# Mekong Water Resources Assistance Strategy: Justifying large water infrastructure with transboundary impacts

By Carl Middleton and Gary Lee



Claiming the Mekong's water resources hold considerable potential for development the World Bank and Asian Development Bank are promoting increased investment in large-scale water infrastructure through their Mekong Water Resources Assistance Strategy. Carl Middleton and Gary Lee examine the central tenets of the strategy and explore its wider implications for water resources development in the Mekong basin.\*

# Introduction

n a working paper released in June 2006, the World Bank and the Asian Development Bank (ADB) outlined their new Mekong Water Resources Assistance Strategy (MWRAS).\*\* The strategy is a major new collaboration between the Banks and the Mekong River

Commission. It promotes the construction of controversial water infrastructure projects in three sub-regions of the Mekong basin where transboundary impacts would occur that include dams, irrigation schemes, and water transfer projects (see box: Joining a controversy). The

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<sup>\*\*</sup> As of mid-2006, MWRAS is also being referred to as the MWARP (Mekong Water Resources Partnership), which is a programme of proposed activities considered as next steps following the MWRAS analysis.

MWRAS proposes to stimulate better transboundary management of the Mekong River and its tributaries, which will also result in the development of a regional strategy and programme for the Banks. The strategy claims that livelihood restoration programmes for affected communities could mitigate any negative impacts from the projects, suggesting that affected communities might even benefit from the new river flows leading to potential "win-win" situations.

The MWRAS claims that economic and other pressures on each of the Mekong countries means it is inevitable that large-scale water infrastructure projects will go ahead. The MWRAS does not question whether the infrastructure projects themselves are the most effective way to reduce poverty in the region or if they are sustainable. Instead it claims that development in the Mekong basin over the past decade has been too cautionary and has "tended to avoid any risk associated with development, at the expense of stifling investments." Rather than calling for the sustainable development of the Mekong basin, the MWRAS legitimises infrastructure plans by calling for "balanced development", in which trade-offs between economic benefits, social equity and ecological integrity must be made.

# The application of hydrological modelling to justify infrastructure development

A key justification put forward by the MWRAS for infrastructure development is the results of a report, commissioned by the World Bank in 2004, that employed a hydrological model to predict likely river flow changes arising from six development scenarios for the Mekong basin ranging from 'Low' to 'High'. The model, called the Decision Support Framework (DSF), was developed by the Mekong River Commission (MRC) under the Water Utilization Programme and is designed to simulate the hydrological flow in the Mekong River and its tributaries. The low development scenario describes a minimum level of development based on population growth up until 2020. The high development scenario includes extensive hydropower construction throughout the basin, together with a significant expansion in irrigated agriculture made possible through water transfers.

Founded on the report's analysis, the MWRAS asserts 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..." According to the MWRAS, the hydrological model shows that even under a high development scenario overall river flows remain comparable to as they are today. However, the hydrological model is capable only of simulating *water flow* in the river, and completely ignores the likely significant changes that will occur to the river's *ecology* as a result of changes in sediment flow, water quality, timing of the flood pulse, and the blockage of fish migrations that will result from dam and water diversion projects.



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The exceptional ecological productivity of the Mekong River and its floodplains is linked inextricably to the system's annual flood pulse. In the flood-pulse process, exchanges of water, nutrients and organisms occur between terrestrial and aquatic environments (plant matter from the land to the water and water to the dry land) according to an annual flood-drought cycle driven by the Mekong River's hydrology that seasonally inundate floodplains. Yet, this productivity is extremely vulnerable to human-induced changes, including the minimum and maximum water levels.

# Joining a controversy: The MWRAS target areas

he MWRAS identifies three sub-regions in the Mekong basin as target areas: the area shared by northeast Thailand and Laos, where large-scale trans-basin diversions are proposed; the Sesan, Srepok and Sekong river basins where the interests of Cambodia, Vietnam and Laos coincide under extensive hydropower development plans; and the Mekong Delta shared by Cambodia and Vietnam where flood, navigation, agriculture and wetlands associated projects are proposed. Although little detail is provided as to why these areas are targeted, MWRAS states the "three proposed packages" can "deliver multiple benefits" and are "broadly endorsable by all stakeholders, NGOs and civil society, thus mitigating controversy." However, existing and planned initiatives in the three target areas have been the subject of considerable controversy over the years, though the MWRAS reports makes little reference to these social histories. Ignoring these complexities, the MWRAS instead tries to scientifically rationalise the planning process, for example, by promoting IWRM and the results of the hydrological model.

### Thai-Lao joint water management and development

The MWRAS report proposes to support the transfer of water from Laos, where a supposed excess exists, to Thailand's dry northeast region. Citing the mutual interest of Thailand and Laos in developing joint water management arrangements, the initiative aims to address water shortages in Thailand, whilst providing economic benefits to Laos.

Over the years, successive Thai governments have promoted large-scale water infrastructure as a means of resolving "drought" and "poverty" in the country's northeast region or *Isan*. The "Green *Isan*" initiative in the 1980s, the Khong-Chi-Mun (KCM) irrigation scheme (see *Watershed* Vol. 6 No. 3) and, more recently, the national water grid, have all been geared towards expanding dry-season irrigation and increasing agricultural production.

With the construction of dams, irrigation schemes and diversions has come conflict over water and water-related infrastructure. Widespread environmental problems, including salinity, loss of fisheries, inundation of wetlands and agricultural lands, have led to significant social displacement and loss of livelihood security for local communities.

Strong local opposition and questionable benefits has meant that many of these schemes were never fully implemented, though various components continue to remerge under different guises. Only the first phase of KCM scheme has been completed whilst the current

status of the national water grid, components of which include diverting water from neighbouring countries, remains unclear.

Earlier attempts to promote water diversions from Laos also faced strong opposition from local communities, particularly by those affected by dams built as part of the KCM scheme. In 1998, Sanyu Consultants published a conceptual study supporting the diversion of water from Xe Bang Hiang River in Laos to the lower Chi basin in northeast Thailand. Sanyu had also approached Japan Bank for International Cooperation (JBIC) for funds to carry out a study on water resources development, including further examining the feasibility of water diversions from Laos. However, JBIC decided not to fund the study following a campaign by communities in northeast Thailand opposing the proposed water diversion.

Far from being an issue "broadly endorsable by all stakeholders, NGOs and civil society", the proposed Lao-Thai water diversions, like the previous projects aimed at "greening *Isan*", have and continue to be heavily contested by many local communities, NGOs, academics and even some government officials in Thailand. Despite these problems, planning continues in secrecy and there is little to suggest transboundary water diversions will be abandoned in favour of less costly and more environmentally sound options.

Of the transboundary water diversions proposed to date - Stung Nam River, Cambodia; Salween River, Burma; and Nam Ngum, Xe Bang Fai and Xe Bang Hiang rivers in Laos - it appears that transfer from Nam Ngum basin in Laos has been given priority. A "Master Plan for Nam Ngum Diversion" is currently being formulated by Thailand's Department of Water Resources and the MWRAS also commissioned a scoping study completed in 2006; neither study has been publicly released. The World Bank-organised workshop held in Khon Kaen in February 2007 to discuss the proposed diversion was largely a closed-door affair, indicating that the MWRAS continues to move ahead with little transparency and openness. In response, potentially affected communities, who had not been invited to the workshop, protested at the meeting venue demanding the cancellation of the Lao-Thai water diversion project.

### Sesan-Srepok-Sekong basins

The Sesan, Srepok and Sekong (3S) river basins shared by Vietnam, Laos and Cambodia contribute 17 per cent of Mekong River's annual flow. The Srepok and Sesan rivers begin in Vietnam's central highlands flowing westwards into Cambodia. The Sekong River flows southwards through Laos before passing into Cambodia. The most notable projects developed, under construction or planned in the region to date are hydropower schemes along the 3S rivers and their tributaries, which are primarily intended to provide electricity to Vietnam, and to a lesser extent Thailand.<sup>1</sup>

Although most of the planned dams would be built in Vietnam and Laos, riverine communities in downstream Cambodia are the most susceptible to impacts arising from hydropower development. The construction of just a few dams in the 3S region to date along the Sesan River have already had devastating impacts on the livelihoods of downstream communities in Cambodia. Since 1996, when a coffer dam burst during construction of Yali Falls causing a major flood downstream, 55,000 people from 16 ethnic groups living along and dependent on the Sesan River for their fishing and farming, have experienced erratic water fluctuations, worsened water quality, increased health problems, a major decline in fish populations and species, and loss of economic and livelihood security. Dam-induced flooding has resulted in at least 39 deaths.

The MWRAS report suggests that community-driven development and strengthening of integrated water resources management (IWRM) "can meaningfully complement existing or new "heavy infrastructure" investments such as hydropower." In pushing for an IWRM approach for the 3S, the ADB's recent technical assistance report does recognise, to some extent, the progressive degradation that will occur from uncoordinated development, singling out hydropower as of particular concern. However, it does not pay due attention to the social histories of the 3S region related to hydropower development, in particular the failure of existing projects and institutions to adequately address ongoing demands from affected communities. Local communities, with the support of NGOs, have been demanding the governments of Vietnam and Cambodia, to provide compensation for damages incurred, greater civil society participation in decision-making, and that no more dams are built without their consent.

At present, planning of the hydropower dams in the 3S is proceeding under a very poor development process. Environmental Impact Assessments, if conducted at all, mostly have not been released to the public. Rather than facilitating a participatory and comprehensive assessment of different development options in the 3S, the MWRAS appears to be geared more towards mitigating negative downstream impacts of hydropower development. The MWRAS justifies its involvement as providing "win-win" situations by re-packaging – and potentially subsidising – risky mitigation programmes as community development projects, and therefore also takes pressure off hydropower planners and operators.



### **Mekong Delta**

The MWRAS claims that to address issues in the Mekong Delta's "flood/navigation agriculture/wetland nexus" requires a thorough rethink of the development and management approaches to the delta. Although the MWRAS working paper offers few details regarding ways forward for the delta, it indicates that its approach will build and expand on the World Bank-supported Vietnam Delta Master Plan (1994) and promote cash crop diversification, such as seeking higher-value crops on Vietnam's side and intensifying rice cultivation in Cambodia's portion of the delta.

To date, the World Bank's main interventions in Vietnam's delta, through the 1994 Master Plan and the subsequent Mekong Delta Water Resources Project in 1999 (see *Watershed* Vol. 5 No. 2), have primarily been in the form of large-scale infrastructure to control floods and seawater intrusion, and support the intensification of agricultural production. Whilst these infrastructure interventions have contributed to economic growth, their emphasis on controlling and modifying the delta's hydrological regime has ignored, and often undermined, local strategies and approaches to living with the floods.

The local farmers and fishers of the delta have over generations adopted and adapted various strategies to cope with the environmental risks of salinity intrusion, soil acidity, and flooding, including integrated rice-fish and rice-prawn farms, and diversifying agricultural and livelihood activities. Yet the infrastructure interventions have not only centralised decision-making over the use and management of water, whereby local farmers' production must be in accordance with the water release and allocation schedules of the irrigation systems, but also exacerbated social and environmental problems. The construction of dams, dykes and water diversions has adversely impacted the delta's ecosystem, resulting in a decline in wild capture fisheries, soil productivity, increased pollution from agro-chemicals, and also exacerbated inequality as the poorer communities have often been disproportionately affected.

<sup>1</sup> On the Sesan River two dams, the Yali Falls and Sesan 3 are fully operational, the Sesan 3A began partial operation in November 2006, and another two dams are under construction. On the Srepok River, five hydropower dams are currently under construction. In the Sekong basin at least nine hydropower schemes are planned (see report this issue).

Using measurements from only a few key points on the Mekong River, the DSF hydrological model study predicts that whilst the dry season flows will notably increase as a result of infrastructure development, wet season flows will change only a little. The MWRAS claims that therefore the overall *shape* of the hydrograph is preserved. This is misleading, however, because it is actually the *range of flows* during the wet *and* dry season that maintains the



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Mekong's productive flood-pulse ecosystem and not just the magnitude of flood in the wet season alone. Furthermore, the timing, duration, height, extent, continuity of flooding, number of peaks, the speed at which the water floods the land, water quality, and sediment load are all critical characteristics of the flood pulse. The DSF model is unable to simulate even basic characteristics, such as water quality indicators and river sediment loads that are necessary to link hydrology to ecology and therefore evaluate the consequences of altering characteristics of the flood pulse.

In addition, by examining the hydrograph of the Mekong River from a macroscopic perspective important local hydrological changes are ignored by the MWRAS, as are the likely negative impacts. There are numerous exam-

ples in the Mekong basin and elsewhere, where the changes in the local flow regime following the construction and operation of large water infrastructure has resulted in massive and rapid changes in river flow, destruction of fisheries, riverbank erosion, and water quality problems that have severely affected riparian communities' livelihoods.

Accurate hydrological modelling is one of the cornerstones of river-basin planning. As such, the 2004 World Bank development scenarios report does provide a valuable starting point for discussion on the potential impact of infrastructure on the Mekong River system. Yet as Ian Campbell, the ex-director of the MRC's Environment Programme points out, "Modelling has an important, but overrated, role in integrated management... What are the ecological consequences of those hydrological changes and, more importantly, what are the livelihood consequences? These are the key questions which cannot be answered using modelling..."

The MWRAS misleadingly argues that the DSF hydrological model results prove that the Mekong River can accommodate further infrastructure development. Yet the model's results are narrowly hydrological and do not account for ecological or socio-economic impacts. Hydrological modelling exercises should be used to inform a broader participatory decision-making process that evaluates wider social, environmental, economic and cultural issues; in themselves they are not able to provide justification for infrastructure development.

# Facilitating investment: A new role for the Mekong River Commission

Over the past decade, the MRC has developed a considerable knowledge base on the Mekong basin and the organisation's role has widely been perceived as a basin *management* organisation. At the same time, the MRC has been reluctant to engage in controversial river development issues, and for their part the Banks have also avoided actively engaging with the MRC over their more contentious projects, such as the recently approved Nam Theun 2 hydropower scheme in Laos. Despite this history, under the MWRAS the World Bank and the ADB will embark on a major new collaboration with the MRC.

A significant portion of the MWRAS analysis, however, highlights shortcomings of the MRC system and calls for its reform. According to the MWRAS, "regional cooperation through MRC is at a crossroads", and that in order to be more responsive to member countries' demands the MRC should "give more attention to the development side of its mandate than in the past." The MWRAS encourages reorienting the MRC's role to a basin development organisation with closer collaboration between the Banks, the MRC and the four member states to develop new infrastructure projects. This reorientation and stronger collaboration is reflected to a degree in the MRC Strategic Plan for 2006-2010, which was prepared alongside MWRAS, and by the fact that representatives from the World Bank and ADB had their status elevated to participants rather than observers at the Council meeting in December 2006.

However, there is not unanimous support in reorienting the MRC's role to a more development-focused agenda. Many questions are being raised by donors and civil society alike over the future role of the MRC (see report this issue). Given that numerous actors, including the Banks, are already heavily promoting infrastructure-oriented development in the basin, some MRC donors and civil society groups argue that the MRC should work to emphasise the joint management and conservation of the river basin. This would require strengthening the capacity of the MRC and the National Mekong Committees towards embracing local participation and diverse perspectives, rather than actively promoting economic development agendas as apparently envisaged under the MWRAS.

# The need for meaningful participation of all stakeholders

The MWRAS analysis claims that competition between water users is unavoidable and trade-offs will have to be made between economic, social and environmental uses of the Mekong River. The critical issue, however, lies not in the fact that difficult decisions must be taken – which are inevitable in any development process – but in the way in which decisions are taken. Equitable decision-making requires that all stakeholders affected by a decision

are meaningfully involved in – and are able to influence – the decision-making process.

Contrary to the Banks' claims that MWRAS is based "heavily on stakeholder consultations", the preparation of MWRAS, to date, has been a Banks-led process developed almost exclusively in consultation with the Mekong governments, who the Banks consider to be the main



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stakeholders. Of the 14 official MWRAS consultations and strategising workshops held throughout 2004 and 2005 there was only one civil society workshop, held in December 2004 in Vientiane. Laos.

Discussions at the 2004 civil society workshop resulted in a number of recommendations for MWRAS, including: broadening the scope of the hydrological modelling to simulate social and environmental parameters, such as sedimentation, salinity, and fisheries; refining the analysis to investigate local impacts that may arise from infrastructure projects; and the continuation of dialogue through regular consultations. Yet, despite the opportunity to incorporate more in-depth and holistic analysis, as well as continuing dialogue to improve communication and build trust with civil society, the World Bank largely ignored the

# Integrated Water Resources Management (IWRM): Concept and practice

According to the most widely cited definition, developed by the Global Water Partnership, "IWRM is a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems."

IWRM recognises the need to go beyond top-down, supply-led, technology-oriented and sector-driven water management and employ a more "integrated" approach to managing natural water systems. This refers to both physical elements of river basins (i.e. surface/groundwater, upstream/downstream considerations) as well as the management of human systems that make use of the water, such as policy coordination between water sectors (agriculture, industry, domestic, etc.) and the need for participation of stakeholders. According to IWRM best practice, the most appropriate scale at which to manage water resources is the sub-basin or tributary level through the establishment of decentralised, participatory decision-making arrangements, namely River Basin Organisations (RBOs).

While IWRM is an appealing concept, whether its ambitious principles are applicable in practice has been increasingly questioned. The definition of IWRM itself is formed of inconcise phrases such as "economic and social welfare" and "sustainability" that have limited value in practice because they do not offer concrete pointers to guide management decisions. On-the-ground, commonly found inter-ministerial conflicts of interest often act as barriers to cross-sectoral management of water, as does the limited capacity and awareness amongst ministries and decision-makers to implement IWRM principles. In international river basins, such as the Mekong, issues of national interest will exacerbate this complexity still further.

Despite IWRM's recent popularity there is little evidence that it has been successfully applied to date. As Asit Biswas, an internationally renowned water expert notes, "in the real world, the concept [of IWRM] will be exceedingly difficult to be made operational."

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civil society recommendations, and has not organised any follow-up civil society consultations. Rather, in the June 2006 working paper the MWRAS misrepresents views expressed during the workshop by claiming that civil society "supported the MWRAS initiative".

Furthermore, these consultations did not extend to representatives of communities likely to be affected. Whilst there is value in consulting NGOs who may work in the target areas or hold expertise on associated issues, the views of these organisations cannot be taken to directly represent the interests of affected communities. Local com-

munities, who are the existing users of the rivers' resources and who arguably exercise a customary right over access, have a right to be participants at the negotiation table. Although the MWRAS acknowledges the role of affected communities, it appears to largely define their roles in the context of community development and mitigation programmes. In other words, the MWRAS seems to put forward a two-tier system in which local communities are to be consulted on addressing the negative impacts resulting from large infrastructure projects, but not on the overarching decision as to whether the infrastructure

projects themselves should be developed.

The recommendations of the World Commission on Dams (WCD) are very clear on the need for informed participation by all stakeholders, stating that "the most unsatisfactory social outcomes of past dam projects are linked to cases where affected people played no role in the planning process..." The WCD recommends that all potential risk-bearers should have a voice in decisions that affect their lives. Overall, the recommendations of the WCD provide a multi-stakeholder, participatory, process-oriented framework for water- and energy-sector planning, from the initial planning stage right the way through to post-construction monitoring.

Both the World Bank and the ADB claim that their existing policies are largely in-line with the recommendations of the WCD. Yet, by identifying the governments as the Mekong basin's main stakeholders, the Banks appear more intent on legitimising existing infrastructure plans than on instigating a proper multi-stakeholder decision-making process.

# Can the MWRAS implement IWRM?

Throughout the 1990s the concept of Integrated Water Resources Management (IWRM) has risen to become the predominant water-sector development paradigm promoted by almost all major international development institutions (see box: IWRM: Concept and practice). The MWRAS argues that by applying the principles of IWRM and by investing in community-based programmes the environmental and social impacts of large infrastructure projects can be mitigated.

It is widely recognised, however, that there is only limited experience of implementing IWRM in the Mekong Region. To strengthen the framework for IWRM, the MWRAS proposes to support institutional capacity building, particularly through River Basin Organisations (RBOs), the National Mekong Committees and the MRC.

Yet the challenge remains daunting. Infrastructure development to date in the Mekong River Basin has generally been driven by national interests rather than integrated planning and transboundary cooperation considerations, as exemplified by the case of Yali Falls dam in Vietnam that has severely impacted communities downstream in Cam-

bodia (see box: Joining a controversy). It remains debatable whether the planned large infrastructure would be operated in such a way that downstream impacts are minimised, as required by IWRM and as proposed by the MWRAS. Operating infrastructure under sub-optimal conditions will, of course, result in lower profits. Hydropower



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schemes, for example, are suitable for peak power generation, which is the most valuable form of electricity. Operating under base power generation conditions, which may result in reduced downstream impacts, incurs a significant economic forfeit. In some developed countries licensing agreements to define operating conditions exist, although at present in the Mekong Region transboundary licensing arrangements are wholly undeveloped.

The MWRAS' promotion of IWRM makes several other

assumptions that entail major risks. It is not certain, for example, that the Mekong governments have a shared understanding and are committed to the principles of IWRM, including the principle of meaningful participation. There is also a high risk that national interests will take precedence over transboundary cooperation. Finally, wider stakeholder endorsement also cannot be assumed and must be fostered over time through genuine participation and cooperation. The MWRAS analysis does not include an honest evaluation of the likelihood of success of IWRM, or the costs were it to fail.

# Nurturing River Basin Organisations

In theory, RBOs are a progressive co-management arrangement enabling local water users and authorities to make management decisions regarding river basins. Yet, RBOs have proven difficult to establish in the Mekong Region to date. Even in Thailand, where the concept is most advanced, success on the ground has been limited. RBOs have been established in some form in each of Thailand's 25 river basins promoted through Thailand's Seventh National Plan (1992-1996). The RBOs are charged with preparing water management plans and developing criteria for equitable and sustainable water allocation. Yet the RBOs still lack formal recognition and exist more as consultative forums rather than empowered decision-making bodies.

Vietnam has established three RBOs to date, including in the Srepok sub-basin. However, the RBOs are conceived mainly as coordinating bodies between government ministries and line agencies to ensure a flow of information that allow decisions to be taken centrally. There is weak local stakeholder buy-in including amongst the local authorities themselves.

In Cambodia and Laos RBO remain at the conceptual stage. In Cambodia, the MWRAS working paper highlights the Tonle Sap Initiative and its steps towards establishing the Tonle Sap Basin Management Organisation. Although this organisation remains at an early stage of development, it has so far been developed in a top-down and bureaucratic manner, and faces numerous challenges. In Laos, under the ADB's "Nam Ngum River Basin Development (Sector) Project" (2002) attempts are also being made to establish a RBO.

Considering the current political, cultural, and social context in the Mekong Region, it is questionable whether conditions are conducive for the establishment of meaningful RBOs. Whilst correctly identifying the need for capacity building, the MWRAS turns a blind eye to more complex issues that will require addressing, including: barriers to meaningful local participation and decentralisation of power; vested interests and competition within and between ministries; and regional politics. Therefore, whilst RBOs should certainly be promoted it is overly-optimistic for the MWRAS to assume that they will be successfully implemented any time soon.

# Risky livelihood improvement programmes

The MWRAS proposes that mitigating impacts from large-infrastructure is simply a question of organising affected communities to adapt to new river conditions, which they will benefit from through adopting new livelihood strategies and gain ownership of through RBOs. Yet promoting an approach that would see large-scale infrastructure developed parallel to community-development programmes that mitigate impacts entails significant risk. Whilst there is sufficient experience in the region to ensure that infrastructure construction proceeds roughly to schedule, success with community-based programmes remains generally limited. Failure of community-based programmes would result in affected communities being unable to adapt to the new environmental circumstances with potentially catastrophic results.

As an example, the MWRAS working paper refers favourably to the experience gained from the Nam Theun 2 hydropower project in Laos, yet both official reports and civil society investigations identify that community-based programmes are lagging behind the infrastructure work. Other livelihoods restoration programmes in the region to date, such as at the ADB-financed Theun-Hinboun hydropower project in Laos, have also only seen limited success.

# Conclusion

The target areas identified by MWRAS are in need of support, yet investment in large water infrastructure is not necessarily the most economic, equitable or sustainable solution. The MWRAS analysis, however, appears to be more concerned with justifying the development of largescale water infrastructure than in offering innovative solutions that contribute towards equitable and sustainable water resource use and poverty alleviation. Arguably, what is actually needed is a participatory comprehensive options assessment for each of the target areas, including a "no large infrastructure option", capable of encapsulating the true value of the multiple services that the Mekong's water resources fulfil to local users, the state, and the region.

To date, consultation with civil society has been limited. If the MWRAS is committed to promoting the principles of IWRM then ensuring meaningful multi-stakeholder participation must be a priority, which for the ADB and World Bank is also a matter of policy. The MWRAS must not assume the main stakeholder of the Mekong River to be only the national governments as it does presently. Confining the role of affected communities to recipients of mitigation measures under community-based programmes does not constitute participation. Past experiences with such programmes provide little assurance that they will succeed in restoring, let alone improving, the lives and livelihoods of communities affected by large-scale infrastructure.

The MWRAS aspires to improve transboundary cooperation on the shared water resources of the Mekong River, an urgent and necessary objective. In order to achieve this goal it proposes the application of IWRM, with a focus on three target areas. Whilst on the surface IWRM appears an attractive set of principles by which to manage water resources its effective implementation remains unproven, especially on international rivers.

Of concern, however, to guide IWRM planning the MWRAS working paper calls for the "balanced development" of the Mekong basin in which trade-off choices between economic, social and environmental values must be made, and under which investment should be less precautionary. Yet this aggressive version of IWRM put forward by the MWRAS is not consistent with more widely held views on IWRM that aspire to "economic efficiency in water use; equity; and environmental and ecological sustainability." Therefore, there is a very real risk that, under MWRAS, a distorted form of IWRM could be adopted that would justify high-risk large water infrastructure projects resulting in development that is neither sustainable nor equitable.

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