Natural Resource Management in the Mekong River Basin: Perspectives for Australian Development Cooperation March 1996

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Natural Resource Management in the Mekong River Basin:
Perspectives for Australian Development Cooperation
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EXECUTIVE SUMMARY
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Preamble

1. Despite a longstanding interest in the Mekong Basin's resources, rapid economic development in Southeast Asia, anda framework for cooperation in river basin management that goes back nearly 40 years, the Basin is often seen as underdeveloped in terms of its potential. Past constraints on resource development have included political divisions and limited access to investment capital. These constraints are now disappearing. Recent political rapprochement and rapid economic growth have fostered development and exploitation of the regional resource base.

2. While the potential economic returns to an intensified level of resource exploitation are great, the social, economic and environmental risks are also very high. Moreover, the benefits and costs of river basin development are likely to be spread quite unevenly, for several reasons:

3. Unequal levels of development in Mekong Basin countries

4. Unequal social structures within Mekong Basin countries.

5. Social, spatial, temporal and environmental externalities intrinsic to river basin resource development

6. Development that puts economic growth before equity and sustainability

7. Natural resource management (NRM) initiatives need to deal with, and not exacerbate, the pressures on the Basin's resource base. Development assistance in the area of environment and resource management must work on the premise of sustainable and equitable development. This requires an understanding of resource use, competition, conflict and approaches to cooperation at different levels within the Basin. It also necessitates confronting different perspectives on resource management.

Development assistance and resource management in the Mekong Basin

8. Planning a regional program for aid delivery in support of enhanced NRM requires consideration of some key issues and principles. It also requires attention to aspects of resource management in which Australia is best equipped to assist, and to specific needs at various levels in the within the Basin.

Key issues and principles

9. Development assistance in support of environmentally sustainable development in the Mekong Basin presents two major challenges for aid delivery. First, programs and projects can assist in environmental management, rehabilitation, planning and promotion of sustainable use (eg protected area management). Second, environmental implications of other projects and programs need full consideration and consultation in the planning process. The wide range of resource users in the Mekong Basin necessitates a sensitive stakeholder approach to project formulation and design.

10. Each country in the Mekong Basin has its own set of economic, political and environmental objectives. There may be some conflict in such objectives within as well as between countries. Several areas of development assistance that helps reconcile different country interests and competing agendas within countries. Assistance in **macro-economic planning** for sustainable development is a key requirement for Cambodia and Lao PDR in particular. **Bilateral resource management** issues may be brokered by AusAID, for example cross-boundary fisheries conservation or improved sharing of information between Mekong River Commission (MRC) and non-MRC members. **Conflict resolution** procedures can be further developed within the MRC. **Areas of synergy** can be fostered, for example through protected areas across national boundaries. **Appraisals procedures** by AusAID and bilateral donors can be enhanced to take into account the regional resource and environmental implications of bilateral interventions; this might mean establishment of a **bilateral donors' forum** in the field of NRM.

11. Each resource sector in the Basin has particular management imperatives, but an integrated approach also requires attention to **cross-sectoral issues**. The main sectors in which resource management needs consideration are, hydropower, agriculture and irrigation, forestry, fisheries, biodiversity conservation, transport, public health and water supply. Aid delivery needs to take

account of the impacts on one sector of development in another and to foster integrated rather than compartmentalised approaches to resource management. At the regional level, this requires initiatives through the Mekong Secretariat and through other channels that foster links between departments with common sectoral interests in the riparian states. It is important to recognise the differences in priority given to different resource sectors and hence the uneven clout of different ministries and departments.

12. Within the region and within each country, different and sometimes **competing socio-political interests** in resource use and management underly potential conflicts and damaging resource competition. Development assistance initiatives must be careful not to intensify or exacerbate competition over the resource base. Cooperative approaches and conflict resolution should be a pro-active component of the aid program. NGOs have much local experience and awareness of the local complexities of resource conflict, and AusAID should draw on this. AusAID should also consider means to influence Australian policy with regard to our commercial involvement in resource development, given that Australian companies are involved in some of the most controversial projects in the region.

13. NRM occurs at **different scales**. A regional program will be concerned primarily with issues that affect more than one country. It is important that this not be confused with attention mainly to mega-project development. Many generic resource management issues are manifest across the region at a local level, and the synergy and learning of a regional approach is of potential value here. In a similar vein, a regional program needs to be wary of reliance on aggregated data. Eco-system- and culturally-specific resource management exigencies require attention to local detail. There is considerable potential for multi-scale project development, notably at the level of the intermediate watershed. Pilot or experimental project approaches are also appropriate with a view to regional extension. Support for regional networks of more local resource managers than currently provided for under the MRC is an area of potential.

14. **Gender impact** should be part of all appraisals at regional as well as local and national level. This should include gender components of projects that are not specifically targeted as WID, for example in land titling. Existing institutions should be fostered, notably Women's Unions, with a view to maintaining their activities beyond the domestic household sphere.

15. The role of the MRC in the regional program needs careful consideration. China and Burma are excluded from MRC based initiatives. The MRC has an ambivalent role, with many seeing it as promoting controversial dams and water diversion. Other channels for regional action should be utilised where appropriate, and at the same time AusAID should use the period of transition at the MRC to foster more integrative and sensitive approaches to resource management that do not prioritise large scale development.

16. Development assistance needs to take into account the political changes affecting the region and the countries that constitute it. Regional geopolitical rapprochment may be tempered by tensions emerging from competition over the regional resource base. Within the region, forces for centralisation and decentralisation set new parameters for design of institutional means to support NRM. Aid provision needs to be wary of incentives that inadvertently promote unsustainable or poorly coordinated resource management, notably at the province level. Also on the political front, the role of Thailand needs careful consideration, with advantages and disadvantages in employing Thailand's experience as model and warning to other countries of the region.

17. Australia's capacity to respond is in part due to our own NRM experience in dealing with environmental issues similar to those affecting the Basin. These include salinity, acidity, deforestation, protected area and watershed management. Both technical and institutional expertise

need to be brought to bear. It is important to adapt experience to the specific ecological and cultural conditions of the Basin and its constituent localities.

Key areas for intervention and support

18. The **geographical focus** for AusAID's regional program should be key areas in which interventions affect, or are affected by, resource use and management in other parts of the region. These include the Mekong Delta, with a focus on poorer and more ecologically sensitive parts; highland areas where new resource pressures threaten existing production systems and the protective function of upper watersheds; and areas that have been subject to rapid deforestation and are in need of rehabilitation. Major regional initiatives with a geographic focus could involve cross-boundary protected area management around the three-country border of Lao PDR, Cambodia and Vietnam, and this should involve the diverse ethnic minorities of the region in a community-based management approach.

19. **Resource tenure** is an important area for development assistance. This should include extension of land titling based on AusAID's experience in Thailand, but also extend into the area of forest and water tenure. It is vital that tenure-based interventions pay close attention to issues of gender and equity. On the one hand, clarification of tenure rights and responsibilities becomes more urgent with intensification of resource use and market development. On the other, the scope for marginalisation and iniquitous control over resources also increases as tenure is formalised. Customary rights are an important backdrop to tenure interventions in remoter parts of the basin.

20. **Forest and biodiversity protection** are vital in the Basin. Despite the degraded nature of many parts of the region, the region still has global significance. The Lao-Vietnam border is particularly important in this respect, as are parts of Cambodia. A considerable amount of inventory work awaits support, and this requires a regional approach. Community based management is a pre-requisite to forest resource management. The same applies to watershed and catchment planning. **Participatory methodologies** developed through total catchment management and Australia's Landcare program, together with multi-jurisdictional management in the Murray-Darling Basin, should form the basis of Australian initiatives in the region, with appropriate adaptation to local institutional and cultural conditions.

21. **Rural water supply** requires interventions in key areas. The relationship between water supply, water quality and public health needs to be examined critically. Different levels of intervention are needed, depending on the local situation, including household, community or larger scale water resource mobilisation.

22. **Human resource development** (HRD) is the key priority in NRM oriented development assistance. HRD support includes capacity building in environmental assessment; environmental education outside the formal secondary curriculum; extension support in key areas such as integrated pest management; action-based learning systems based around pilot projects; regional training and study tours. The relative value of different interventions needs careful evaluation, particularly in the case of expensive study tours to Australia.

The Mekong Basin and its resources

23. Management of the Mekong Basin occurs within two incongruent sets of boundaries. The first set is political and results from division of the region into countries, provinces and districts. The second set is bio-physical. This incongruence bears both on socio-economic data, which tend to be collected and organised by artificial administrative units rather than by natural entities, and on resource management, which is similarly constrained by jurisdictional boundaries that divide

watersheds.

24. The six states of the Basin have historically been in conflict more than in harmony with one another. During the Cold War period, the Mekong River was an axis of division rather than unity. Recent events have seen easing of tensions and convergence of development orientation among the riparian states. Nevertheless, there are still areas of competition and incompatibility in the field of NRM.

25. The Mekong River is 4200 kilometres long. Its Basin covers 795,000 square kilometres. Annual discharge is 475 billion cubic meters. Due to the monsoonal climate, the difference between low flow and high flow of the river is about fifteen-fold, and this fact governs many water resource considerations in the basin. There are seven main bio-geographical zones in the Basin:

- Upper Mekong, mainly steep gorges in China *
- Northern Highlands, in Burma, northern Thailand and northern Lao PDR *
- Eastern Highlands, in southern Lao PDR and Vietnam's Central Highlands *
- Korat Plateau, the driest section mainly in northeastern Thailand *
- Southern Uplands, a small section of southern and western Cambodia *
- Lowlands, including most of Cambodia bar the Delta section *
- Delta, including southeastern Cambodia and southern Vietnam

26. The population of the Basin is unevenly distributed, with the highest densities - about 400 per square kilometre - in the delta. Many highland areas have very low population densities, but also low agricultural productive potential. The Basin is ethnically diverse, and there is historically a close association between ethnicity and resource use patterns.

27. The Basin is economically diverse. Average incomes in Thailand are about ten times those in most of Indochina. However, northeastern Thailand is that country's poorest region, while the Mekong Delta has above average incomes for Vietnam, and this greatly reduces actual income disparities within the Basin. As the former socialist economies move rapidly toward market-based development, there is both a convergence of economic development strategy and prospects for increased regional economic integration. Both place extra stresses on the resource base.

28. The institutional basis for NRM at a basin level was set with the establishment of the Mekong Committee in 1957. Political upheavals and military conflict limited the extent to which resources were developed within this framework, and Cambodia's withdrawal in 1975 and establishment of an interim Committee further slowed the pace of joint development. Establishment of the Mekong River Commission (MRC) in April 1995 followed the signing of an Agreement on Cooperation for the Sustainable Development of the Mekong River Basin by the original four lower riparian states. The MRC consists of a Council, a Joint Committee and a Secretariat. The latter in particular is very similar in structure to that exisiting under the Mekong Committee. A significant change from the Committee rules is that downstream countries no longer have an effective veto on upstream developments. Rules are structured around notification and consultation on projects that affect dry season and wet season water flows.

29. There are many recent and current regional initiatives other than the MRC of which AusAID should be aware. Better integrated bilateral assistance in the field of NRM is a high priority, particularly in programming that falls outside the MRC framework.

Perspectives on Basin resource management

30. Perspectives on NRM in the Mekong Basin vary by country, by sector and by socio-political actor. There is a tendency to dwell mainly on differentiated country perspectives in the framework of Mekong Basin cooperation, at the expense of other considerations. This is re-inforced by the MRC structure.

31. Country differences arise due to different levels of economic development, geographical position with respect to the river and its basin, and the relative significance of the Basin in each country.

32. For **Vietnam** the basin is of significance out of proportion to the 20 per cent of the country's territory that it covers. The Mekong Delta is Vietnam's rice bowl and source both of food security and export income. The Central Highlands are of economic and strategic importance, and have received large numbers of internal migrants in recent years. They are also the potential source of hydro-electric power. The Delta's importance to Vietnam and its vulnerability to upstream developments tends to define Vietnam as the country representing downstream interests, but it is in fact both an upstream and downstream country. Vietnam's relations with other riparian states are affected both by Basin issues and by other geopolitical factors.

33. **Cambodia** is also mainly a downstream country, and 86 per cent of the country's territory is in the Basin. Thus, most resource management and environmental issues in Cambodia are by definition Basin issues. Cambodia stands to be affected both by downstream and upstream developments. Significant flow alteration by upstream diversion and impoundment would affect the Delta, which extends into Cambodia. Flood regulation in the Vietnamese portion of the Delta could create backups that exacerbate flood problems in Cambodia. The Mekong's primary natural regulator, Tonle Sap, is located in Cambodia. Reversal of the Tonle Sap River during the flood is a fundamental element of the river's macro-ecology. Cambodia is also extremely vulnerable to any changes that affect mainstream and tributary fisheries.

34. With 85 per cent of its land draining into the Mekong, **Lao PDR** is another small country whose territory is largely contained within the Basin. Lao PDR is not as vulnerable to upstream flow regulation as the two downstream countries, but dependence of some 90 per cent of the population on terrestial and aquatic resources for subsistence livelihoods nevertheless indicates the vulnerability of Lao PDR to major disruptions. This includes developments in its own territory, notably hydropower development for export to Thailand. Mainstream and tributary fisheries are also highly significant for the Lao population.

35. Only 36 per cent of **Thailand**'s territory is in the Basin, but Thailand is nevertheless a significant player. In part this is due to potential use of Mekong water on its own territory, with two major diversion schemes planned that could affect downstream flows. In part it is also due to Thailand's "resource diplomacy" that has seen the country looking to regional neighbours for timber and energy. Thus, Thailand's advanced economic development status within the region and increasing dependence on its neighbours for natural resources shapes that country's perspectives on Basin development.

36. The two upstream countries, **Burma** and **China**, are somewhat more marginal in terms of the proportion of their territories in the Basin (3 and 2 per cent respectively) and also because they are not MRC members. Nevertheless, China in particular is a significant player as the country that contains half the length of the river and 16 per cent of its flow. China has unilaterally built the first mainstream dam and others are under construction or being planned. China has least to gain from Mekong Basin cooperation, both as the upstream country and as the dominant power in the region, while for Burma the Basin is quite marginal to its territory.

37. The **MRC** is charged with coordinating and accommodating these different perspectives as a basis for joint management and development of the Basin's resources. The role of the MRC is ambivalent, and it is often perceived as promoting large scale impoundment and diversion of the Mekong and its tributaries. A run-of-river plan is the latest in a series of large scale hydro-power developments for which studies have been supported by the MRC. China and Burma's non-membership hampers the role of the Commission.

38. Different **sectoral interests** provide many of the key resource management challenges for the Basin as a whole, and for individual countries. For example, reconciling the need for energy and foreign exchange in the case of hydropower sits uneasily with biodiversity conservation and the maintenance of fisheries. The latter provide the bulk of the Basin population's protein requirements and are thus a central issue to livelihood development and a major area of risk in disturbance of the Basin's delicate ecosystems. Forestry and local agricultural livelihoods come into conflict in many parts of the Basin, and deforestation is another key threat to the Basin's environmental integrity. There are also incompatibilities between vegetation clearance in upper watersheds, whether from forestry or shifting cultivation, and sustainability of hydro-power investments due to the problems of erosion and siltation. Integrated resource planning on a watershed basis is thus crucial to the wider process of NRM in the Basin.

39. Emerging conflict in the Basin arises with **resource competition between different socio-political actors.** Subsistence cultivators have quite different perspectives on what constitutes sustainable resource management than do ministries of energy or forestry. Business plays an increasingly important role in resource extraction, and some of the largest investments, including Australian players, would involve multi-sector resource management being financed and partly carried out by corporate actors. These new developments need to be accommodated in future approaches to resource managment in the region, which is made more complex by the range of actors involved. Stakeholder approaches to development provide an underlying framework for inclusiveness and participation, but these need to take account of the unequal political, social and economic power structures in and between the countries involved.

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