

## IRRIGATION AND WATER POLICIES: TRENDS AND CHALLENGES

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### Introduction

In the past several years, water has moved up on the agenda of most countries in the Mekong region. This is due to several interconnected factors. First, recurring water shortages and crises (scarcity droughts, pollution, interstate or intersectoral competition around the Mekong River, etc.), although often local and temporary, have instilled a sense of vulnerability. These shortages have typically affected irrigation and, in some cases, have also threatened urban supply. Second, numerous global initiatives and networking focused on water management (World Water Forums, etc.) have also contributed to giving water issues greater public salience. Third, these initiatives have been paralleled by persuasive insistence from development banks—most notably the Asian Development Bank (ADB) and the World Bank—that borrowing countries develop regulatory frameworks, water policy, white papers and water legislation. Fourth, there has been increasing involvement of the private sector, notably in hydropower generation and in urban water supply, which has changed the situation of virtual state monopoly over water resources. Water policy reform processes generally contemplate a blend of the following recommendations and measures:

1. Poor water distribution in irrigation networks, epitomized by efficiencies of between 30 and 40 percent, is addressed by trying to instill greater participation from users through designing service agreements in which agency and farmers act as service provider and clients, rather than as supplier and recipients.
2. Concern for cost-recovery and financial sustainability generally leads to making provision for the levying of a water charge.
3. Embracing Integrated Water Resource Management (IWRM) leads to putting emphasis on river basin management that, in turn, leads to proposals for River Basin Organizations (RBOS) or other types of interfaces between concerned line agencies and users.
4. The distinction between operating the hydraulic network, resources management, and policy-making/regulation is emphasized, which leads to proposing three nested layers of institutions with clear and distinct mandates.

These trends in the water sector give rise to several questions: how pressing was the need for such reforms and how sound have been the steps taken? To what degree have national bureaucracies and ruling political parties shared this concern for reordering the water sector and added their will power to the solicitations of outsiders, and how does this vary from country to country? How do expectations from these formal and state-centered initiatives compare with reality on the ground? Are policies derived from blueprints or based on a sound analysis of local problems, and to what extent do top-down approaches crowd out the emergence of endogenous and condition-specific solutions? More generally, what are the patterns of governance emerging in the water sector, and how do they shape policy-making, planning, and management of water resources?

This chapter documents current irrigation and water policies in the Mekong countries.<sup>1</sup> It successively reviews planning issues, water policies and legal frameworks, the setting up of water policy “apex bodies,” participatory policies, and IWRM/river basin management. It comments on the underpinning of these policies, their discursive dimension, and how they fit the reality of the countries concerned. The aim is to pave the way for further research on water governance in the Mekong region.<sup>2</sup>

## **Review of main irrigation and water policy development**

### ***Planning and development of water resources***

The development of reservoirs and irrigation schemes has been, and still is, prominent in the Mekong region. The situation, however, differs sharply according to the country. Thailand, China and Vietnam have extensively

developed their irrigation infrastructure and investments have declined in the last few years but hydropower development is in full bloom (especially in Vietnam and in the upper Mekong in China). Lao PDR, because of its scarce population, and Cambodia, due to the war and political turmoil, and to some extent Myanmar [Burma], still have a low degree of infrastructural development and options for the future are subjects of debate (notably in the Salween River basin).

According to Sacha et al. (2001) Thailand's irrigated area is around 30 million rai or 4.8 million hectares (ha), that is, approximately 20 percent of the total farmland. Its dams can now store 70 billion cubic meters (Bm<sup>3</sup>) of water and most major dam sites have been exploited. A number of reservoirs are still under planning or construction, but their typical size is around 250 million cubic meters (Mm<sup>3</sup>) and they face growing opposition from civil society, forcing the Electricity Generating Authority of Thailand (EGAT) to look for ventures and alternative sites in neighboring countries (Hirsch 2001). Nevertheless, in July 2003, the Government of Thailand announced that it would target 200 billion baht or USD 5 billion to solve the problem of water scarcity in Thailand and allow the irrigation of cultivable land not yet supplied with water. The northeastern region was to be the major beneficiary of the project conceived as a part of the plan to "eradicate poverty" in the country (see box 2.1).

Justifications for such large-scale investments are usually fuelled by alarmist surveys or reports on the impact of droughts and floods (*Bangkok Post* March 24, 2004, *Bangkok Post* February 18, 2004). Nothing is said about how scarcity is defined, and whether it is a result of climatic variability or, perhaps, slack management. These numbers are used to call for the construction of new dams and other infrastructures. Since irrigation areas tend to be overdeveloped in relation to storage capacity, a sense of scarcity is artificially created: "water distribution doesn't completely cover those irrigation areas; we've lost a balance between storage and distribution," commented a high-level official (*Bangkok Post* December 28, 2003). Focus on benefits rather than on cost/benefit ratios was exemplified by the then-Prime Minister Thaksin Shinawatra, who reportedly said: "It would not be a problem if the (water grid) project required a lot of money because it would be worthwhile eventually," and by the then Deputy Prime Minister in charge of the project, who saw the project as "a worthwhile investment because it will benefit 30 to 40 million people nationwide" (*The Nation* June 23, 2003).

The gigantism and the ambition of the project have been met with skepticism by many water professionals and with dismay by environmentalists (*The Nation* September 24, 2004). It strains the imagination to envisage how the irrigation area, which has been developed to 22 million rai or 3,520,000 ha in over one century, could be trebled or more in five years. From the governance point of view, the whole process is characterized by

secrecy, with only a few statements (mostly contradictory) being delivered to the press. Despite the dramatic projected impact on populations, livelihoods and the environment (in terms of benefits, costs and externalities), no participatory mechanism has so far been observed.

**Box 2.1 Thailand and the “Water Grid” project**

The government of Thaksin Shinawatra announced in July 2003 that it would pursue a 200 billion<sup>3</sup> baht (USD 5 billion) venture to bring water to un-irrigated farms, notably in the northeast, and help “turn Thailand into an agricultural powerhouse” (*The Nation* September 14, 2003).

Project targets are still ill-defined and contradictory but all point to a dramatic increase in irrigated land. A recent study by Khon Kaen University asserts that water will be provided to 60 million rai (9.6 million ha) of farmland and confirms that there is not enough water domestically and that “water diversion from neighboring countries and international rivers is an essential part of the water grid project” (*Bangkok Post* June 13, 2004). In addition to that, according to a senior irrigation officer, “300 new large and medium-sized reservoirs and 25,000 community reservoirs are needed to support the project” (*Bangkok Post* May 03, 2004).

Thaksin was reported to believe “northeastern provinces have enough water resources and the problem is the irrigation and distribution system, which needs to be improved” and had instructed the “Irrigation Department to fix the lack of water in northeastern provinces and report to him on ways to solve the problem within one month” (*The Nation* April 24, 2004). According to a professor at Khon Kaen University involved in the feasibility study, the delay in the project was “the result of a row between the former Natural Resources Minister Suvit Khunkitti and former Agriculture Minister Somsak Thepsuthin over who should oversee the project,” adding that “both ministers want to supervise the project because it could be promoted in their election campaigns” (*Bangkok Post* June 13, 2004). Pilot projects worth USD one million (40 million baht) are expected to be start soon and will consist of a diversion of water from Mae Klong to Phetchaburi and Prachuap Khiri Khan. Recent political changes probably means the project is going to be shelved, although specific projects are likely to be implemented.

Vietnam is still involved in massive investments for rural and water infrastructures. The Red River and Mekong deltas require huge outlays for works on dikes (flood protection) and channels, notably the Mekong, with further reclamation of land in the Plain of Reeds and closing off of the seashore, allowing freshwater irrigation during the dry season. Significant investments are also being made in rehabilitation and modernization, since

most of the schemes developed in the 1960s and 1970s are now in a severe state of degradation (Tu n.d., World Bank 2004), but also because “further crop diversification and increases in productivity require modern hydraulic infrastructure and more efficient delivery of irrigation and drainage services” (Tiep 2002).

The area of irrigated land is currently around 3 million hectares, out of 7.4 million hectares cultivated. According to Tiep (2002), water used for agriculture was 47 Bm<sup>3</sup> in 1990 and increased to 61 Bm<sup>3</sup> in 2000. Average demand increases 3 percent per year and “requirements” for 2010 are estimated at 74 Bm<sup>3</sup> (Tu n.d.). Other large investments are made in the dam sector, mostly for purposes of energy generation (Song Da on the Black River in the northwest, and Mekong tributaries flowing westward into Cambodia).

In Cambodia, water policy as a whole and irrigation in particular are seen as crucial elements of the development of agriculture, leading to food security and poverty alleviation, the main objectives pursued by the state in a country where agriculture amounts to half of the gross domestic product and 90 percent of employment (Sinath 2001). Less than one percent of Cambodia’s water is diverted and only 200,000 hectares (16 percent of the total cultivated area) are irrigated. The country counts only one medium-scale dam for hydroelectricity. During the Khmer Rouge regime, numerous schemes composed of dikes serving as reservoirs and of crude canals criss-crossing paddy lands were built but most of them have been destroyed and can only be transformed to efficient schemes with considerable redevelopment (Sinath 2003). In other words, Cambodia is presumably only at the beginning of substantial investments in the water sector. The main debate revolves around whether priority should be given to the development of small-scale water resources or to conventional large-scale irrigation schemes (Öjendal 2000), with investments relying heavily on forthcoming loans and grants from international banks and donors (MOWRAM and ADB 2001).<sup>4</sup>

Laos exhibits a similar low level of investment/infrastructures that contrasts with the fact that the agriculture sector provides the largest share of foreign currency income (40 percent), about 52 percent of the GDP, and 85.5 percent of the employment. The government stresses that: “The national economic development process is to be based on the wealth of natural resources, especially water and water resources,” which includes in particular irrigation and hydropower (Phonechaleun et al. 2002). Significant improvements have been achieved in the agriculture sector, with an increase in dry-season rice area from 2,700 hectares in 1976 to 110,000 hectares in 2000,<sup>5</sup> and irrigation shifting the average rice yield from 1.43 t/ha (rain-fed) to 3.27 t/ha during the same period. In 1999/2000, there were 19,170 irrigation schemes with a service area of about 295,000 hectares in the wet season, a number still rising due to heavy investment

in the National Pump Installation Management Project (NPIMP), mostly along the Mekong River in the southern part of the country (Khamhung 2001). Large-scale public schemes are confined to the main valleys, notably the Nam Ngum valley near Vientiane, which has a reservoir with a capacity of 7 Bm<sup>3</sup>. Hydropower production is still low, i.e., 2 percent of a “potential” estimated at 30,000 megawatts. Development of hydropower dams has been subject to intense environmental debate and lobbying by nongovernmental organizations (NGOs) and activists from outside Laos, as epitomised in the Nam Theun 2 Dam controversy. New investments including large dams are contingent upon loans by development banks and private sector involvement, both explicitly welcomed by the government (Richardson 2002).

China’s water economy has long been dominated by a strong engineering approach, but significant efforts are being made towards accommodating new concepts of environmental sustainability, demand management, rational pricing and institutional power-sharing (Boxer 2001). Although construction-based policies have decreased in importance, in the past years China has been a focus in the global news because of two major projects: the Three Gorges dam, and the south-north diversion, which diverts water from the Yangtze to the Yellow River (Berkoff 2003). This project includes three transfer canals that are expected to inject 50 Bm<sup>3</sup> into the Yellow River basin (see box 2.2). Dam construction on the upper Mekong River has been less publicized but has stirred debate on their current and future impact.

### **Box 2.2 The South-North transfer project in China**

The south-north transfer project includes three different routes (the east, middle and west routes) that are to interlink the Yangtze River (which has relative “surplus” water) and the Yellow River (which is severely overcommitted). The North China plain is home to a population of over 300 million and is undergoing critical water scarcity, with the common patterns of declining aquifers, reduced allocation to agriculture, shortages in supply to cities and severe environmental problems of pollution and siltation. The first phase aiming at the diversion of 20 Bm<sup>3</sup> has started, with an estimated cost of USD 17 billion and the likely displacement of 300,000 people.

Although the environmental and economic dimensions of the project are not attractive, political and pragmatic arguments are likely to prevail. At stake is the alleviation of the enormous stress distributed between agriculture, cities and, last but not least, the environment in a region with high population densities and booming economic development (From Shao et al. 2003, Berkoff 2003).

## ***Water policy and water laws***

In past years, the Mekong region has witnessed several initiatives aimed at updating and strengthening national water laws and regulations. China enacted its first water law in 1988, which was revised in 2002. Laos and Vietnam had laws passed in 1996 and 1998, respectively, while Cambodia's draft is to be examined by its Parliament. Thailand has been considering several versions of a water law over the past fifteen years or so but the process still continues. These legal documents, and related decrees, have often been designed with significant contributions by foreign consultants hired by the World Bank, ADB or the Food and Agriculture Organization (FAO). As such they invariably borrow from a corpus of issues and strategies seen as "best practices" or "modern"<sup>6</sup> international standards, sometimes overlooking local constraints or specificities. Even where the role of foreign consultants has been more modest, as in China, a new generation of water specialists has reportedly embraced what is seen by Boxer (2002) as "internationally accepted strategies and methods." Recurring features include the separation of the water regulation, management and service provision functions (with, in particular, the establishment of an apex body); definition of permits for water use; mechanisms for cost-sharing; watershed management; polluter-pays principle; and emphasis on participatory and integrated land and water resources management; these two latter issues are examined in more detail in the following sections.

In Laos, the Water Resources Law and the Environmental Protection Law were approved in 1996 and 1999 respectively, and some ministerial decrees and regulations have been approved recently. The Water Law has ten provisions and forty-nine articles focusing on the protection of water resources and watersheds, water resources planning and prevention of water pollution (Khamhung 2001). An apex body, the Water Resources Coordination Committee (WRCC) was established in 1999 within the Prime Minister's Office, with the active support of the ADB (Khamhung 2001). The law includes some vague provisions for the establishment of water use permits which some observers see as little realistic (Pheddara 2003). There has been little domestic discussion or awareness of the law and its implications, and no civil society input into the policy process.

In Cambodia, a first draft was issued in 1999, one year after the establishment of the Ministry of Water Resources and Meteorology (MOWRAM), and revised in 2001. It failed to be examined before the political stalemate of 2003 and is expected to be considered when the national parliament reassembles. While one cannot prejudge what adjustments are going to be made,<sup>7</sup> the draft puts emphasis on several principles (Koc 2001): article 9 stipulates that "the diversion, abstraction and use of water resources for purposes other than those mentioned in article 8 [domestic uses and gardening], and the construction of the waterworks relating thereto, are

subject to a license by the MOWRAM.” These licenses “may be transferred by its holder to another user, whether totally or in part, subject to the prior approval of the MOWRAM” (article 13) and will be granted against a water fee. Accordingly, MOWRAM will keep and update a “centralized inventory of the water resources of the Kingdom of Cambodia”<sup>8</sup> and will also “record all water use and wastewater discharge licenses.” Beyond granting the state the power to exact water fees from users, it is not clear why such a complex device is recommended in a context where allocation conflicts are hardly an issue and hydrological measurements are almost nil.

In the aftermath of the 1997 financial crisis, Thailand obtained a USD 600 million loan from both the ADB and Japan Bank for International Cooperation (JBIC) under the name of ASPL (Agriculture Sector Program Loan), conditional upon acceptance of some principles and a Reform of the Water Sector (RWS). A policy-matrix was defined, showing commitment and successive milestones to be achieved. The RWS was designed by consultants to the ADB and issued in March 2001. It included several components (Halcrow et al. 2001), including:

- Strengthening of the Office of the National Water Resources Committee (ONWRC) and its transformation into an apex body.
- Decentralization of water management to river basins.
- Watershed protection strategy.
- Setting of performance indicators and service standards.
- Participatory irrigation management and definition of farmers as clients of a service rather than beneficiaries.
- Cost sharing of O&M (Operation and Maintenance).
- Reorganization, decentralization and privatization of the Royal Irrigation Department.

In parallel, the National Water Resource Committee (NWRC) worked on the draft Water Law (that has been revised several times during the past years), which was supposed to encapsulate many of the crucial aspects of this ambitious reform, notably the establishment of River Basin Committees (RBCs), and the separation of the policy, management and O&M functions.

The reform process initiated under the ASPL has been phased out during 2002 and 2003, at the behest of the then-Prime Minister. Pilot projects have been implemented partially and without supervision, leading to no real change. Cost-sharing policies and service agreements have disappeared from the front scene. The draft Water Law is still in limbo. The restructuring of RID has been limited to measures such as the non-replacement of retiring staff. Only the setting up of RBCs has continued as planned, under the guidance of the ONWRC (now the Department of Water Resources of the MNRE). At present, however, they still lack the formal recognition that would give them a role beyond that of a mere consultative

forum. On balance, although the reform process built in the ASPL was in general sound on paper, it suffered from being introduced through loan conditionalities, without paying enough attention to the acceptance or preparedness of the bureaucracy and of the political leaders, as well as of the civil society (which, for example, vehemently opposed conditionalities over water pricing). Involvement of the latter was minimal, although some stakeholder analyses and workshops were carried out by academics hired by the ADB.

Vietnam's 1999 Water Law vests all power in the state and "State agencies, economic organizations, political organizations, People's Army Forces units and all individuals in the protection, exploitation and use of the water resource ... have the responsibility to implement legislation on water resources" (Water Law, article 4). "The People's Committees at all levels and the competent State organizations" are entrusted with most of the tasks, from planning, regulation, emergency works, implementation, to control and management. The law introduces the user-pays and polluter-pays principles. Users must register and get a permit from the competent State agencies except for "small scale [use] for the family in agricultural, forestry production, aquaculture, small industry and handicraft production, hydropower generation and other purposes" (article 24). The law reviews in detail and prohibits a large number of actions that are "harmful to water resources and their quality." In 2001, the government set up the National Water Resource Council and also a provision for basin management, although little detailed. Control of water management by the state apparatus is almost absolute.

China's 1988 Water Law was meant to serve as a regulatory framework for rationalizing water use in a context of transition to a market economy (AIRC 2003). The law includes the user-pays principle<sup>9</sup> and compensations for third-party impact in case of flow alteration but often reads like a policy document since application is left to subsequent decrees. The 2002 revamp of the law draws on the 1988 act but gives greater emphasis to themes such as conservation, environmental preservation and allocation by quota. The major issue of river basin development and management is also given more salience (Shen 2004) but largely remains a matter of bureaucratic and centralized planning. Yet, the law provides for a relatively high degree of autonomy to local authorities (Saleth and Dinar 2000) and several experiments with bulk water allocation and pricing (Mollinga et al. 2003), intersectoral reallocation of water rights (Fu and Hu 2002), for example, are reported. Local administrative units, notably provinces (such as Yunnan, which has its own dam agenda), prefectures and county governments all have Water Resources Bureaus with large latitude for water management.

Myanmar has not yet considered updating any of its laws related to water. However, as part of its recent effort to define a National Water

Vision to Action, it is considering working on “a unified water resources law so as to promote a more effective legal framework for coordination and management of water resources” and establishing a national water authority (Ti and Facon 2004).

In the Mekong region, pressure from external agencies to pass water acts have tended to generate a process whereby these laws are watered down, leave state control intact or increased, pay lip service to the fads of the day (Biswas 2001, Jonch-Clausen and Fugl 2001), and need further decrees to be put into action.<sup>10</sup> Phonechaleun et al. (2002) emphasize “the urgent necessity to implement laws, decrees, regulations for integrated and sustainable management and development of water resources,” but admit “that the enforcement of the Water and Water Resources Law and related regulations [in Laos] is still very weak.” One may question whether such emphasis on legal aspects is warranted or not. Pessimists argue that the regulation established is wholly inadequate, at best innocuous and at worst counterproductive, echoing Ostrom’s (2000) warning that “the worst of all worlds may be one where external authorities impose rules but are only able to achieve weak monitoring and sanctioning.” Optimists tend to retort that despite the idealized view enshrined in the laws, these have to be seen as a set of principles meant to underpin future decisions and policies over a long time period. To be sure, both tend to overestimate the power of the state to control the water regime.

Institutional reform processes equated to policy and law formulations tend to be highly prescriptive, presenting models for desired end stages and list policy recommendations (Mollinga 2001). They rest on static<sup>11</sup> and managerial views of the world that deny heterogeneity and uncertainty (Mehta et al. 2000) and leave little room for flexibility and stakeholder inclusion.

### ***Apex bodies and three-tier institutional design***

Apex bodies are intended to advise governments and improve coordination between the various water-related sectors and ministries (Birch 2004). They have emerged recently as part of what Wright (1999) sees as “modern water management arrangements” to separate as much as possible the three complementary roles that constitute water management:

- Standard setter and auditor/reporter (*apex policy body*).
- Water resources manager or *regulator*.
- Water *operator* (for example, irrigation providers or water-supply utilities).

In Asia, apex bodies have been promoted as “best practice” by the ADB<sup>12</sup> which has supported the inclusion of a three-tier structure in national

water policy reforms. According to Birch (2004), the focus of apex bodies is at the interministerial level and they are meant to influence national debates and reforms, instilling a degree of IWRM thinking and practice into decision making. ADB advocates that apex bodies “are needed in the developing countries of Asia to bring together government, civil society and nongovernmental stakeholders to promote effective water policies and guide national water sector reforms” (Arriens 2004), although it is not clear how interministerial committees can achieve much participation of the civil society.<sup>13</sup>

One reason why apex bodies proposed by ADB are relatively well accepted by the different countries might be that they understand the need to improve coordination and overall decision making in issues related to water resources. Yet, setting up such bodies, which are intended to be committees, not operational entities, does not automatically ensure that they will have a strong influence over water issues. Initially at least, they are likely to either remain largely cosmetic, or to appear as a threat to irrigation and other agencies, especially if they try to influence decisions in a way perceived as detrimental by these agencies. These bodies are, in general, an emanation of the higher levels of the bureaucracy and as such unlikely to preside over a drastic redistribution of power.

In Laos, the Water Resources Coordination Committee (WRCC) was established to “provide advice to the government on matters related to water and water resources and to coordinate the planning management, follow-up, inspection and protection of water and water resources aimed at sustainable development and utilization of water and water resources in line with the government policy of socioeconomic development” (Phonechaleun et al. 2002). In 2001, the Vietnamese government set up the Vietnam National Water Resources Council (VNWRC), to provide consultancy to the government “in the important decisions on water resource that come under the tasks and powers of the government.” The VNWRC’s achievements have so far been rather modest (Birch 2004, Lai 2002).<sup>14</sup> In Thailand, the ONWRC has been set up without legal backing and its record is modest. Despite the dedication of some officers, the committee’s outreach is constrained by limited staff and resources, and its lack of power when dealing with long-established line agencies. Birch (2004) acknowledges that apex bodies must take a step-by-step approach and gradually build their capacity and legitimacy, and that they eventually critically depend on leadership and on the existence of a “champion” dedicated to pushing the new IWRM agenda.

The separation of the management/regulatory and water provision roles is a much more touchy issue because it meddles more deeply with the existing distribution of power. Therefore, it is no surprise that little, if any, progress is recorded on this point. The management function is generally being entrusted to Water Resource Management Departments

established in new ministries responsible for natural resources or water as a whole. This is the origin of the **MNRE** in Thailand, Vietnam and, to some extent, of the **MOWRAM** in Cambodia.<sup>15</sup> So far, the experience has been inconclusive because powerful irrigation agencies have remained under the Ministry of Agriculture in Thailand, and the Ministry of Agriculture and Rural Development (**MARD**) in Vietnam. The new Water Departments have generally been staffed with individuals transferred from the irrigation agencies, who then found themselves in a delicate situation vis-à-vis their professional communities of origin.

On balance, it is too early to draw conclusions from these attempts to reorder roles and responsibilities in the water sector. However, regardless of whether the new concept is sound or not, it has not yet proved to be effective and it remains to be seen whether traditional structures will accept and adapt to these changes. The separation of roles has many benefits (Abernethy 2005) but it hinges on the assumption that water management can be expressed in terms of service agreements, abstraction licenses, allocation rules, enforcement, etc., which is often a far cry from the reality on the ground.

### ***Participation and turnover***

The ideology and rhetoric of participation have long infused development theory and practice (Cleaver 1999, Nelson and Wright 1995). The underpinning of the concept is that participation is conducive to greater efficiency and equity in management; that problems are better solved by those who experience them, and that projects are better maintained and more sustainable when designed and taken care of by the direct beneficiaries. Participation can be conceived as a tool (for better management) or as a process (with view to empowerment). In the water sector, there have been repeated and widespread attempts to replicate the traditional organizations for water management, observed in small communal systems, adapting them to large-scale schemes. Experiences with Participatory Irrigation Management (**PIM**) or management transfer (turnover) have had mixed results (Vermillion 1997, Samad and Vermillion 1999, Kolavalli and Brewer 1999, Meinzen-Dick et al. 1994), mostly because of a lack of genuine farmer empowerment and redistribution of roles, and of limitations in hydraulic infrastructure (Facon 2002).

In Cambodia, participation principles are reaffirmed in the draft water policy in a standardized and politically correct manner. The main policy line is the transfer of small- and medium-scale irrigation systems to Farmer Water User Communities (**FWUCS**). A long-term program called Participatory Irrigation Management and Development (**PIMD**) has been launched by the **MOWRAM** to establish **FWUCS** as legal entities with the

right to own irrigation systems, hold bank accounts and enter into legally binding contracts. They are to be responsible for the o&m of their scheme; however, it is also clear that the “essential principle of PIMD is cost sharing” (Sinath 2003). After rehabilitation of the scheme (if needed) the FWUCs are to collect a fee: this is, initially, supported by the government, with a participation that decreases each year by 20 percent, over a period of five years. This income is to be re-injected into maintenance activities (that still need the approval of the Ministry) while possible surpluses can be used for collective investments such as tractors, threshing machines, pumps or seeds. The project is still at the initial stage and includes setting up one pilot project in each of the twenty-two provinces, while provincial teams are trained to establish and assist FWUCs.

The PIMD is a top-down program where farmers are considered as recipients of the knowledge and advice of the administration and experts, and are sometimes considered not to fully understand the issues at stake. The declared objective is “to catch the big benefits via using the participatory approach to mobilize, organize and explain to the farmers how important are the FWUCs, the responsibility for further o&m” and to instill a sense of ownership after rehabilitation of the irrigated system (Sinath 2003). The challenge of the project is to build up mechanisms of financial sustainability at the scheme level to avoid recurrent state expenditures or rapid deterioration of infrastructures. Several other similar initiatives have been launched by different NGOs (Roux 2004). Some anthropologists and political scientists dispute the adequacy of participatory approaches in Cambodia’s socio-cultural context (Chandler 1996, Ovesen et al. 1996): the social structure is reputedly loose, with an all-pervasive notion of hierarchy and a strong control by the state on local life; communal work is associated with forced collective labor; marked inequalities and lack of personal security foster traditional patron-client relationships, etc.

The state-centered Water Law of Vietnam is parsimonious with regard to participation. It contains seventy-one occurrences of “state,” forty-nine of “government,” but none of “participation” or “participatory.” This can be attributed to the particular conception that people are effectively represented by local People’s Committees (pcs) and other official organizations. This may appear as a practical way to sideline civil society but such conception is also genuinely ingrained in local political discourse and culture, and the writers of the law did not feel the necessity to pepper its articles with participatory rhetoric. In that sense the notion of “civil society” is redundant. It is abundantly clear from official documents that the statement: “involvement of stakeholders is important for integrated water resources management” (Lai 2002) refers to the involvement of all ministries and provinces concerned. Likewise, China’s water laws also make no mention of participation other than that of the concerned department and layers of the bureaucracy. The concept of civil society is absent and the same conception of people represented by their administration prevails.

In Laos, new policies are said to include “fully decentralized and bottom-up participatory planning with the governmental system” (Khamhung 2001) but there is little sign that this translates to giving people more say on, for example, the large infrastructures that are planned in the country (e.g., Nam Theun 2 or the Theun-Hinboun project; see Hirsch 2001, Pahlman 2000). The fact that NGOs are not allowed in Laos also gives a measure of the limits within which civil society is allowed to participate. According to Khamhung (2001), the rationale for the policy to transfer ownership and associated costs of irrigation to farm users is based on the belief that “traditional irrigation systems have been efficiently managed by farmers’ communities” and also on the economic necessity for the government to reduce agriculture-sector subsidies.

In Thailand, the ideology of accountability and participation finds some common ground with that of self-reliance, cooperation and participation co-opted by governmental (in line with the 1997 Constitution) and academic circles, as well as with the rhetoric of the NGOs on grassroots democracy and community-centered development (Rigg 1991). It is thus little contested but the underlying conceptual understanding or assumptions of the different actors are often at variance.

Molle et al. (2002) have reviewed the Thai experience with Water User Groups (WUGs) and WUAs in large-scale public schemes and identified several reasons for their repeated failure. Most reforms focused at the tertiary level because irrigation agencies usually have little interest in what is occurring beyond the tertiary turnout. When supply at the tertiary level generally depends on allocation and distribution at higher levels in the system and cannot be made predictable, farmers soon discover that there is nothing to be managed and the WUGs become apathetic. Rather than issues of O&M at the tertiary level, the problem that has gained prominence in a context of water scarcity is the allocation of water in the dry season. The definition of (seasonal) entitlements in which users have a say (as a first step to defining water rights) is the preliminary step to the definition of service agreements, but nothing of the like has so far been attempted.

Attempts at joint management of natural resources (Heyd and Neef 2004) or to institute participatory irrigation management are still perceived locally as state-initiated and state-oriented, without real benefit for the farmers in terms of improved access to water. The contradiction between the decentralization rhetoric and the very nature of the Thai bureaucracy prompted Rigg (1991) to state that “a truly decentralized, grass-roots development approach comes into conflict with bureaucratic methods and Thai society.”

More generally, in the whole region, the rhetoric of participation in official discourses and the prevailing cultural representations of farmer/official relationships are often at odds. This can be clearly sensed during workshops and seminars, where officials are given the opportunity to

express their viewpoints: “UNDP, UNEP, MRC, ADB, everyone who cares about environmental sustainability is a stakeholder, *even* the people themselves are stakeholders” (a Cambodian official);<sup>16</sup> “you have to make people understand your will” (a Thai RID official). These and many other declarations reveal deeply ingrained conceptions that are often at loggerheads with the intended activity and cannot be uprooted overnight.

### ***IWRM and river basin management***

IWRM and river basin management are definitely ubiquitous attributes of a “modern” water policy. They have received wide and consensual support from all quarters and feature prominently in all legislations. The underpinning of these concepts lies in the recognition that basin-wide interactions between upstream and downstream, surface water and groundwater, quality and quantity, and among uses and users, require integrated and systemic approaches to water management, as opposed to the sectoral and fragmented approaches followed in the recent past.

In Cambodia, the four priorities listed by MOWRAM include the establishment of a pilot RBO for the Prek Thnot River basin, which includes Phnom Penh. As for now, no activity is reported and the objectives and targets set up remain very general (Tara et al. 2003).<sup>17</sup> Myanmar, as part of its recent attempt to define a national Water Vision, has targeted the Sittoung River basin (Ti and Facon 2004). Likewise, in Laos, the Nam Ngum River basin (NRRB) has been selected as the first river basin to demonstrate the usefulness of IWRM approaches, because of the existing and planned water-sector investments as well as its proximity to the capital, Vientiane (ADB 2004). The National Water Vision for Laos (Phonechaleun et al. 2002) stresses not only the participatory nature of the RBO but also that management is under the control of the government.

In Thailand, the Seventh National Plan (1992–1996) provided strong incentive to the development of guidelines for water resources management in all twenty-five basins of Thailand (Sacha et al. 2001). This appears to be a desirable policy, especially in the basins where intra and inter-sectoral competition for water is highest. Basin studies, with detailed analyses of existing resources, uses, and problems were carried out for each of the twenty-five basins during the period of the plan. These studies were followed by a policy to gradually establish RBOs in these twenty-five main basins, the task of setting them up being incumbent upon the ONWRC. Farmers were grossly underrepresented in the earlier eight pilot RBOs but the ONWRC (now the Department of Water Resource) has worked to correct this imbalance. Three pilot RBOs that had received early support from the World Bank (Pasak River) and from the ADB (Upper Ping and Lower Ping rivers) are showing some interesting evolution (Apichart 2004). From an

early composition heavily biased towards administrative representation, some RBOS have now been divided into subbasin committees, which choose/elect representatives at the village level, with further cooption of some of these representatives at the subdistrict, subbasin and basin levels successively. However, the lack of political and institutional support, with no formalization or recognition by law of their roles and power, is likely to affect these RBOS in the very same way they affected both the ONWRC (“upstream” of them) and the WUGS (“downstream”). The odds are high that these proto-RBOS will remain paper organizations with limited power and a consultative role rather than strong participants in arenas of negotiation and decision making.

It is also interesting to note how well the rhetoric of IWRM has been seized by consultant firms. Two consultants, for example, recently (2003) drew a Master Plan for the Ping River on behalf of the MNRE and claimed that “it was the first time basin management and integrated plans for water resources management were applied to solve the problems of drought, flood and water quality.” An integrated plan is to establish both structural and nonstructural measures but while both are comparable in numbers the budget planned for the former ends up being only 1.3 percent of the total. Problems are to be “mitigated” by the implementation of both basin-level and local measures: numerous meetings with communities were used to produce a list of 5,056 desirable investments (mostly for domestic supply) “requested” by local people. These claims of a largely participative process are used to enhance the plan legitimacy but there is no mention of discussions/dissent about any of the large-scale plans envisaged, which seems to have been removed from debate.

China’s 2002 law (CIECN 2004) stipulates that the “state shall, with respect to water resources, adopt a system that organizes the administration by watersheds as well as by administrative areas” and that comprehensive watershed plans<sup>18</sup> will be “formulated by the department of water administration under the State Council.” The functions of river basin management focus on data collection, planning and interprovincial management on the key rivers. The Ministry of Water Resources retains a central role through its provincial departments but no role is granted to other stakeholders in the possible negotiations for water allocation or development plans. Shen (2004) believes that the law is “a milestone” but that its application is likely to face several problems, notably the equilibrium between river basin management and jurisdictional management, the lack of integration between water quality and water quantity, unclear separation of the regulator, manager and provider functions, and a low degree of participation.

Vietnam enshrined river basin management in its 1999 Water Law. In 2001, it started to build up RBOS for the Red, Dong Nai and Mekong (Delta) river basins (Wright 1999). As mentioned earlier, RBOS “must fit

in the country administrative system” (Phan 2003). For the government, there is no question that official bodies, in particular at the local level, like districts, communes and People’s Committees, do adequately represent the people, their needs and interests. The River Basin Planning Management Boards (RBOS in short) are seen as coordination institutions between different administrative scales/levels made necessary by the fact that river basins do cut across provinces and that interaction through the hydrological cycle requires management at an upper level (Phan 2003).

The Cuu Long RBO, for example (Mekong Delta), supported by Australian Agency for International Development (AUSAID), is focusing its work on gathering data and improving cooperation and integrated planning/management over the twelve provinces concerned (Cantor 2003). That it is part and parcel of the administration is strikingly illustrated by the fact that “the standing members of the RBO have been selected almost exclusively from Central Government Agencies based in Hanoi, more than 1,000 km from the delta, with non-voting representation from the provinces” (Cantor 2003). The need for coordination between provinces has become crucial to address the combined impact of land and water development on the river flow in the dry season (and resulting salinity intrusion threats).

The Vietnamese case well illustrates the dialectic of basic governance that, on the one hand, demands decentralization/participation, and where, on the other, integrated management also requires a degree of recentralization of decisions and command, or at least some high-level coordination. It is recognized that empowerment of local authorities in the 1980s has produced a fragmentation of water planning and management that created negative impacts (Wright 1999, Cantor 2003). Each province operates with a strong local perspective both in terms of management and planning of future works. The administrative structure is very hierarchical and provincial services are linked to MARD. As reported by Wright “any major issue affecting more than one province becomes a sensitive issue within MARD and is usually handled by separate discussion with each province.” As some shortcomings of this fragmentation gradually appear, the RBOS might be seen as the place for the central government to reassert its authority regarding issues that eventually prove to transcend local boundaries, or to special interest-groups to promote narrow-focus development (Barrow 1998).

The way consultant firms or bureaucracies seem to ride the wave of IWRM supports the claims of Biswas (2004) that “because of the current popularity of the concept, some people have continued to do what they were doing in the past, but under the currently fashionable label of IWRM in order to attract additional funds, or to obtain greater national and international acceptance and visibility.” Likewise, Jonch-Clausen and Fugl (2001) fear that IWRM may have “degenerated into one of these buzzwords

that everybody uses but that mean many different things to different people.” Just like participation, *IWRM* appears as something desirable and uncontroversial, and official documents can resort to it abundantly and at “no cost.”

## **National policies, management of the Mekong River and other international issues**

The Mekong River itself remains surprisingly pristine and undammed in its lower course, despite grand plans drawn up in the 1960s and 1970s to transform the basin to a sort of Tennessee Valley Authority. This can be partly ascribed to the difficulty of building reservoirs along the course of the river and also to the political instability of the region during the past four decades (Radosevich and Olson 1999, Mingsarn and Dore 2003).

National policies and development of water resources in the many tributaries of the river directly affect the flow in the Mekong, in terms of timing, quantity and quality. So far, interventions in the Chinese part of the basin have been limited but this has now changed with the construction of four dams (out of a total of eight reservoirs planned) (Dore et al. this volume). Forthcoming impacts of the Chinese dams are still unclear but opinions vary from alarmism (TERRA 2002) to relative confidence that sustained dry-season flows will benefit the basin (Adamson 2001). However, the main impact of a change in the hydrological regime (especially from the daily fluctuations in dam releases following electricity requirements), is likely to be on fisheries, since several species have reproduction cycles attuned to the current water regime and since the size of the fishery is directly related to the size of the flood. While Laos has only one major dam (Nam Ngum), Thailand has intensively developed its tributaries on the Korat plateau and has carried out studies on the possibility to divert significant parts of the Kok River, in Chiang Rai Province, before it reaches the Mekong, as well as some Mekong tributaries located in Laos (by siphoning under the river). Vietnam is also moving ahead with an aggressive hydropower development plan.

Potential for conflict from further direct abstraction from the Mekong or excessive use of its tributary streams is therefore high (Öjendal 2000), but efforts by the Mekong River Commission (MRC) have so far contributed to staving off divisive actions (Frederiksen 1998). In 1995, after three years of intense negotiations, the “Mekong River Agreement” was signed by the riparian countries (except China and Myanmar). The focus of the agreement is on “reasonable and equitable utilization” and “prevention and cessation of harmful effects” (with concern for environmental protection, ecological balance, pollution, fisheries, etc.). The touchiest section of the agreement is article 5, which constrains diversions from the mainstream and

from tributaries (Radosevich and Olson 1999). Analysis of the agreement and consequences for riparian states are beyond the scope of this report. What needs to be noted here is that development of dams and diversions in each country is, in theory, constrained. Although the recent events in the Se San River (Vietnam/Cambodia) (Hirsch and Wyatt 2004, Öjendal et al. 2002) bode ill for the future, there are signs that the agreement acts as a deterrent to transbasin initiatives in Thailand.

## Discussion

This brief review of policies in the water and irrigation sectors of the Mekong countries has yielded a number of both commonalities and discrepancies. It is apparent that the different countries are at different levels of water resources development. Laos and Cambodia are still at an early phase of infrastructural development and face the challenge of adopting better and more inclusive decision making processes than their neighbors were able to devise. Thailand and China have already significantly developed dams and irrigation schemes and are expected to move towards improved and more environmentally sensitive management. Vietnam and, probably, Myanmar stand somewhere in the middle and still have extensive plans to develop hydropower. Here, participatory decision making and willingness to manage water with a view on other uses need to be strengthened.

### *A global toolbox?*

The development and evolution of water policies in all these countries<sup>19</sup> also bear, at least superficially, a number of similar features. They embody, tentatively or permanently, formally or informally, several traits that are part of the global “toolbox” of what is being promoted as “best practices,” “internationally recognized principles,” or “modern management.” The hegemony and popularity of such principles, according to Biswas (2004), has something to do with their vagueness. “Integrated,” “participatory,” “decentralized,” “pro-poor,” “transparent” or “accountable” practices signal a “brave new world” and are at a certain level consensual, but their reification into a set of standard policy prescriptions may stymie or preclude the search for more flexible, adapted and negotiated outcomes.

The apparent uniformity of these water institutions partly stems from their promotion by bilateral and multilateral agencies, and also through mainstream literature and international conferences (Merrett 2003), or through influential NGOs such as WWF or IUCN. On the one hand, ADB discards the one-size-fits-all approach and acknowledges that “there is no standard approach that fits all the needs” (Arriens 2004). On the other hand, it proposes a quite unambiguous model of water regime,

whereby “modern” water legislations are enacted, the state is confined to a regulatory role decentralized down to RBOS, while irrigation and urban waters “services” are assured by providers and utilities, duly paid by their clients in order to ensure full cost-recovery (Arriens 2004). Irrespective of the merits or limitations of such a water regime, this approach tends to “freeze” the range of arrangements and site-specific mix of communities, state and private management that are precisely what needs to be defined endogenously.

Mainstream approaches fostered by development banks or international agencies/think tanks and aimed at disseminating “best practices,” organizing regional seminars and cross-country field visits do have positive aspects. They enable the formation of a wider community of water decision-makers who may learn from each other by putting their own context into perspective; they allow the diffusion of general principles and the identification of common problems and solutions at a generic level; they offer support/expertise and foster national processes of reflection on policies and the establishment of priorities; they sometimes elicit dialogues between segments of the administration or ministries that share responsibilities on water issues but do not coordinate their actions.

But policies are often top-down prescriptions consisting in identifying “lacks” and failures and then “providing” what has been identified as missing. Rehabilitation programs look for “technical fix,” PIM policies or administrative reforms for “institutional fix,” and new laws and regulation for “legal fix.” All these approaches include a good deal of naïve social engineering that purges social processes of their political dimensions.

A corollary of the standard policy toolbox approach is that changes are evaluated based on the formal existence of particular administrative devices or institutions, without looking too much at contents and at processes. This is reinforced by the requirement for development banks and project managers to “measure” the impact of their interventions. They thus run the risk of finding themselves in the situation where the success of participative programs is supposedly assessed by the number of Water User Groups or RBOS set up (by the government), or by the number of meetings held with “stakeholders.” It is obvious that the mere formation of an RBO does not ensure integrated management (Schlager and Blomquist 2000) nor does a water law reorder a water regime by itself (Shah et al. 2001). As Jasper (2001) noted with regard to the situation in Zimbabwe, it is becoming “painstakingly apparent that it takes more than good legislation to guarantee a change for the better.”

### ***Transposition of experiences and mindsets***

The question of the transposition of experiences from one setting to the other is central to development theory and practice.<sup>20</sup> Are “success stories,” “best practices,” or “promising technologies” readily transferable

to other contexts? Many analysts observe that the water sector appears to be largely littered with well-intentioned and rationalistic reforms that have failed to fully appraise the context of their implementation (Sampath 1992, Pigram 2001, Shah et al. 2001, Molle 2001). This raises two questions: is a particular reform element sound or indeed relevant in a particular context? And can this element be readily introduced by a voluntary and formal administrative fiat? In other words, even if a particular policy is likely to bring benefits, has its introduction any chance of success within the particular political-economic context?

It is interesting to note that reforms prompted by outsiders are never literally implemented but rather “absorbed” and always “digested” in some way: laws that include general principles always need application decrees that remain largely at the discretion of concerned ministries; conditionalities set by the multilateral banks are often watered down into pilot projects which evaporate with the next government or policy change; the transit through different governmental spheres may allow draft laws (once translated into local language) to be aptly modified before they are voted; participatory reforms are steered off course by peculiar conceptions of bureaucratic top-down “participatory” interventions; the rhetoric of *IWRM* is hijacked by line agencies repositioning themselves within the new discourse and by consultant firms proposing conventional structural projects under the disguise of “people’s request” or integrated approaches.

All in all, two opposite attitudes seem possible:

1. One may simply dismiss attempts to set *RBOS* in contexts that are arguably unfit, and sometimes adverse, or legislation/reforms that seem overambitious and are unlikely to be put in practice. This leapfrogging syndrome often leads to failed and untimely policy reforms and make further attempts more difficult (Shah et al. 2001).<sup>21</sup> As Thomas and Grindle (1990) noted, with regard to economic and political reorganizations, “Reforms have been attempted when the administrative or political resources to implement them did not exist. The result has generally been misallocated resources, wasted political capital, and frustration.”
2. But one may also adopt a more optimistic stance, whereby *RBOS*, apex bodies, cost-sharing arrangements, etc., are considered as necessary, if not sufficient, foundations towards a longer-term objective of establishing *IWRM*, redefining line agencies as service providers and water users as clients, in self-financing and sustainable arrangements. Initial effectiveness of the measures taken may often be limited or nil but there is confidence that, with time, adjustments to local reality lead to viable and adapted institutions. The gradual evolution of *RBOS* in Thailand (Apichart 2004), or the recognition by *ADB* that fully independent regulators

may not necessarily be the most effective (Arriens 2004), are examples of evolution by learning.

Both positions have their weaknesses. Sticking to the former may lead to inaction because settings are rarely easily amenable to change; it denies the possibility to seize opportunities or the necessity to adjust to changes. Sticking to the latter, on the other hand, may be tantamount to subscribing to the fallacy that some blueprints and alleged “best practices” can be easily transplanted, without burdening oneself with a thorough analysis of each situation. As pointed out by Evans (2003), with regard to economic reforms, “institutional monocropping” premised on the presumption that “the most advanced countries have already discovered the one best institutional blueprint and that its applicability transcends national cultures and circumstances” is a sure recipe for frustration. What is important to acknowledge is that none of the best practices promoted are inherently good or bad. Beyond the formal nature of a particular proposition, what counts is the substance of the corresponding process. For example, RBOS can be pivotal platforms for representations of different users and values about water, for information sharing and knowledge building, and for decision making about crucial issues of infrastructural development or water allocation. But they can also just as well be limited to consultative meetings masquerading as participatory processes, or be a handy way to sanction and give legitimacy to business-as-usual strategies. The two logics are at work and the constant but antagonistic shifts towards either genuine participation and democratization, or institutional reordering and capture by more powerful actors, is ultimately a political struggle, or process, shaped by many factors. This invites us to somehow reconcile the two approaches by looking for a middle path between prescription and a wait-and-see attitude.

### ***Instilling or enabling change***

Whether reforms are about the design of a water policy or water law, the establishment of basin or catchment organizations or platforms, the turnover of irrigation management to users, or the financial sustainability of a domestic water supply scheme, the main ingredients of these reforms are various and generally conflicting values, discourses and interests, which reflect the diversity of the people having a stake in water and the way they try to secure both personal and common interests. The smaller the scale, the more “wicked” the problems are: no omniscient representative of the public interest, enlightened planner, or expert-based model, will ensure an optimal social outcome (Wester and Warner 2002, Lachapelle et al. 2003, Clark 2002). Where heterogeneities and uncertainties prevail, “processes of mediation, bargaining, conflict and power become key” dimensions of institution building (Mehta et al. 2000). Robust arrangements combine

(often lengthy) trust building, confrontation of worldviews and social learning, informed and supportive science, political space for the representation of all stakeholders, and must allow for a degree of “messiness and unpredictability” that is usually not recognized in classical approaches to Common Property Resource management (Cleaver 2000).

A more inclusive and balanced development path is, however, largely contingent upon societal changes and democratization, whose dynamics lie beyond the scope of the sole water sector. The vision of a shift from supply-oriented, paternalistic development to process-oriented approaches leading to “informed consent” (Delli Priscoli 2004), however attractive and desirable, certainly remains on the far horizon rather than something that can be conjured up by fiat or mere good will. Deliberative development enables a better definition of social choice but can only develop in a political environment whereby some “messiness” in the process of choice is allowed and where a degree of redistribution of existing power is made possible (Evans 2003). Multi-stakeholder dialogues are one way to engage government, business and civil society stakeholders in processes of learning and negotiation (Roling and Woodhill 2001).

In that sense, “check-box” approaches which merely aim at establishing formal and static structures or laws miss the crucial point that institutional building is an evolutionary and socially embedded process: human systems must adapt not only because surrounding ecosystems change but also because the actual distribution of a resource is always contested and generate conflicting claims that need to be reconciled (Both Ends 2000, Miller and Hirsch 2003, Cleaver and Franks 2003).

The definition of more inclusive and equitable governance patterns is also hampered by scale constraints. Local communities and NGOs emphasize the use of local and traditional knowledge to address problems and this knowledge and corresponding institutions are often quite effective at a micro scale. However, communities have rarely developed means to address issues at a wider scale because there was no such necessity and because they may not have the understanding of environmental changes occurring at a larger scale. They, therefore, have difficulties to scale-up their knowledge, organizations and interventions in a context of growing hydrologic interconnectedness across scales. To some extent it can even be stated that the principle of subsidiarity is antagonistic to macro-level basin management. Conversely, state agencies have a better understanding of macro-level constraints and allocation, have access to more data and technical tools, but struggle to understand the heterogeneity and discontinuities, both physical and human, of the real world, and have mixed success in their application of ready-made solutions. Their problem is scaling-down their understanding and management practices (Roth 2004).

### ***Emerging governance patterns and main actors***

What is the overall governance pattern emerging from the ongoing development planning and water policy reforms, and who are the main actors? While a quite vibrant civil society has developed in Thailand in the past fifteen years (Hirsch 2001), and is now emerging in other Mekong countries through the growth of NGOs (Dore 2003), grassroots movements and citizens as a whole have yet to be incorporated in decision making processes. Advocacy groups have recorded a few successes in their opposition to dams, for example, but they tend to be considered by governments more as an unavoidable nuisance than as “partners in development” to be reckoned with. Participation of “stakeholders” in meetings related to water policy or the setting up of RBOS has often remained cosmetic and largely been a way to legitimize state action.

NGOs, local activists and academics have generally adopted stances putting forward local traditions, culture and knowledge, but these have not been factored in policies (see Watershed 2001, for Thailand). These civil society organizations are also not homogeneous. Conservationists sometimes see the preservation of nature or biodiversity as an objective, which must take precedence over productive activities of poor people. The debate between conservation and production (e.g., protecting forests *from* people vs. protecting forest *by* people, see Johnson and Forsyth 2002) is persistent, although environmentalists have also borrowed from the livelihood framework in order to find compromises. Marked differences are also apparent between NGOs, which systematically oppose taxation of peasants, and organizations like IUCN or WWF, which have largely bought into the mainstream discourse of pricing and markets as a way to regulate the use of natural resources.

ADB and other funding agencies have also found difficulties navigating between their borrowers/client states and organized advocacy groups, despite unremitting calls for participation. While willing to balance government power through a more democratic process of decision making, they fear that projects (and disbursement of funds) may be paralyzed by uncompromising NGOs. Current affairs provide signs that both multilateral agencies and states are nevertheless, willy-nilly, gradually moving towards a more cautious approach to planning (Öjendal et al. 2002). However, traditional expert-driven approaches to development problems and a reluctance to engage in lengthy and uncertain planning processes set a limit to the changes one should expect.

If water policies owe a lot to mainstream general concepts, one must also question the role of national decision makers. Are these merely passive receivers of concepts crafted in other arenas? Is there a struggle between state departments, schools of thought (e.g., big vs. small projects), lines of thinking, or ideologies? The material reviewed earlier does not allow us to fathom policy-making processes in all these dimensions but the

general impression is that disagreements are more related to political or administrative in-fighting, struggle for power, budget, or prerogatives than to differences in vision. Yet, it is also apparent that each line agency taken in isolation is not homogeneous. Some segments favor the status quo and oppose changes but others are open to reform and sometimes champion them.

Most bureaucracies or line agencies have difficulties in dealing with more deliberative or participatory approaches. They feel threatened by what they perceive as a loss of control, challenge to their legitimacy, or denial of their competence (Lachapelle et al. 2003, Wester and Warner 2002). The limits of the participatory rhetoric are also apparent in the fact that large-scale projects with massive potential impact on population and the environment and are still being devised in secrecy (e.g. the Thai “water grid” or the plans for “river interlinking” in India).

### **Research issues**

This review of the water sectors in the Mekong region has unearthed more questions than answers. Failed reforms have a cost not only in terms of time and money but also in terms of lost opportunity and distrust. Research should address both theoretical issues (e.g. what governs differences in policy responses to similar challenges) and practical ones, providing insight on what governs success and failure, and on implementation, while emphasizing the need for the contextualization of options (see Bery 1990). Because of the centrality of water in many activities and livelihoods, relevant research questions on water governance in the Mekong region span a large spectrum of issues. Those more specifically related to irrigation and water resources management, either on a general plane or in relation to a particular project, could include:

1. What are the most pressing issues regarding water and irrigation practices and policies, and in which locale are these issues more salient (establish spatial and thematic priorities; do not apply policies across the board)?
2. What are the measures that can, realistically, be successfully taken and enforced by the state, given its current power and the political-economic environment?
3. What changes can be gradually instilled by a bottom-up approach that creates a sense of ownership and generates incentives through clear benefits to the population concerned? At the same time, what are the costs and limitations of bottom-up approaches? Most importantly, what avenues are there for a multi-scalar approach, co-management and so on that accommodate both state and civil society interests and agendas?
4. What is the scope for a “professionalization” of line agencies? What incentives to managers and officers can be designed?

5. What are the intrinsic limitations of local stakeholders (knowledge limited to local scale, nonawareness of scalar interactions, varied cohesiveness, etc.) and can leadership and accountability be fostered?
6. What can we learn from the ongoing implementation of policies on the ground? What scope is there to enhance social learning, build trust and favor endogenous processes?
7. What is the underlying structure of power and interests, within the bureaucracy, political parties and other stakeholders, and what bearing does this have on the options available and possible outcomes? How can this be rebalanced? And what is the nature of bureaucratic competition within and between state structures?
8. Genesis of reform and ideas: what type of knowledge and legitimacy are used, to what degree can experiences elsewhere be recontextualized?
9. How can the support of external development banks and agencies be made more efficient and better blend support to both the government and the civil society? How to avoid ready-made “best practices” to crowd out more endogenous responses? How to reconcile the slow pace of sociopolitical processes and the short time frames of state or bank projects?
10. How pressing was the need for such reforms and how sound have the steps been taken? To what degree (and why) have national bureaucracies and ruling political parties shared a concern for reordering the water sector and added their willpower to the banks’ solicitations, and how does this vary from country to country? How can we get beyond the infamous “lack of political will” explanation?
11. What is the nature, and what are the implications of private sector involvement? How are community and private conceived in each case as alternatives to state roles?

In sum, water policy appears as a contested domain where varied interests (e.g. financial or political dividend of projects), values (e.g. local development or large projects), and strategies to access water conflict with each other. Two main lines of tension have been identified. The first is the conflict between water policies largely derived from international references, presumed internationally sanctioned practices and, on the other hand, the need for a more endogenous definition of priorities with emphasis placed on the specifics of each locale. The second line of tension is between the conventional top-down mode of action of state agencies and the general principle that puts the active participation of concerned populations as the point of departure for designing interventions that are more efficient, fairer and less-prone to externalities. Crafting or, rather,

enabling governance patterns for water management in the Mekong region will be a journey towards bridging these divides.

## Notes

1 China is mentioned but not dealt with in full detail because the diversity of situations warrants an extensive treatment beyond the ambition of this report.

2 In particular, it is meant to orient research of the water governance network of M-POWER.

3 The cost of the project fluctuates between 200 and 400 billion baht, depending on the official sources. The former Prime Minister Thaksin pledged to set aside 100 billion baht “for solving water problems in the Northeast” (*The Nation* April 24, 2004).

4 MOWRAM’s current financial resources only ensure (very low) staff salaries and 10 percent of needed operation and maintenance (o&m) funds (MOWRAM and ADB 2001).

5 Numbers given by Khamhung (2001) differ: “The irrigation area in dry season has rapidly increased from 29,000 ha in 1996 to 197,000 ha in 2000.” This increase has mostly been based on pump irrigation.

6 The introductory note of the Cambodian draft stresses that the document was “well conceived, in line with modern trends in water resources management” (KOC 2002).

7 The 2002 draft has been translated in Khmer and is to be submitted to the Council of Ministers, the Parliament, the Senate and the King before being translated back to English after its approval. This “black box” process ensures the appropriation of the law by national decision-makers, but sometimes also harbours some surprises, as was observed with the earlier fisheries and forest laws.

8 “This inventory shall indicate the location, quantity and quality of the resources during the year, each year,” A massive task that seems to ignore the current poor status of data/knowledge of the overall hydrology in the country.

9 But this principle has been a principle of Chinese irrigation (as well as Vietnam’s) for many years dating back to the 1960s.

10 As reported by Malano et al. (1999), the Vietnamese Water Law states general principles but provides no details on the modalities of their application. This will meet development banks’ conditionalities for further funding in the water sector, while possibly deferring concrete actions for an indeterminate period of time. China’s laws, too, let application modalities to be defined by ulterior decrees.

11 A similar static and bureaucratic view of river basin management appears graphically in *rwmi* (2003), where “right” policies, laws and administration are the three “pillars” supporting the temple: “sharing river basin water resources.”

12 See <http://www.adb.org/Water/NWSAB/default.asp>.

13 The compositions of the apex bodies of Vietnam (Anonymous 2004b) and Laos (Anonymous 2004a) do not show any inclusion of non-state participants. Arriens (2004) sees an initial role of apex bodies at “multi-stakeholder forum at the highest level” which does not accord with their composition, unless stakeholders are assumed to be limited to the state apparatus.

14 An official report in 2002 on ONWRC (Lai 2002) states that “there is a perception that ONWRC is small and poorly supported... and inactive.”

15 But Cambodia also has a Ministry of Environment (in addition to the Ministry of Agriculture and to the Ministry of Rural Development).

16 Southeast Asia Water Forum, Chiang Mai, December 2003, emphasis added.

17 Or sometimes utterly unrealistic: “Increasing water production two times in five years,” “Decreased conflict in the river basin in two years” (Tara et al. 2003).

18 “The ‘comprehensive plans’... shall refer to the overall arrangements, formulated according to the needs of economic and social development and the present situation of the development and utilization of water resources, for the development, utilization, preservation and protection of water resources, as well as for the prevention and control of water disasters” (CIECN 2004).

19 To a lesser degree in Myanmar because of its particular political situation.

20 There has been, for example, a flourishing literature on the conditions and possibility to transfer Australian experience to other regions of the world, notably to the Mekong River basin and Sri Lanka (Chenoweth 1999, Pigram 1999, 2001, Malano et al. 1999, Birch et al. 1999).

21 “Uncritical ‘copycat’ replication of successful institutional models—either by enthusiastic national governments or at behest of enthusiastic donors—is the sure formula for failure” (Shah et al. 2001).