

CONTESTED WATERSCAPES

in the
Mekong Region

HYDROPOWER, LIVELIHOODS AND GOVERNANCE



Editors

François Molle

Tira Foran

Mira Käkönen

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Hydropower, Livelihoods and Governance

EDITED BY

François Molle, Tira Foran and Mira Käkönen

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For a full list of publications please contact:

Earthscan

Dunstan House
14a St Cross St
London, EC1N 8XA, UK
Tel: +44 (0)20 7841 1930
Fax: +44 (0)20 7242 1474
Email: earthinfo@earthscan.co.uk
Web: www.earthscan.co.uk

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The Anti-Politics of Mekong Knowledge Production

Mira Käkönen and Philip Hirsch

INTRODUCTION

Despite the enormous efforts of planning agencies and significant amounts of time and money spent on feasibility studies for water resource infrastructure, the Mekong River has remained one of the world's least developed of the world's major rivers and is thus now perceived by national decision-makers and many international donor organizations as having 'underused potential'. This is at a time when there is a major concern that most large rivers have been *overdeveloped*. There are clear signs that countries in the Mekong River Basin are striving more aggressively after 'modern development' in forms of large-scale dams, irrigation and hydraulic controlling structures. But at the same time, many in the region are aware of the failures of the modernist projects elsewhere, and in those parts of the region where dams and irrigation have been installed, the uncritical belief in human mastery over the forces of nature has been seriously questioned. There are also evolving domains of knowledge that actively contest the scientific and expert knowledge usually used for policy and development plans of the basin. It is thus important to look at how these modernist plans and aspirations, epitomized by large-scale dams and diversions, are being justified and legitimized in relation to competing knowledge domains.

Knowledge produced by experts in the form of models, impact assessments and scenarios dealing with risk play a crucial role in the legitimization process. This chapter provides a perspective on the production of knowledge around major development issues in the Mekong River Basin. At a time when large-scale

development plans are being justified and rationalized, it is relevant to ask in what ways scientific knowledge is being deployed, and whose visions of future waterscapes the dominant models and scenarios favour. Important questions also relate to the openness of expert knowledge: is it really open to the public, how is it framed, and what are the possibilities and manifestations of civil contestations and public participation in the current societies of the Mekong region? The focus of this chapter is on the Mekong River Commission (MRC), which is one among the main knowledge brokers in the region. The MRC is mainly foreign funded and, at least as perceived by those who fund it, the MRC has a central role in the water resources management of the Mekong Basin (on the MRC, see also Chapter 14).

Much discussion on the politics of knowledge in the Mekong River Basin and elsewhere draws lines of tension between expert knowledge that employs scientific discourses, on the one hand, and, on the other, local knowledge of farmers, fishers and other ordinary people who have a living understanding of, and dependence upon, the myriad natural resources of the land, forests and water bodies of the basin. In Thailand, and latterly in other countries of the Mekong, initiatives such as Tai Baan (e.g. Foran, 2006; Sretthachau, 2007) have promoted registers associated with quite different development preferences of the people on behalf of whom such knowledge is asserted. So successful has the new knowledge production been that relatively mainstream organizations, such as the International Union for Conservation of Nature (IUCN) have accepted it as a valid methodology and supported Tai Baan research in the region.

Ironically, however, the participatory turn in mainstream institutions such as the MRC has another side to it. It is at constant risk of being far from a counterbalance to the expert knowledge. Especially as abstracted from its societal context in an international agency such as the MRC, participation tends to mirror a type of development-driven participation that can contribute to the depoliticization of knowledge in support of a particular governance agenda.

This chapter addresses the process and problems of depoliticization of knowledge, or what we call the 'anti-politics of knowledge production'.¹ We focus on two seemingly contrasting aspects of the MRC's work. In the first part the focus is on the MRC's hydrological models, which form the backbone of the MRC's knowledge production and the main source for the MRC's estimations of development impacts. The results of the MRC's hydrological models have also been the main source of justification for future development plans by the Asian Development Bank (ADB) and the World Bank. This domain of expertise is still relatively closed and exclusive. We discuss the knowledge produced by models not only in terms of accountability and validity, but also in relation to the social shaping of interpretations.

The second part of the chapter covers the MRC's response to contestations of the closed nature of its expertise and associated shortcomings of the assessment work. One component of the demands for more participation in knowledge production is that there should be more local knowledge and expertise included

in the assessment processes, as well as more diversified and representative interests guiding the knowledge production. The embryonic participatory turn of the MRC is also part of the more general shift that the field of development has gone through. Because the MRC depends heavily upon international donors, its public discourse needs to be in line with the current international discourses, where the new orthodoxy includes participatory decision-making. Hence, for the MRC, it is now not enough to provide only scientific bases for policy-making concerning new development plans. The MRC also has to prove that its expertise is being opened up and democratized, or at least shared more widely. The chapter thus seeks to discuss the rationale of this new participatory turn of the MRC, its promises and limitations in relation to knowledge production, and the role of mainstreamed participation, which tends to *reinforce* rather than defuse the depoliticization of knowledge.

Theoretical dimensions

Knowledge production related to the probable impacts of new development projects, mainly in the form of large mainstream dams, is closely related to the estimations of risk and to assumptions on risk management. Beck's (1992) theory of risk society and his related modernization narrative offer one way of seeing the Mekong region's current situation. Through Beck's lenses, the region appears to be a hybrid of premodern, modern and reflexive modernity. As the Mekong still flows relatively freely, the unpredictable disasters that it brings in some years in the form of exceptionally strong floods or droughts are, in many parts of the basin, often still natural and thus not risks characteristic of modern society. Rather, they are hazards common to premodern societies.²

Since the establishment of the Mekong Committee in 1957, there has been an enormous amount of planning effort and expenditure to materialize the 'underused potential' of the river and to engineer out the floods and droughts associated with its monsoon-derived hydrology. For the dam and irrigation plans, whose developers included former Tennessee Valley Authority engineers, the common denominator was the will to control and manipulate nature in order to trigger the economic growth of the region and to fight back the spreading communism (see also Chapter 1). These could be seen as failed attempts to shift the area to the first stage of the era of modernization in which wealth production is driven by a will to control and manipulate nature under the imperatives of economic growth.

After the establishment of a new Western donor-driven MRC in 1995, the emphasis shifted from ambitious plans for a series of large-scale dams to knowledge production on the impacts and risk assessments of proposed development interventions. New domains of knowledge are also evolving that actively contest the scientific and expert knowledge claims used for policy and development plans of the basin. This situation comes close to Beck's key concept for the second stage

of modernization: the risk society or 'reflexive modernization' at the heart of which are issues of ecological crisis and contestations between citizen initiatives and formal authority. The key issue, thus, is how the status of knowledge begins to be contested, and how the risks that used to be a matter for experts and scientific legitimation become subject to public debate so that 'modern' scientific knowledge loses its monopoly over truth. The risks that were once presented as being calculable now start to seem incalculable. But still the aspirations of striving after modern development by the governments of the Lower Mekong Basin have not ceased, and the region is now closer than ever to the realization of several large-scale dams on the mainstream Mekong River. The hybrid nature and, even, dissonance of the basin and the MRC in relation to Beck's modernization narrative thus manifests itself in that the underlying current of policy-making is still pursuing the modernization of the first stage, while the knowledge production in the MRC simultaneously needs to face the expectations of the risk society.

Beck's concept of risk is, however, not very beneficial when analysing more profoundly the current knowledge production in which the MRC takes, most importantly, the form of basin flows analysis. For Dean (1999, p177), 'risk is a way – or rather, a set of different ways – of ordering reality, of rendering it into calculable form. It is a way of representing events in a certain form so they might be made governable in particular ways, with particular techniques and for particular goals.'³ The analysis of how the concept of risk is used in the knowledge production and how it is part of political technologies of the MRC would deserve a deeper and more detailed discussion than is possible in this chapter. But one of the important aspects of the political technologies, also related to risk, is 'technical rendering', a concept developed by Nicolas Rose (1999). This is discussed in more detail in relation to the MRC's hydrological models.

According to Dean (1999), increased numbers of assessments and participatory processes do not necessarily mean that the decisions made are better informed, but that the central target and objective of the governments becomes the reform of the performance of the existing governmental institutions and techniques. This comes hand in hand with the processes where governments are challenged by their capability to control the risks that they produce (Dean, 1999). The analysis of reforms in knowledge production and policy-making in MRC-like organizations benefits from this perspective of seeing them as ways of securing the mechanisms of government.

A central idea of Dean (1999) and Rose (1999) is that the relations of power and truth are inseparably interwoven. In this chapter, the point is not to search only for the obvious '*realpolitik*' dimension in knowledge production.⁴ To some extent, there have, indeed, been situations where undesirable assessment results are sidelined and participation often appears to be just a necessary condition for government and lender approval. But there are also less visible yet pervasive power relations that are not simply reducible to '*realpolitik*' or to 'conspiracies'. The assessment tools, like hydrological models, are already shaped by values and power

relations. And similarly, even the recent participatory approaches can be perceived as new forms of depoliticizing power relations (see also Brosius, 1999).

HYDROLOGICAL MODELS AT THE HEART OF THE MEKONG RIVER COMMISSION'S (MRC'S) KNOWLEDGE PRODUCTION

The core of knowledge production within the MRC Secretariat is still dominated to a great extent by technical and scientific expertise. Data-gathering is principally limited to data seen as relevant to the assessment and regulation of hydrological impacts of planned development projects. The backbone for all the assessments of the MRC consists of the Decision Support Framework (DSF) that has been developed over several years and is still being further improved. The DSF forms the foundation for the development scenario assessments of the MRC *Basin Development Plan* (BDP) and of the MRC's Water Utilization Programme (WUP), which are supposed to help implement key elements of the 1995 Mekong Agreement and inform and shape negotiations that address water-sharing issues between the member states.

The inherent simplifying aspect of models and other assessment tools, and the richness and diversity of living nature always create debates on how to interpret ecological and social complexities adequately. Interpretations of what is adequate and what is relevant to policy also vary quite differently in different knowledge domains. The examples below shed light on the MRC's assessment work and on the discussions that they have evoked. To date, the MRC's models have brought into focus rather limited aspects of the basin's ecological and social dynamics, which in turn results in overestimation of macro-level economic returns and underestimations of the risks that the tributary and mainstream dams, water diversions and other interventions are likely to bring about.

MRC's models: High investments, thin and controversial outputs

The original terms of reference of the MRC's Decision Support Framework were very ambitious, and the DSF was planned to consist of tools that would enable comprehensive basin-wide hydrological, environmental and socio-economic impact assessments in line with the principles of integrated water resources management (IWRM), which acknowledge the complexity of relations between water, environment and livelihoods. However, so far the DSF appears to remain a rather narrow platform, consisting mainly of hydrological components that, in turn, consist of models which simulate two-dimensionally the flow regimes and the main hydrological aspects of the river basin (Sarkkula et al, 2007). The hydrologists behind the models themselves have stated that the 'output of the models is quite narrowly hydrological – water utilized for irrigation and power generation; river

flow and stage at key locations; volumes; inundated areas, depths and duration of inundation; and salinity levels' (World Bank, 2004, p1). But they also claim that 'these parameters can, in turn, provide insights into possible impacts on fisheries, flood management, saline intrusion, navigation and the environment' (World Bank, 2004). Because the models do not allow assessments on parameters such as water quality, and sediment transport in the river and the floodplain, the models' ability to give relevant insights on impacts upon the environment and fisheries has been questioned (Sarkkula et al, 2007).

The DSF has also received criticism on the basis that it has required high investments (the hydrological component has required approximately US\$4.9 million), while outputs have been very limited. In particular, the outputs to the public domain have been almost non-existent. Lack of transparency with the findings is thus one of the core aspects questioning the legitimacy of MRC models (e.g. Affeltranger, 2008). When results have been published, they have been presented without giving information on the assumptions upon which they are based. One of the few outputs of the DSF process to the public domain has been the report *Modelled Observations on Development Scenarios in the Lower Mekong Basin* (World Bank, 2004), which emerged from a World Bank consultancy that drew on the DSF, but was not actually even an MRC output. The report was based on six scenarios:

- 1 baseline (representing the situation in 2000);
- 2 China dams (considers the Manwan and Dachaoshan dams) operating at the time of the report and the two largest proposed dams (Xiaowan and Nuozhadu dams);
- 3 low development (baseline + increase of water usage in line with the estimated population growth to 2020 + dams in China and most likely dams in Laos);
- 4 embankments (low development + increased number of built structures in Cambodian floodplains);
- 5 agriculture (low development + substantial increases in irrigation and inter- and intra-basin water transfers);
- 6 high development (includes all the previous ones + several tributary dams and a mainstream dam in Cambodia).

The purpose of this report was to inform the Mekong Water Resources Assistance Strategy then being shaped by the World Bank (which was later joined by ADB). The results of the modelling exercises were reported to show that there were few major risks related to the different scenarios, including the high development scenario (World Bank, 2004). The vulnerability of fisheries and other elements of the Mekong's ecology were acknowledged; but the report gave mixed messages. For example, although the tested scenarios were reported not to reveal significant negative impacts upon the fisheries except 'a small decline in fish feeding opportunities, the most pronounced reduction occurring in years of low flow' (World Bank, 2004),⁵ the report also stated that:

Nevertheless, any development which directly impedes fish migration in the mid and lower reaches of the river will have significant negative impacts on fish production. Mainstream dams or weirs in the mid and lower Mekong are therefore most unlikely to be part of any balanced development scenario that complies with the objectives of the [Mekong] Agreement. (World Bank, 2004)

The report was initially available to the public but was later (in 2006) withdrawn by the MRC Secretariat (MRCS) and made internal and inaccessible to the public. The reasons for this were not made public either. Interviewed experts and consultants of the MRC Secretariat have commented that after this, it was also difficult for them to make direct references to the report, and one could not talk openly about the different scenarios used. Baseline, low-development and high-development scenarios were within the MRCS renamed as flow regimes 1, 2 and 3. At the same time, the content and the assumptions of the scenarios were made inaccessible. The use of the modelled scenarios thus became much more technical, opaque and less informative for the public, and, hence, less open for public debate. Although the entire report became difficult to access, an excerpted hydrograph was widely used in World Bank, ADB and MRCS presentations to suggest that there was little change in the shape of the hydrograph under even the high-development scenario. This excerpt misrepresented the more nuanced messages that emerged from closer reading of the 2004 report.

A pretext sometimes used to restrict public release of such analyses is that they are developed by the consultants and await endorsement of the countries or of the MRC Secretariat. Yet, often there are also political reasons at stake: even though the report in question did not bring up very serious impacts of 'high development', it did, however, ask for a great degree of caution with the mainstream dams. This kind of statement would be perceived by at least some governments as a threat to their current development aspirations. A related explanation for the pressure to render the scenarios more technical might simply be that the countries do not want to discuss openly the different development plans. The limited information on the assumptions upon which the modelling exercises were based of course leaves little space for independent evaluation of the validity of the modelling results and their interpretations.

A second major occasion where results from MRC models were brought into the public domain was a working paper released by the World Bank and the ADB related to their Mekong Water Resources Assistance Strategy (MWRAS) for 2005 to 2010 (World Bank and ADB, 2006). The report strongly supports new large-scale water infrastructure projects in the Mekong Basin and states that the development has so far been too cautious. The MRC's models play a central justification role in the report. The assumptions behind the modelling results were not discussed in the report; but the modelling results were interpreted to show that there are no major risks related to new large-scale development plans:

The bottom line message of this Mekong Water Resources Assistance Strategy is that the analytical work on development scenarios has, for the first time, provided evidence that there remains considerable potential for development of the Mekong water resources. (World Bank and ADB, 2006, p4)

And that:

The development scenarios modelling exercise demonstrated that the Mekong river system has significant tolerance for development, including of hydropower and water diversion for irrigation. (World Bank and ADB, 2006, p31)

Such statements reflect the way in which an exercise whose design at best provides a hydrological building block to a basin-wide assessment of the complex linkages between hydrology, ecology and livelihood becomes a firm policy statement on the 'potential' and 'tolerance' of the river to accommodate large dams.

The report received criticism from several civil society groups, including, for example, the International Rivers Network and Towards Ecological Recovery and Regional Alliance (TERRA) (IRN, 2006; Middleton and Lee, 2007). It also received academic comment, including from the Australian Mekong Resource Centre (AMRC, 2007). The critiques included remarks on the use of the models. The way in which the report referred to the models was claimed to be oversimplifying and the capability of the models to assess environmental impacts was questioned because the models only simulate the water flow and do not address the ecology of the river. Central arguments were that bold claims on environmental and socio-economic impacts could be backed up with only narrowly hydrological results from MRC models (IRN, 2006; IUCN et al, 2006; AMRC, 2007), and that the macroscopic perspective could not address the likely localized negative impacts arising from infrastructure development (Middleton and Lee, 2007). Even the reliability of the models was questioned because the assumptions built into the model and the assessments of the robustness of the model have been unavailable to the public (IUCN et al, 2006). But even if the models were developed to a more reliable and credible standard, there is still always scope for social and political shaping of interpretation and presentation of the results.

The models have not only received criticism from civil society and university-based groups. Some of the interviewed experts in the MRC stated, as well, that the model base is not yet diverse enough, nor have there been adequate comparisons with other scientific models. Some hydrologists have stated that there are still major challenges for the MRC to build a scientifically validated and credible model platform (Adamson, 2007; Sarkkula et al, 2007). Some interviewed experts who have worked in the MRC criticized the consultants of the MRC's Water Utilization Project for working with too strong a private consultant mentality – keeping in

mind the policy preferences of the institutions funding their consultancy – which was seen to downplay the limitations of the models and associated risks and uncertainties (Shackley and Wynne, 1996). Yet, studies in science and technology have found that while modellers themselves often do understand the uncertainties and limits of their models, the more distant users, such as experts closer to policy-making, become enchanted by the technologically sophisticated models and the unqualified modelling results, especially when these are self-serving (MacKenzie, 1990; Shackley and Wynne, 1996).⁶

Models such as the recently developed and more comprehensive WUP-FIN model (see Chapter 9) tend to be received within the leadership echelons of the MRC and by policy-makers with more scepticism and emphasis on the uncertainties than the previous model exercises because the results of these models have, for example, raised questions on the vulnerability of the Tonle Sap ecosystem and its aquatic productivity. As Shackley and Wynne (1996) have stated, the appreciation of uncertainty increases when there is a motivation to critically explore the basis of the knowledge claims. Thus, there will always be politics over uncertainties when modelling results are discussed in terms of policy implications.

The interwoven nature of facts and values: Models and their representation of the Mekong Basin

The social and political shaping of the interpretations of modelling results illustrates the blurred boundaries between science and politics. An even more profound issue is that definition of the scientific questions to be asked, and thus the relevant group of experts to answer them, is always also a value-laden and political act (e.g. Demeritt, 2006). Important questions here thus relate to why, despite the original ambitious plans of creating comprehensive and integrated assessments and the huge sums devoted to them, the *de facto* developed tools of knowledge production in the MRC have been reduced to relatively simple hydrodynamic models that do not allow ecosystem impact scenarios and, even less, impact assessments on natural resource-dependent livelihoods. And even more importantly: why in the first place do the models play such a crucial role in the MRC's knowledge production? A justification often given for the importance of the models is that there are such wide gaps in environmental information on the Mekong region that models are the only way to go forward with the assessment work. But the underplaying of the complexities of the ecology and livelihood interlinkages inherent in this sort of modelling also conveniently serves the economical rationalities and power relations shaping the MRC's approach to water issues.

The MRC's Decision Support Framework is, most importantly, built to support the objectives of the 1995 MRC Agreement. The relevant principles of the Mekong Agreement here include the 'reasonable and equitable utilization' (Article 5) of water by the riparian states and the maintenance of minimum flows

on the mainstream (Article 6). These principles also guide the way in which the river is envisioned by the MRC. They also guide the knowledge production, as can be interpreted from the modelling report (World Bank, 2004, pv), which states that the rules required by the agreement ‘define the key, monitorable indicators – in terms of times, locations, flow rates, levels, quantities, water quality or other variables – that are sufficient to define each country’s opportunities and responsibilities in the Mekong Basin’.

Even though the MRC Agreement is often cited as a model for international river basins and as a promise of sustainable development in the developing world (e.g. Sonnenfeld and Mol, 2002), it has also been criticized as a manifestation of a state logic that violates the complex nature of the environment–livelihood linkages of large river basins (Fox and Sneddon, 2004; Sneddon and Fox, 2006). The principle of reasonable and equitable utilization is an important base for cooperation in international basins; but Fox and Sneddon (2004) argue that the interpretations of this principle should also be looked at critically. Because the main concern is the equitable allocation of water between the member states, the agreement establishes a vision of Mekong primarily as a watercourse, and not as a basin, with its complex socio-ecological dynamics. Following James Scott’s (1998) idea on state simplifications, they interpret that this makes the river legible to state-centric reasoning. As a watercourse, the river can be reduced to its parts, divided between states, and rationally managed through the application of universal legal principles. Because of the allocation paradigm, the focus is mostly on the quantities of water and, especially, on the maintenance of the minimum flows in the dry season.⁷ This leads to the neglect of the flood pulse-driven character of the Mekong’s ecosystems for which the tempering of the peaks of flood and drought are damaging. The flood pulse system has been recognized by ecologists as crucial to aquatic productivity, and it sustains the rich fisheries of the basin and the livelihoods of millions of people who depend upon them (Lamberts, 2007; Sarkkula et al, 2007; Lamberts and Koponen, 2008; see also Chapter 9 in this volume).

Li (2006, 2007) has studied knowledge production in the development field, inspired by Nicolas Rose’s concept of technical rendering. Technical rendering refers to processes in which the arena of intervention needs first to be represented ‘as an intelligible field with specifiable limits and particular characteristics ... whose component parts are linked together in some more or less systematic manner by forces, attractions and coexistences’ (Rose, 1999, p33, cited in Li, 2005). In his study of the ‘anti-politics’ of development, Ferguson (1994) has similarly described how knowledge production in the development field is used for planning purposes and the generated data is often *sui generis* because it identifies only those problems for which a technical remedy within the competence of the planners can be supplied. The knowledge production of the MRC seems to resonate with the rationale of technical rendering, which is an inherently depoliticizing process in its reduction of problems and their solutions as technical challenges and fixes,

respectively. Through the use of the models, the river becomes dis-embedded from the ecosystem, livelihoods and meanings, and this facilitates the exercises of linking water back to society through economical reasoning and simplistic causal chains. The models generate powerful visualizations of the basin as a manageable system ripe for development interventions, which enables technocratic calculations and planned water allocations.

An example of this is a public statement by Jeremy Bird, the chief executive officer (CEO) of the MRC, that 'in the medium turn, we're going to see a situation where as a result of construction of dams upstream in China, there will be some significant increases in dry season flows in the Mekong which actually then might facilitate Thailand taking water from the river because then there'll be more water available during the dry season' (Radio Australia, 2008). The results of the modelling have thus produced, in MRC explanations, an image where hydropower dams are seen in a positive light because 'the excess water' they allow in the dry season can be effectively utilized for water diversions and irrigation in another place.

Knowledge production, including the MRC's models, is implicitly tied to the redistribution of rights to use the environment. The knowledge production and the production of political order (in terms of management and policies) should thus be seen as mutually constructing and reinforcing one another (Wynne, 1996, 2002; Forsyth and Walker, 2008). Like other technologies and innovations, however, models emerge in 'a garden of forking paths' (Williams and Edge, 1996), and the use or interpretation of the models is not predetermined. But the ways in which specific models developed by private consultants for the MRC have been used so far are clearly shaped predominantly by developmental values. This is not to say that different routes for their use are precluded. The questions raised by civil society on the models show that even though the model use was aimed at reaching closure over the discussion on the severity of impacts, this did not necessarily happen. And models are becoming more important as part of competing knowledge domains (e.g. advocacy coalitions, networks of action research or alternative discourses) shaped by different development aspirations.

An even more profound question, however, is whether the debate is limited to scientific facts. It is important to note that technical rendering refers, importantly, to a scientized rationality, which hides politics and depoliticizes development decisions. Because science is given such an instrumental role in legitimating policy, competing knowledge domains easily shift to questioning the science and presented facts, rather than questioning the reasons for policies or the specific ways in which the science is being framed and its results articulated. Critiques that restrict themselves to discussing the scientific validity of the knowledge production are thus problematic because they include a positivist expectation that political consensus about development plans will follow from scientific consensus of the impacts. If this paradigm is not opened, the politics behind seemingly science-based decisions are not really brought into the debate. Herein also lies the somewhat paradoxical

nature of the new participatory approaches in knowledge production, which are discussed in the next section.

THE MRC, THE PARTICIPATORY TURN IN DEVELOPMENT AND NEW OPENINGS IN KNOWLEDGE PRODUCTION

The tools and technologies of knowledge production and the ways in which they have been used as presented above reflect the still relatively closed nature of the expertise within the MRC Secretariat. But the MRC has also faced pressure to open up the expertise and to enhance its participatory processes. Several scholars, Ulrich Beck and Mitchell Dean included, have emphasized the ways in which risks inherent in modernist control schemes have created a need to include the participation of groups such as civil society organizations and local communities who have previously been excluded by a scientific-technological rationality of risk assessment.

The current development orthodoxy recognizes public participation as necessary for achieving sustainable and socially just development. If earlier schemes were often doomed to fail because they were based on overly simplified representations, science now has to respond to the critique that it is missing contextualized and situated knowledge and practices. Participation has become something of a mantra even in the field of water management, which has for long been the exclusive preserve of technical experts.

In the Mekong Basin, voices have been raised with increasing intensity over the past decade about the undemocratic and unaccountable nature of the basin's water resources management. The MRC has typically responded to its critics by stating that as it is an intergovernmental organization, it principally serves its member states in ways that it is requested to. But recently, particularly in 2008, the MRC has begun to demonstrate a participatory turn. A first Public Participation Strategy was circulated in 2003 (MRC Secretariat, 2003) and a booklet about *Public Participation in the Lower Mekong Basin* was published in 2005 (MRC, 2005), but there has not been much follow-up action. The MRC's programme on fisheries has sought ways to create more space for local knowledge and spaces of inclusive decision-making at the community level. The MRC has also (somewhat reluctantly) participated in events such as Exploring Water Futures Together: Mekong Region Waters Dialogue (IUCN et al, 2006, 2007). More recently, two of its programmes in 2008 – Basin Development Planning (BDP) and Hydropower Programme – have hosted more extensive stakeholder consultations. These are not perfect; but for the MRC they are already significant steps on the road not travelled of more participatory engagement with non-state actors.

Many critical remarks about previous efforts have been raised. The participation strategy, for example, gives all power to the riparian states to decide who they

consider relevant stakeholders and who they do not. This ensures that 'the invited spaces of participation are likely to reflect the dominant development aims of the riparian states' (Sneddon and Fox, 2007, p2175). Participation has been enhanced mostly within the MRC's own structures and member governments, and has not been extended to meaningful engagement with critical NGOs or local communities (Sneddon and Fox, 2006, 2007). It remains to be seen to what extent the expertise will be truly open to public review and whether there will be spaces where the technocratic risk assessment rationalities dominating the knowledge production can be meaningfully challenged. To take a step forward from 'tokenism', the debate needs to substantially expand beyond the received framings by experts on hydrology or policy-making.

The most relevant steps in relation to more participatory and inclusive knowledge production have been taken by the MRC Fisheries Programme (MRCFP). The methods developed in the Fisheries Programme hold the potential to produce knowledge where the complexities of the relations between water, ecology and livelihoods are not overlooked. In the programme's studies, local fishers have participated in identifying and tracking fish species and in evaluating the importance of the fisheries for local livelihoods. The findings of the studies have enhanced the knowledge base of the fish migration patterns and fish production, and also stressed the importance of fisheries for basin residents (Sneddon and Fox, 2007). There are, however, also signs that even within the Fisheries Programme, the appreciation of local knowledge still remains somewhat superficial. For example, the work of Thai Baan Research (see Box 13.1) has not received real acceptance from the MRC. Even though some space have been given, for example, in the MRC's stakeholder consultation for presentations on Thai Baan or Sala Phoum (the Cambodian version of Thai Baan) research findings, the MRC's own reports have not built on or even referenced the findings of Thai Baan Research. More fundamentally, local knowledge and participation of fishers in producing fisheries knowledge enrich a central knowledge base rather than, as is the principle of Thai Baan, knowledge from which fishers themselves manage their own livelihood interests. The knowledge base of the MRCFP, produced with participatory methods, has certainly been important for raising awareness of the importance of fisheries in a basin-wide framework; but it remains the experts and the technocrats who own and present this 'mined' knowledge.

The studies that acknowledge the different meanings which local communities attach to the fisheries hold the potential to produce knowledge that is less amenable to state-centric reasoning and technocratic trade-off paradigms. This, in turn, could enable the inclusion of alternative visions on the basin's development to the current debates. Ironically, the most crucial issue here is that while the MRC's Fisheries Programme has aimed to develop more appreciation for local knowledge, the whole programme has been increasingly sidelined from the MRC's core activities.

BOX 13.1 LOCALIZED KNOWLEDGE PRODUCTION THROUGH THAI BAAN RESEARCH

Thai Baan Research – research undertaken by villagers – has recently emerged as a counter-hegemonic approach, aiming to reveal local knowledge about the environment and how villagers interact with it. It reveals their practical understanding of the complexity and dynamics of natural resources, the way in which resources have been used, and the moral economy of those who depend upon them for their livelihoods.

Thai Baan Research was established in 2000 when the Thai government agreed to open the Pak Mun Dam sluice gates to evaluate the social and environmental impacts from the dam's operation. In this case, for the Pak Mun villagers who tried many ways to voice their concern and register their grievances about the environmental, economic and social impacts of dam construction, Thai Baan Research was identified as a new way of influencing the contested dam project (see Chapter 3 in this volume). Many academic institutes were assigned by the Thai government to conduct various types of research; but the reports did not reflect the social and ecological realities as seen by affected villagers. Academics from Chiang Mai University, the Southeast Asia Rivers Network (a regional non-governmental organization) and villagers affected by the Pak Mun Dam developed the Thai Baan Research approach in order to collect data on issues such as local knowledge of fish, traditional fishing gear, natural plants and herbs, ecosystems and activities, which returned after the opening of the dam gates. The research conducted was published and submitted to the Thai government to coincide with findings submitted by academic institutes. This type of research was meaningful for the villagers because they were able to take control over the process and 'write' their own story on how they perceive and interact with their environment and how to live in harmony with it.

The findings of the Thai Baan Research at Pak Mun have gained acceptance by academics, the media and civil society groups. The methodology utilized has been adopted and replicated throughout other areas in Thailand, such as Rasi Salai, along the Upper Mekong in Chiang Khong, the Salween River along the Thai–Burmese border and the Songkhram River Basin in the northeast (see Chapter 7). This expansion has allowed for an informal network of researchers to develop, share information and learn from each other. In 2004, the Thai Baan approach was expanded to the Ramsar sites in the Lower Mekong in Cambodia and Vietnam. In Cambodia, Thai Baan Research (which is known as 'Sala Phoum') has been carried out by ethnic groups in Stung Treng, the NGO Culture and Environmental Preservation Association (CEPA), Health Unlimited (HU) and the World Conservation Union (IUCN)-led Mekong Wetlands Biodiversity Programme (MWBP). In Vietnam, Thai Baan Research is conducted by An Giang University, Tram Chim National Park, Lang Sen Preserve Forest, Care International and the MWBP.

The Thai Baan approach also provides a basis for more informed, balanced negotiations between local stakeholders and government. By working with local development institutions and gaining the support of provincial and national government agencies the Thai Baan is complementary to decentralization initiatives and national policy towards more integrated water resources planning and the establishment of river basin organizations.

Source: adapted from Sretthachau (2006)

Knowledge production and the entry of participation discourse in the riparian states

The MRC is not the only relevant level for observations on the changes of water-related knowledge production in the Lower Mekong Basin. The MRC Secretariat often reminds its critics that it is an intergovernmental organization. The MRC's ability to foster and implement participatory processes is, therefore, closely bound to the political cultures of its member governments. Here we briefly discuss the different country-level situations through selected illustrative examples.

The degrees of political freedom and spaces for civil society organizations (CSOs) differ significantly in the riparian countries, Thailand having the most active and effective advocacy groups and networks, and Laos and Vietnam having very limited space for CSOs. In all four countries, there have been struggles or contestations over large-scale water development projects (e.g. controversies over Pak Mun Dam in Thailand; dams on the Sekong, Sesan and Srepok rivers in Cambodia; Son La Dam in Vietnam; and Nam Theun 2 Dam in Laos PDR). The struggles have also, in some cases, resulted in attempts to create more participatory processes (see Chapter 3). A significant push for more participation has also come from aid agencies or influential international non-governmental organizations (INGOs) (Molle, 2005).

Nevertheless, the literal and societal translation of participation has varied from one national context to another. In Thailand, participation translated as *kaan mii suan ruam* – 'having a part in joining' – took hold as a discourse during the 1980s, first among NGOs, soon to be followed by government development programmes. Its interpretation, however, varied from one actor to another (Hirsch, 1990) along lines similar to those proposed by Arnstein (1969) in her ladder of citizen participation. Yet, with the democratization of Thai society and the promulgation of a progressive constitution in 1997, the notion of participation with empowering potential is well entrenched, even if bureaucrats often continue to interpret it as a willingness to engage with state-set agendas. In Laos, in contrast, a similar discourse of participation, translated directly from Thai (*kaan mii suan huam*), has a much less nuanced interpretation and remains at the level of preparedness to devote time, energy and resources to helping meet state and party-led development goals. Neither independent local NGOs nor a culture of challenge to policy articulated by the state are features of the Lao civil society landscape. In Vietnam, participation translated as *su tham gia* maintains a collectivist connotation of willingness to join the common cause (of development); but while the political structures remain largely state based, the culture of challenge and assertion of alternative ideas is quite vibrant at a local level. In Cambodia, the official discourse of participation as *kaa chaul ruam* translates as a compound 'enter-join', imparting a sense of joining a preset and usually state-sanctioned agenda. On the other hand, Cambodia has a vibrant NGO community with alternative perspectives, but which does not necessarily rely on participation as a key part of the alternative discourse.

The promises and limitations of participation in knowledge production

Even though participation has been very partial and rhetorical, and strategy papers face great challenges to translate into practices what would meaningfully open up expertise, the participatory turn is still on the upswing and, more importantly, is praised by many actors as a remedy to all ills, if properly implemented. It is therefore important to discuss more profoundly the promises and limitations of these attempts to shift the paradigm. Important questions include: what expectations exist related to more open use of expertise? In what ways could democratization of knowledge production matter? Could democratization of the assessment processes meaningfully influence development plans? In what ways is participation likely to fall short of promises?

The promises of participation relate to at least two different dimensions of knowledge production. One relates to the quality and validity of the assessments and the other to the power relations that shape the knowledge production, particularly where enhanced inclusiveness of different perspectives holds potential of democratization.

The examples given above of the model-based impact assessments demonstrate that the knowledge production of the MRC still fails to address the risks that the current development plans present to the basin's ecosystem and livelihoods. The exclusive nature of the expertise is one part of this story. External consultants or scientists are more likely to underestimate complex and interrelated ecology and livelihood systems as they often have no experience of the region they study prior to their assignment. In the Mekong region, there remain numerous unstudied areas where there is no accumulated 'scientific knowledge'. For example, the taxonomy, distribution, abundance and movement of fish is still far from sorted out. Often fishers themselves have the best available knowledge of the fishery and thus are more reliable experts than outside consultants. More inclusive approaches could enhance the actual 'scientific' quality of the assessments. As already discussed above, the MRC has taken this on board in a limited way in its fisheries assessment programmes. But this has not then reached the core of knowledge production, such as the modelling exercises that influence decisions by national governments on dams and diversions.

In principle, participatory approaches such as multi-stakeholder platforms and dialogues could contribute to more balanced framings of the knowledge production now driven by developmentalist objectives and values that mostly represent the interests and worldviews of powerful elite groups. But if one concentrates on participation only in knowledge production, the possibilities of contestations are narrowed and they may fail in contesting the technocratic core of the approaches that still reign at the MRC; in addition, they do not challenge the paradigm of looking for science to give indisputable answers in policy-making. As stated by Szerszynski (1996, p113), this kind of approach 'simply obscures the political

nature of decisions about how we should live'. If the development plans can only be contested on scientific grounds, then the opponents are left to argue over scientific facts even though they might be actually opposing the plans for other reasons (Demeritt, 2006; see also Rayner, 2003). The 'fact'-driven debates also 'free' policy-makers from the inherently political nature of the decisions. This is why participation that is narrowed only to scientific knowledge production easily becomes a part of the 'anti-politics' machine of development.

Is the participatory turn necessarily counter-hegemonic?

At a more profound level, critical scholars have even questioned the very possibility of a participatory turn in development to form a counter-hegemonic force; indeed, they have shown how the participatory discourse may become an entrenched or even 'tyrannical' part of prevailing power structures and disempowering practices (Cooke and Kothari, 2001). This discussion does not refer specifically to knowledge production, and it also goes beyond analysing the failures of participation in specific programmes or organizations. Rather, it addresses the very rationale behind the whole paradigm shift. Henkel and Stirrat (2001), for example, have referred to the current emphasis on empowerment, the marginal distrust of the state, and celebration of 'local' knowledge as the 'new participatory orthodoxy'. This new orthodoxy has received different kinds of criticism, the conservatives claiming that the state and the experts actually do know the things better than the 'locals', and 'progressives' claiming that participatory policies do not lead to participation and empowerment because they are too naive and do not sway the dominant power structures. But as Henkel and Stirrat (2001) point out, most of these critiques fail to see that the participatory approach is actually a new form of governance, and not only a counter-hegemonic process. They state that:

Empowerment in this sense is not just a matter of 'giving power' to formerly disempowered people. The currency in which this power is given is that of the project of modernity. In other words, the attempt to empower people through the projects envisaged and implemented by the practitioners of the new orthodoxy is always an attempt, however benevolent, to reshape the personhood of the participants. It is in this sense that we argue that 'empowerment' is tantamount to what Foucault calls subjection. (Henkel and Stirrat, 2001, p182)

The 'subjection' refers to the productive side of power relations, which in this case means that participatory processes shape the subjectivities of the participants and the ways in which the rationalities of the more powerful actors can be contested.⁸ It is thus important to note that participation is not failing to fulfil its promises simply because it is trapped by the managerial discourse, but because it is actually

an integral part of that discourse and of the present mentality of government. Dean (1999) has given several examples of how contemporary liberal rationalities of government endeavour to operationalize the self-governing capacities of the governed in the pursuit of governmental objectives, and he has also given many illustrations of how empowerment and self-government have become components of power relations.⁹ These points are important to keep in mind as the MRC and the riparian states contemplate expanded participation. The main message of these discussions does not mean that the participatory techniques of governmental organizations form an end to political contestations; but they do not necessarily make contestation easier either.

CONCLUSIONS: GOVERNING WATER THROUGH DEPOLITICIZED KNOWLEDGE

The *'realpolitik'* in knowledge production about the Mekong should not be dismissed. Problems such as lack of transparency relate to the development interests of the MRC's member states, and secretive processes around knowledge production have been clearly intentional and guided by the interests of the basin's riparian populations. Yet, politics does not manifest in any simple way; the politics of knowledge production implies much more 'invisible' nuances of power relations than intentional misuses or falsifications of the assessment processes. Important questions relate to the values and aspirations that guide and shape knowledge production and the interpretations of the assessment results that are presented as neutral. In the case of hydrological models, the social shaping relates to the differing interests between model developers and users, and between different knowledge domains with different policy motivations, and importantly to power relations at and between different scales. Hydrological models form the current core of the MRC's knowledge production and they represent an area of expertise that is still relatively closed and exclusive. Motivated by state-centred reasoning, the models simplify the complex ecosystem and related socio-economic dynamics of the basin and back up visions of the Mekong as a watercourse and a system of water channels. This is why the results of the assessments tend to find the risks of the development interventions less critical than the more comprehensive studies that acknowledge the complexity of the Mekong's ecology. But even if there were more critical findings, it is not self-evident that they would actually influence decisions and policy-making.

In accordance with current international discourses of development and the requirements of both objective science-based risk assessments and participatory processes in the legitimizing of projects, participation in knowledge production is presented as key to redressing the power imbalances that shape the production of knowledge. But the participatory approaches of knowledge production do not necessarily challenge the overly scientized nature of politics. And better and

more inclusive science and assessment procedures are still rarely a sufficient and appropriate remedy for the unequal power structures underlying policy decisions. Even in dialogue processes, the contested knowledge domains tend to be debated in terms that do not challenge the technocratic core of assessments and the interest of MRC member states, as well as their enduring developmentalist vision of the Mekong's future.

Water and river basin management are inherently political processes, involving decisions that affect different groups in different ways and negotiation of diverse interests and values. The MRC is an inherently political body, established to manage the interests of its member states regarding the use of water and related resources of the Mekong River. The role of the MRC as a knowledge production agency that influences policy and decisions on how the river is to be used, managed and developed should not be to pretend to take the politics out of decision-making, but rather to foster a political dialogue between and within riparian countries that is informed by a better understanding of the implications of particular decisions and policy approaches. The 'anti-politics' of knowledge production that we have described in this chapter obscure rather than enhance the embedding of river basin management within the realm of informed social and political negotiation.

NOTES

- 1 The inspiration for the chapter's title comes from the famous book by James Ferguson (1994) entitled *The Anti-Politics Machine: Development, Depoliticization and Bureaucratic Power in Lesotho*.
- 2 As Beck has stated, in premodern society, risks as such do not exist in the sense that there is no calculus of control or assessment. Rather, natural and unpredictable disasters remain in the domain of hazards to be coped with but not influenced or calculated.
- 3 Dean is a central scholar in the field of so-called governmentality studies that follow the Foucauldian approach in the studies of power and authority. The concept of 'governmentality' refers to ways of thinking about governing. It examines how we conduct ourselves and others in all our spheres of life. It links together elements of politics, institutions and subjectivities and examines how power relations shape collective and individual practices, subjectivities and identity formations. Dean (1999) has stated that the way in which Beck approaches risk within a narrative of the modernization process is based on over-totalizing assumptions about risk. According to Dean, risk should be analysed as part of governmentality and, thus, as a component of assemblage of practices, techniques and rationalities concerned with how we govern others and ourselves. So it should not be approached as a naturally occurring entity, but as a form of calculation about reality: a way of thinking about and representing events.
- 4 By *realpolitik* we mean the very visible power relations through which powerful actors, like the representatives of the riparian states in the case of the MRC, pursue their particular interests.

- 5 The data of water flow, height and area inundated used in the models were taken in the report as preliminary indicators of the fish production through estimations of changes in fish feeding opportunities. The report acknowledged that these should be seen as only preliminary indicators (World Bank, 2004).
- 6 Some, like Lahsen (2005), have criticized this interpretation as an oversimplification. Lahsen reminds us that modellers themselves also get seduced by the simulations they have produced because of the high stakes they have in the model development, which often requires several years, even decades, of dedication.
- 7 This does not mean that agreement on minimum flows would be easy. The equitable sharing and maintenance of minimum flows does not provide a straightforward set of targets and criteria of mutual acceptability to all the Lower Mekong states, as evidenced, for example, in the difficulty of agreeing on basic questions such as the definition of the length of the dry season. So far the differing national interests of the countries have been difficult to overcome (Hirsch and Mørck-Jensen, 2006). Vietnam and Thailand, in particular, have had a history of mistrust between them because of Vietnam's worries over Thailand's plans to implement large-scale water diversions. In this level of discussion, the Mekong Agreement and the DSF models can, of course, be seen as important elements in reaching balanced cooperation between the basin's governments. But the concept of national interest is tricky in the sense that it does not seem to mean that the diverse interests of all stakeholders within each country would be captured by it (Hirsch and Mørck-Jensen, 2006). Furthermore, such interests are embedded within wider sets of political relations, which in the case of Vietnam and Cambodia, for example, tend to supersede assertion of country interests around water.
- 8 This sheds light on why, for example, in the debates on the development plans in the Mekong Basin the focus often remains on what should be included in the impact assessment calculations (such as economic valuations of ecosystems), rather than on questioning the very rationales underlying the assessments of technocratic knowledge production.
- 9 The context that Dean mostly refers to is the failure of welfare government. More generally, it refers to the growing distrust of direct state interventions and how government now seeks to operate through free individuals. In development practice, corresponding processes include decentralization and participatory processes.

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