of the Lower Mekong Basin) (1972) *The Mekong Project 1972*, Bangkok

Chomchai, P. (1994) *The United States, the Mekong Committee and Thailand: A Study of American Multilateral and Bilateral Assistance to Northeast Thailand since the 1950s*, Asian Studies Monograph no 051, Institute of Asian Studies, Chulalongkorn University, Bangkok

CIFOR (Centre for International Forestry Research) (2004) *Forests and Floods: Drowning in Fiction or Thriving on Facts*, CIFOR, Bogor, Indonesia and FAO, Bangkok, Thailand

Cornford, J. and Matthews, N. (2007) *Hidden Costs: The Underside of Economic Transformation in the Greater Mekong Subregion*, Oxfam Australia

Darling, F. C. (1962) 'American Policy in Thailand', *Political Research Quarterly*, vol 15, no 93, pp93–110

de Koninck, R. (2005) *L'Asie du Sud-Est*, Armand Colin, Paris

Dore, J. (2003) 'The governance of increasing Mekong regionalism', in Mingsarn Kaosa-ard and John Dore (eds) *Social Challenges for the Mekong Region*, White Lotus, Bangkok, Thailand, pp405–440

Dore, J. (2007) 'Multi-stakeholder platforms (MSPS): Unfulfilled potential', in Lebel, L., Dore, J., Daniel, R. and Koma, Y. (eds) *Democratizing Water Governance in the Mekong Rregion*, Mekong Press, Chiang Mai

Drooj, M. (2006) Oral presentation, 6–7 July, Vientiane, Laos

Dryzek, J. S. (2000) *Deliberative Democracy and Beyond: Liberals, Critics, Contestations*, Oxford University Press, Oxford

Dugan, P. (2008) *Examining the Barrier Effect of Mainstream Dams to Fish Migration in the Mekong, with an Integrated Perspective to the Design of Mitigation Measures: Conclusions from an Independent Expert Group Meeting*, 22–23 September 2008, Vientiane, Laos

du Pont, P. (2005) *Nam Theun 2 Hydropower Project (NT2) Impact of Energy Conservation, DSM, and Renewable Energy Generation on EGAT's Power Development Plan*, World Bank, accessed 24 March, http://siteresources.worldbank.org/INTLAOPRD/Resources/DSMmarch2005.pdf

EarthRights International (2005) *Flooding the Future: Hydropower and Cultural Survival in the Salween River Basin*, 28 April, www.earthrights.org/burma

The Economist (2005) 'Dams back in fashion. But have the right lessons been learned?', *The Economist*, 7 April

Ekachai, S. (2008) 'Destructive mega dreams', *Bangkok Post*, 12 June

Feldhoff, T. (2002) 'Japan's construction lobby activities – systemic stability and sustainable regional development', *ASIEN*, vol 84, pp34–42

FIVAS (2007) *Ruined Rivers, Damaged Lives – The Impacts of the Theun-Hinboun Hydropower Project on Downstream Communities in Lao PDR*, FIVAS, Oslo, Norway

Floch, P., Molle, F. and Loiskandl, W. (2007) *Marshalling Water Resources: A Chronology of Irrigation Development in the Chi-Mun River Basin, Northeast Thailand*, Mekong Programme on Water, Environment and Resilience, Chiang Mai University, Thailand International Water Management Institute, Colombo

Foran, T. (2006) *Rivers of Contention: Pak Mun Dam, Electricity Planning, and State–Society Relations in Thailand, 1932–2004*, PhD thesis, Division of Geography, Department of Geosciences, University of Sydney, Australia

Foran, T. (2007) *Advocacy Pathways towards Decision Making in Thailand*, Working paper, Unit for Social and Environmental Research, Chiang Mai University, Chiang Mai, Thailand

Forsyth, T. and Walker, A. (2008) *Forest Guardians, Forest Destroyers: The Politics of Environmental Knowledge in Northern Thailand*, University of Washington Press, WA

Fox, C. A. (2000) *Flexible Sovereignty and the Politics of Hydropower Development in the Mekong River Basin*, PhD thesis, University of Oregon, OR

Friesen, K. M. (1999) *Damming the Mekong: Plans and Paradigms for Developing the River Basin from 1951 to 1995*, PhD thesis, Faculty of the School of International Service, American University, Washington DC

Goh, E. (2004) 'The hydro-politics of the Mekong river basin: Regional cooperation and environmental security', in Thakur, R. and Newman, E. (eds) *Broadening Asia's Security Discourse and Agenda: Political, Social, and Environmental Perspectives*, United Nations University Press, Tokyo

Greacen, C. and Palettu, A. (2007) 'Electricity sector planning and hydropower', in Lebel, L., Dore, J., Daniel, R. and Saing Koma, Y. (eds) *Democratizing Water Governance in the Mekong region*, Mekong Press, Chiang Mai

Hirsch, P. (1998) 'Dams, resources and the politics of environment in mainland Southeast Asia', in Hirsch, P. and Warren, C. (eds) *The Politics of Environment in Southeast Asia: Resources and Resistance*, Routledge, London, Chapter 3, pp55–70

Hirsch, P. and Mørck-Jensen, K. (2006) *National Interests and Transboundary Governance in the Mekong*, Australian Mekong Resource Centre, University of Sydney, Australia

Hirsch, P. and Wyatt, A. (2004) 'Negotiating local livelihoods: Scales of conflict in the Se San River Basin', *Asia Pacific Viewpoint*, vol 45, no 1, April, pp51–68

Hoanh, C. T., Tuong, T. P., Gallop, K. M., Gowing J. W., Kam, S. P., Khiem, N. T. and Phong, N. D. (2003) 'Livelihood impacts of water policy changes: Evidence from a coastal area of the Mekong river delta', *Water Policy*, vol 5, pp475–488

Hori, H. (2000) *The Mekong: Environment and Development*, United Nations University, United Nations University Press, Tokyo, Japan

Hudson-Rodd, N. and Shaw, B. J. (2003) 'Mekong river development: Whose dreams? Which visions?', *Water International*, vol 28, no 2, pp268–275

Ingersol, J. (1968) 'Mekong river basin development: Anthropology in a new setting', *Anthropological Quarterly*, vol 41, no 3, pp147–167

IUCN, TEI, IWMI and M-POWER (2007) *Exploring Water Futures Together: Mekong Region Waters Dialogue: Resource Papers from Regional Dialogue*, IUCN, Thailand Environment Institute, International Water Management Institute and the Mekong Programme on Water, Environment and Resilience, Bangkok, Colombo and Chiang Mai, p132

Jenkins, D. (1968) 'The Lower Mekong Scheme', *Asian Survey*, vol 8, no 6, pp456–464
Karl, H. A., Susskind, L. E. and Wallace, K. H. (2007) 'A dialogue not a diatribe: Effective integration of science and policy through joint fact finding', *Environment*, vol 49, pp20–34
Keeley, J. and Scoones, I. (1999) *Understanding Environmental Policy Processes: A Review*, IDS Working Paper 89, Environment Group, Institute of Development Studies, University of Sussex, Brighton, UK
King, P. (2006) Oral presentation, 6–7 July, Vientiane, Laos
Kirmani, S. S. (1990) 'Water, peace and conflict management: The experience of the Indus and Mekong river basins', *Water International*, vol 15, pp200–205
Lamberts, D. and Koponen, J. (2008) 'Flood pulse alterations and productivity of the Tonle Sap ecosystem: A model for impact assessment', *Ambio*, vol 37, no 3, pp178–184
Lang, G. (2002) *Deforestation, Floods, and State Reactions in China and Thailand*, Working Papers Series no 21, Southeast Asia Research Centre, Hong Kong
Le-Huu, T. and Nguyen-Duc, L. (2003) *Mekong Case Study*, Technical Documents in Hydrology, PC-CP series, No 10, UNESCO, Paris
Manorom, K. (2007) 'People's EIA: A mechanism for grassroot participation in environmental decision-making', *Watershed*, vol 12, no 1, pp26–30
McCool, D. (1987) *Command of the Waters: Iron Triangles, Federal Water Development, and Indian Water*, University of California Press, Berkeley, CA
McDowell, D., Scudder, T. and Talbott, L. (2008) *Lao PDR Nam Theun 2 Multipurpose Project*, 13th and 14th Reports of the International Environmental and Social Panel of Experts, February–April
Menon, P. K. (1972), 'Financing the Lower Mekong River Basin Development', *Pacific Affairs*, vol 44, no 4, pp566–579
Missingham, B. D. (2003) *The Assembly of the Poor in Thailand: From Local Struggles to National Social Movement*, Silkworm Books, Chiang Mai
Mitchell, M. (1998) 'The political economy of Mekong basin development', in Hirsch, P. and Warren, C. (eds) *The Politics of Environment in Southeast Asia: Resources and Resistance*, Routledge, London, pp71–89
Molle, F. (2006) *Planning and Managing Water Resources at the River Basin Level: Emergence and Evolution of a Concept*, Comprehensive Assessment Research Report, no 16, IWMI, Colombo, Sri Lanka
Molle, F. (2008a) 'Nirvana concepts, narratives and policy models: Insights from the water sector', *Water Alternatives*, vol 1, no 1, pp131–156
Molle, F. (2008b) 'Why enough is never enough: The societal determinants of river basin closure', *International Journal of Water Resource Development*, vol 24, no 2, pp247–256
MRC (Mekong River Commission) (1995) *Mekong River Commission towards Sustainable Development*, MRC, Bangkok
MRC (2005) *Public Participation in the Lower Mekong Subregion*, MRC, Vientiane, Laos
MRC (2008) *Flood Situation Report, August 2008*, MRC Technical Paper No. 21, 1 September, Mekong River Commission Secretariat, Vientiane
MRCS/WUP-FIN (2007) *Final Report – Part 2: Research Findings and Way Forward. WUP-FIN Phase 2: Hydrological, Environmental and Socio-Economic Modelling Tools*

for the Lower Mekong Basin Impact Assessment, Mekong River Commission and Finnish Environment Institute Consultancy Consortium, Vientiane, Laos, www.eia.fi/wup-fin/wup-fin2/publications.htm.

NEDECO/TEAM (1983) *Pre-Feasibility Study of the Nam Songkhram Basin Irrigation and Flood Control Development*, vol 1, Main report, March 1983, Code 4.56.056, Prepared by NEDECO, Arnhem, The Netherlands, in association with TEAM, Bangkok, Thailand, Interim Committee for Coordination of Investigations of the Lower Mekong Basin, Bangkok

Öjendal, J., Mathur, V. et al (2002) *Environmental Governance in the Mekong: Hydropower Site Selection Processes in the Se San and Sre Pok Basins*, SEI/RESPSI Report Series no 4, Stockholm Environment Institute, Bangkok

Parnwell, M. and Bryant, R. (eds) (1996) *Environmental Change in South-East Asia: People, Politics and Sustainable Development*, Routledge, London

Phillips, D., Daoudy, M., McCaffrey, S., Öjendal, J. and Turton, A. R. (2006) *Transboundary Water Cooperation as a Tool for Conflict Prevention and Broader Benefit-Sharing*, Ministry for Foreign Affairs Expert Group on Development Issues (EGDI), Stockholm

Phongpaichit, P. and Piriyarangsan S. (1996) *Corruption and Democracy in Thailand*, Silkworm Books, Chang Mai, Thailand

Porter, I. and Shivakumar, J. (2008) *Doing Dams Right: The Challenges of Lao Nam Theun 2 (Directions in Development)*, World Bank Publications, World Bank, Washington, DC

Ratner, B. (2003) 'The politics of regional governance in the Mekong River Basin', *Global Change*, vol 15, no 1, pp59–76

Reisner, M. (1986) *Cadillac Desert: The American West and Its Disappearing Water*, Penguin, New York, NY

Repetto, R. (1986) *Skimming the Water: Rent Seeking and the Performance of Public Irrigation Systems*, Research Report no 4, World Resources Institute, Washington, DC, p47

Richardson, M. (2002) 'In its water, Laos sees power to cut poverty', *International Herald Tribune*, 11 March

Rigg, J. (1997) *Southeast Asia: The Human Landscape of Modernisation and Development* Routledge, London

Roe, E. (1991) 'Development narratives, or making the best of blueprint development', *World Development*, vol 19, no 4, pp287–300

Roongrueng, C. (1999) 'There is no other alternative', *Watershed: People's Forum on Ecology*, vol 4, no 2, pp10–16

Samudavanija, C. (1995) *Economic Development and Democracy in Thailand's Industrialisation and Its Consequences*, St Martin's Press, Canberra, Australia

Scholtens, B. and Dam, L. (2007) 'Banking on the Equator: Are banks that adopted the Equator Principles different from non-adopters?', *World Development*, vol 35, no 8, pp1307–1328

Scott, J. C. (1998) *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed*, Yale University Press, New Haven and London

Sewell, W. R. and White, G. (1966) *The Lower Mekong: An Experiment in International River Development*, Carnegie Endowment for International Peace, New York, NY, cited in Ingerssol (1968)

Sinh, B. T. (2003) 'The cultural politics of development and environment in Vietnam', in Kaosa-Ard, K. and Dore, J. (eds) *Social Challenges for the Mekong Region*, White Lotus Bangkok, Thailand, pp375–405

Sluiter, L. (1992) *The Mekong Currency*, Project for Ecological Recovery/TERRA, Bangkok

Sneddon, C. and Fox, C. (2006) 'Rethinking transboundary waters: A critical hydropolitics of the Mekong Basin', *Political Geography*, vol 25, pp181–202

Sneddon, C. and Fox, C. (2007) 'Power, development, and institutional change: participatory governance in the lower Mekong basin', *World Development*, vol 35, no 12, pp2161–2181

Sretthachau, C. (1999) 'People movement against dams in Thailand', Paper presented at the Environmental NGOs' International Symposium on Dams, 29 December 1999, Seoul, Korea

SSEO (Shan Sapawa Environmental Organization) (2006) *Warning Signs: An Update on Plans to Dam the Salween in Burma's Shan State*, Chiang Mai, Thailand

Sutton, R. (1999) *The Policy Process: An Overview*, Working paper no 118, ODI, London

Tubb, J. A. (1966) 'A consideration of the fisheries problem of the Lower Mekong Basin', *Indian Journal of Power and River Valley Development*, Mekong Project Number, vol 16, pp62–64

Vaaler, P. M., James, B. E. and Aguilera, R. V. (2008) 'Risk and capital structure in Asian project finance', *Asia Pacific Journal of Management*, vol 25, no 1, pp25–50

Warner, J. F. (2006) 'More sustainable participation? Multi-stakeholder platforms for integrated catchment management', *Water Resources Development*, vol 22, pp15–35

Wheeler, R. A. (1958) *Programme of Studies and Investigations for Comprehensive Development: Lower Mekong Basin*, United Nations Technical Assistance Mission, Headed by Lt General R. A. Wheeler (TAA/AFE 3), UNESCAP, Bangkok

Wheeler, V. M. (1970) 'Co-operation for development in the Lower Mekong Basin', *The American Journal of International Law*, vol 64, no 3, pp594–609

White, G., F., de Vries, E., Dunkerley, H. B. and Krutilla, J. V. (1962) *Economic and Social Aspects of Lower Mekong Development*, UNESCAP, Bangkok

Wipatayotin, A. (2008) 'MRC defends China over Thai floods', *Bangkok Post*, 16 August

Woodall, B. (1993) 'The logic of collusive action: The political roots of Japan's Dango System', *Comparative Politics*, vol 25, no 3, pp297–312

World Bank/ADB (Asian Development Bank) (2006) *Future Directions for Water Resources Management in the Mekong River Basin*, Mekong Water Resources Assistance Strategy, World Bank/ADB

Young, I. M. (2001) 'Activist challenges to deliberative democracy', *Political Theory*, vol 29, pp670–690

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