

Third report of the International Advisory Group
on the World Bank's handling of social and
environmental issues in the proposed
Nam Theun 2 hydropower project in Lao PDR.



6 April 2001

SUMMARY OF CONCLUSIONS AND MAIN RECOMMENDATIONS

- The timing of the visit was strategic: the project process is close to the big decisions.
- The people are impatient over the delays; so the IAG sent a message to the relevant World Bank Vice President advocating the setting and promulgation of a timetable for decision-making.
- The macro economic situation is transformed for the better: the GoL has made substantial progress in stabilising the economy.
- The World Bank's remaining apprehensions about the projects are largely being resolved:
 - The leakage of trained people is still a problem but there are ways for the GoL to reduce this;
 - Overall public expenditure and fund management are improving with the active help of international financial institutions including the Asian Development Bank;
 - Revenue usage issues involve trust and sovereignty: the IAG's view is that seeking some form of guarantee that project revenues will go into poverty alleviation (official GoL policy) is premature and that there are systems in place and means to monitor and influence allocative decisions sufficient to allay the World Bank's fears;
 - But the GoL would bolster confidence by publishing in full its budget documents including its use of ODA flows.
- The major remaining social impact issues relate to the people in the NBCA rather than to those to be resettled or downstream of the powerhouse. The priorities are:
 - Maintaining, upgrading and expanding the LIL project;
 - Setting up the (now legislated) Watershed Management and Protection Authority (WMPA) as soon as possible and initiating some activities on the ground;
 - Starting work on upgrading boat/track access to facilitate the delivery of livelihood, agriculture extension, health and education services to watershed villages.
- The revised Resettlement Action Plan (RAP), if faithfully and yet flexibly carried out provides a sound basis for successful resettlement and is usefully spelled out in the draft Concession Agreement (CA). The developer should look at World Commission on Dams (WCD) guidelines for performance contracts with families and communities
- Downstream of the power station there will be some negative impacts of the inter-basin transfer of Nam Theun waters, most notably on riverside

gardens and (probably) on fisheries. The draft CA spells out compensatory arrangements.

- There will also be substantial benefits in the potential for stimulating dry season rice and other production through irrigation.
- The major environmental issues and risks also relate largely to the NBCA:
 - The NBCA and its corridors are largely intact. They represent a global treasure. This is all highly encouraging;
 - Public education on nature conservation is nevertheless needed;
 - To counter cross-border hunting and wildlife trading joint patrolling with Lao military and villagers acting together is recommended;
 - While preparations should begin now with setting up of the WMPA, the application for World Heritage status for the NBCA and its corridors should probably not be initiated until an effective management regime is in place.
- Other major environmental issues and developments are:
 - The ban on illegal logging across the project area seems to be largely effective, with court action following a transgression;
 - There is an over-capacity in wood-processing facilities in Laos, symbolised by the new plant outside Laksao;
 - Initiating baseline monitoring of fisheries in the project area is an overdue development and a sensible one but the risks to fisheries remain high especially in the downstream areas;
 - An update on predictions for greenhouse gas emissions for the project is called for;
 - The restructuring (and downsizing) of GoL agencies with responsibilities in the conservation and environment areas was most untimely and better co-ordination of the new agencies in support of the project is needed.

In conclusion, the IAG strongly supports the project going to appraisal in the very near future and, along with the overwhelming majority of the external agencies consulted over the years, strongly supports this impressive project proceeding. It meets the WCD guidelines and standards. It may be argued at this point that the risks of the project not proceeding outweigh the risks inherent in major infrastructure projects like this. Among the losers, if the project were not to go ahead would be the people, the forests and other biodiversity of the watershed, those to be resettled and those downstream and elsewhere, who would benefit for many years from the revenues being invested in poverty alleviation and, it has to be said, the reputation of the World Bank in many circles.

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1. INTRODUCTION

Only three of the five members of the International Advisory Group (IAG) set up to provide an independent assessment of the World Bank's handling of environmental and social issues in the proposed Nam Theun hydropower project in Lao PDR were available for the third visit¹ from 5 to 10 March 2001. Mr Kazuo Takahashi and Ms. Meg Taylor were unfortunately both ill, so the team on this occasion was made up of Mr Dick de Zeeuw, Mr David McDowell and Mr Emil Salim.²

The Group had six days in Laos, three working days in Vientiane consulting with the Deputy Prime Minister, the Minister of Handicrafts and Industry, senior Lao officials involved in the project, the representatives of international financial institutions and NGOs based in the country and the developers (NTEC). The extensive use of a helicopter enabled the team to have talks with Provincial and District officials in Laksao and Nakai³, to consult with the people in village meetings in the Nam Theun watershed (Ban Navang and Ban Makfeung) and the Nakai plateau (Ban Sop Phene and Ban Sailom, the latter being the designated pilot resettlement village) and to overfly community forests in the Nam Malou area, much of the watershed and plateau and the areas downstream of the proposed power station including the Gnommalath Plain⁴.

The timing of the visit was strategic. The long drawn out investigatory, planning and legislative phase of the proposed project is now drawing towards the close. The adverse macro-economic situation in Laos which had delayed progress for two years has taken a substantial turn for the better. The power purchase and concession agreement negotiations which must be concluded (with drafts on the table) before the World Bank takes a decision to proceed (or not) to formal appraisal are being actively pursued and should be concluded by April (concession) and May/June (power purchase). The Bank itself is engaged in a final risk assessment exercise and is moving to a pre-appraisal phase. In short, the project is close to decision time.

The IAG's mandate was the standing one – to assess the World Bank's handling of social and environmental issues in the project and the risks involved – but it was asked also to give its opinion on two key documents⁵, the revised Resettlement Action Plan and the just-completed Environmental Assessment and Management Plan (EAMP), February 2001. The Group was to comment on the prospects for the revenues accruing from the project being well managed and in particular for them being used, as planned, for poverty alleviation. The Government's commitment in relation to forest management, reducing illegal logging, conserving biodiversity and supporting existing World Bank field projects related to the NNT venture were to be gauged.

¹ The first visit was made in May - June 1997 and a second visit in November 1998.

² See appendix 2 – composition of IAG.

³ See appendix 5 – map of the project area.

⁴ See appendix 3 for the complete working programme of the IAG.

⁵ See appendix 4 for an overview of documents used.

These were substantial tasks to be achieved in what was a short visit. The IAG concentrated on what it saw as essentially new developments since its last visit and on providing the World Bank with a snapshot of the situation on the ground in Laos. It does not claim to have made comprehensive assessments of the latest technical documents relating to the project, some of which are still under negotiation.

The Group's immediate impression was that the level of impatience in Laos over the repeated delays in coming to decisions and in particular over the absence of a known schedule for decision-making was such that an early warning to the Bank was called for. A letter to the relevant Vice President (Mr Jemal-ud-din Kassum) was drafted accordingly and sent to him on March 10, the last day of the visit. A copy of the message is appended⁶. It argues for the setting and promulgation of a timetable for decision-making. Some preliminary views on the issues of revenue usage, public expenditure management, capacity building and technical assistance are incorporated in the letter.

In essence, the IAG strongly supports the project going to appraisal in the very near future and, on the basis of its four year association with one of the most comprehensive and pro-active processes ever engaged in by the World Bank, strongly supports the project proceeding. In our view the risks of not proceeding – for the Government and impoverished people of Laos, for the world-class forests and biodiversity of the country, for the reputation of the World Bank given the almost universal endorsement of the project by a series of highly qualified advisers and technical consultants⁷ and the high priority and commitment to the project by the Government, outweigh the social and environmental risks inherent in such projects. But this is to anticipate. Suffice it to say at this point that the GoL and the World Bank are to be congratulated on the progress thus far in setting up what may well come to be seen as a global model for such projects.

This report below addresses four broad subject areas: macro-economic considerations (section 2), social impact issues (section 3) environmental issues (section 4), global considerations (section 5) and conclusions (section 6). References to previous IAG recommendations are incorporated in the appropriate section rather than being listed separately.

⁶ See appendix 1

⁷ 5 Visits of POE (Panel of Experts), 3 visits of IAG, 2 visits of Dam Safety panel and extensive public consultation

2. MACRO-ECONOMIC CONSIDERATIONS

2.1 Economic performance developments

On the latest occasion the IAG visited Laos (November 1998) World Bank officials were very concerned over the emerging macro-economic situation faced by Laos consequent upon the so-called Asian financial crisis. The Bank was seeking assurances and further action on the policy and management levels to right the situation and was clearly disinclined to move much further on the NT2 project until there were improvements.

The situation is now transformed. As is well known, the GoL has met its ambitious expenditure targets – albeit at the cost of some damaging cuts on the social and environmental fronts - and has made what the IMF describes as substantial progress in stabilising the economy:

- The excessive liquidity has been mopped up;
- Inflation is down from a high of 167% to an annualised level to January 2001 of 10% with relatively realistic targets of 8% and 5 % for the next two years;
- The exchange rate has stabilised at around Kip 8,200 to the US \$1;
- The reserves of the Central Bank have steadily expanded;
- The real growth rate is annually 5% to 5.5%.

In short, the consensus is that the economic performance of the GoL, not least its fiscal discipline, has improved substantially. Representatives of the international financial institutions resident in Vientiane express “cautious optimism” about the future. Reservations relate to the continuing lack of transparency regarding the allocation of external resources (an issue currently being addressed), the pace at which the economy will be permitted to open up further, and continuing capacity problems in areas like Budget allocation processes, public expenditure management in general and Central Bank and Ministry of Finance staffing.

As the World Bank is aware, the international financial institutions represented in Vientiane, notably the Bank itself, the IMF and the Asian Development Bank, have established greatly improved relations with the GoL and are co-operating actively with their national counterparts in addressing basic development issues as well as economic and financial management and capacity problems. This is a most encouraging development. The IAG was impressed with the breadth and depth of this technical assistance, with the quality of the IFI representation in Vientiane and with the growing confidence between the GoL and the IFIs. The current Public Expenditure Review with IFI involvement can also be expected to produce upgraded processes and capacity in due course.

While capacity leakage remains a difficulty, the bank's apprehensions about overall public expenditure and fund management are being actively addressed. This is reassuring, though of course there remains a good deal to be done. Given that project revenues from NT2 (assuming it is approved)

do not come on stream for a further five to six years, it would seem that there is time for the capacity and competence building programmes in the central financial institutions to acquire greater strength before the pressures generated by NT2 revenue flows begin. The Bank should derive encouragement from this. It should also continue to invest in financial management upgrading programmes.

For its part, the IAG encourages the GoL to try to stem the constant leakage of trained manpower and attract well qualified recruits by upgrading its personnel management techniques and lifting public finance management salaries to a level where there is a greater degree of parity with the private sector and trained staff can concentrate on their responsibilities without needing supplementary income. Investment in staff of the central financial agencies pays dividends.

2.2 Revenue usage

The World Bank has a legitimate concern to ensure that the greater proportion of the revenues of the NT2 project flow, as is the declared intention of the Government, into poverty alleviation programmes. The Bank management has its own shareholders and monitors and has had some embarrassing experiences elsewhere in the world over the direction of revenues into unproductive channels. In an economy as small as that of Laos the expected project revenues would represent a considerable proportion of Government resources. The temptation to use them indiscriminately simply to cover the general Budget deficit, for example, will be high.

This is a sensitive area, as was brought out in the IAG's discussions with Ministers. Questions of trust and sovereignty arise. What is acceptable, indeed mandatory, in one country will be obtrusive if not offensive in another. Interestingly enough, two of the Bank's partners in Vientiane argue against it pressing for too explicit and too binding an assurance about revenue usage, noting that policy distortions can arise and effective fiscal management can be affected if a large proportion of Government resources are in some way "ear-marked", especially some years before they begin to flow. They point out that there is an active and ongoing debate in Laos about what poverty is and how to alleviate it most effectively. International financial institutions are fully involved in these strategic discussions. There is a high level of transparency in the debate and further transparency can be expected to evolve as trust grows.

The IAG started out with some trepidation by seeking ideas on a process, a mechanism, an institution or a programme which might help assure the Bank about project revenues going into poverty alleviation work. They tried out several ideas, ranging from ear-marking to establishing a subset of budget lines devoted to poverty alleviation, to setting up a poverty reduction endowment or fund of some sort, to creating a joint institution of some kind to monitor revenue usage. Neither the GoL side nor the international agencies to which we talked were particularly attracted to these ideas though there has apparently been some discussion in government circles of a poverty reduction fund idea and there are already precedents for international involvement provided for in monitoring several aspects of the project. Examples are:

- Annual "joint monitoring and control of wood exploitation activities in forest reserve area" between the GoL, NTEC and the World Bank with participation of two international experts from the POE and the IAG – Notice No. 0885/CPMO of the Prime Minister's office;
- Provisions in the recently signed Decree establishing the NNT Watershed Management and Protection Authority for representatives from donors or intergovernmental organisations to become members of the WMPA Board by invitation and for an independent monitoring agency and an independent auditor, both of "international standing", to monitor, audit and report on the activities of the Authority in the interests of "transparency and accountability";
- provision in the draft Concession Agreement for a Panel of Experts in Social and Environmental fields to review project impact mitigation and performance of CA social and environmental objectives.

There is an element of the chicken and egg situation here. The World Bank has indicated that it seeks assurances on revenue usage but it has put no specific proposal on the table. Similarly, the GoL might be prepared to consider putting on paper its policy on revenue use or even to discuss ideas on a Poverty Reduction Fund or some form of unobtrusive joint monitoring but it is not clear about what the Bank is seeking and has taken no initiative. There was earlier talk of a letter of development policy but the GoL is unsure what this means. In short, there is an impasse.

To be frank, the IAG's view is that it is premature for the World Bank to be seeking some form of programmatic or institutional assurance about project revenue usage beyond the broad policy statements already made at the highest level (and reaffirmed to us by the deputy prime minister and minister of finance). There are many avenues through which the Bank can monitor and even influence the GoL on allocative matters. The round table process, for example, is increasingly open – though still not open enough – and the dialogue is almost continuous. At the November 2000 Round Table meeting the government responded positively to suggestions that it expand its allocations to the social sectors. The Bank is a participant in the current public expenditure review exercise which will address inter alia financial management and allocative procedures in the context of poverty alleviation. The Bank is helping the GoL draw up an interim poverty reduction strategy paper leading to the proposed establishment of an IMF poverty reduction and growth facility. The Bank's international partners are closely involved in helping make the five year plan process more connected to social and economic programmes at provincial and district level. These are just some avenues through which the Bank can monitor and influence (though not direct) the GoL's allocative policies. It seems likely that in the years ahead an even closer relationship will develop between the government and the IFIs. In the IAG's view, all this provides the context for developing the confidence about the government's implementation of its declared policy on using revenues for poverty alleviation which the Bank is seeking. Furthermore, the Bank or other external consultants will, as noted above, be involved in monitoring or executing many aspects of the poverty alleviation programmes of the NT2 project itself. We are not convinced that a more formal process or mechanism is called for at this time although there may be a case for a suitably drafted letter of development policy, in which

case the GoL would need some guidance on the usual content of such a document in order to prepare it.

The area in which the government could quickly help allay apprehensions is in publishing in full its budget documents including its use of ODA flows. That is an action the IAG recommends that the GoL undertake in the very near future. It is unusual for such flows not to be identified publicly.

3. SOCIAL IMPACT ISSUES

3.1 General observations

The reality the IAG faced in its visits to four villages, two in the watershed, two in the plateau and in its discussions with village representatives in Nakai is that measures imposed as a precondition for project planning to proceed have had the unintended (and hopefully short-term) effect of impacting adversely on the economic situation of the villagers. The level of poverty encountered appears to be even more abject than it was when the IAG first visited the area four years ago. This is as true of the villages where the Bank-funded Upland Development and Conservation Project (LIL) is being implemented as in other villages since the LIL project has been slow to get under way and has, in the IAG's view, made no significant impact as yet.

Destructive of habitat and species though they were, the traditional hunting and cultivation practices of the people both in the watershed and in the plateau area did provide a more or less adequate living at the subsistence level. Hunting provided protein, forest food gathering supplemented the staple crops and slash-and-burn cultivation usually provided a reasonable level of productivity from a succession of soil plots. In those areas where wildlife hunters and traders had penetrated and in areas where logging was either permitted or conducted illegally, the villagers often benefitted directly or indirectly in cash terms from such activities.

For sound project-related reasons such activities, with the possible exception of forest food gathering, are now frowned upon if not explicitly prohibited. Slash-and-burn cultivation is still going on, a smoke haze at this stage of the dry season hanging over much of the lower areas of the NBCA, the plateau and even the plains along the Mekong, but its reduction and eventual elimination is official policy and the plateau villagers are having to travel further each year from their homes to find cultivatable areas. Similarly, the progressive clearance of forest and other vegetation from the plateau in anticipation of inundation has resulted in the diminution of areas for food and other NTFP gathering including house building materials. Although the IAG had no independent means of verifying this, it seems that the serious threat to biodiversity posed by commercial poachers from across the border remains (see POE's fifth report, January 2001, and further comment below) but the widespread collection of firearms from village hands has had the dual effect of conserving biodiversity around many villages (POE) but at the same time, of course, reducing their sustenance from hunting. There has apparently been some reversion to non-firearm methods of killing birds and animals.

In short, as already noted in the IAG's letter of 10 March 2001 to Vice President Jemal-ud-din Kassum⁸ the net effect of the project-related measures now in force in the project areas has been negative in economic terms. It is also true that the villagers, waiting for the project decisions, have felt unable to undertake other initiatives which might better their circumstances.

⁸ See appendix 1

3.1.1

The Upland Development and Conservation Project (LIL)

None of this has yet been addressed by the Upland Development and Conservation Project (LIL) in the three villages covered although poverty alleviation is an objective of the project. The IAG saw enough on the ground in two of the pilot LIL villages (Ban Navang and Ban Makfeung) to suggest that if the management, late delivery and counterpart payment problems are overcome the project may begin to make an impact. We were impressed by the enthusiasm of the managers on the spot and by their plans for livelihood diversification and farming practice improvement. They deserve better and more timely support for the Provincial level, which is where the delays on the funding side appear to be occurring. Counterpart funds have been approved but there are delays in releasing them to the District and Village levels.

The IAG notes that the World Bank Mission which visited Khammouane Province in December 2000 including one of the pilot villages, recorded that if implementation does not improve significantly within the next six months (to June 2001) the project will be "rated unsatisfactory". While recognising the factors which led to this recommendation the IAG expresses the hope that a further discontinuity in help to the pilot villages will not result. One of the sources of the scepticism towards visitors which the December Mission noted (Aide memoire, December 2000, p3) is the lack of continuity over the past five years in programmes of development and conservation assistance to the villages in the watershed. The history is well known - and the reasons for it - but it is clear that the stop-go-stop nature of Bank-funded activities in the area has been discouraging to the villagers. Though less outspoken than the people in the plateau area, they have seen restrictions imposed on their traditional practices without consistent action benefitting them by way of balance. They expressed impatience verging on anger about this. For their part, two of the plateau villages said that if resettlement as promised was not forthcoming they would go into the NBCA "because life is easier there". When asked why they saw it so, they said that in the uplands there was ready access to suitable slopes for slash-and-burn and to forest products for food, housing materials etc..

Though the GoL would presumably not permit this, the threat of a return to the watershed does put a new slant on resettlement options! It also emphasises the risks of alternative scenarios if the NT2 project does not proceed within its present framework.

In line with its recommendation to Vice President Kassum that the Bank return, now that the macro-economic situation has so substantially improved, to a more pro-active approach on technical assistance, capacity building and practical poverty reduction and conservation programmes the IAG suggests that the LIL programme be focussed on by both the Bank and the GoL and turned into an ongoing success story. We recommend that the GoL free up its systems and follow the logic of its decentralisation policy by delegating further financial powers on the LIL project to the District and, where appropriate, to the village level itself, while retaining overall monitoring and audit functions. The history of decentralisation endeavours elsewhere in the developing world is that the only way to decentralise is to decentralise i.e. there are risks involved but devolving responsibility down the chain as far as possible is the surest way to achieve practical progress in rural development projects like this. Halfway or half-hearted

decentralisation does not work. (We will revert to technical assistance and capacity building further on).

3.2 Watershed Developments: getting the system in place

The logical way to assess actual or potential impact developments since the IAG last reported in November 1998 is to address developments in the watershed in the NBCA area and then proceed downstream (as it were) to the resettlement area (the southern portion of the proposed reservoir and its southern embankment), and finally to the areas below the dam on the Nam Theun and below the power station on the Xe bang Fai.

3.2.1 Developments of legislative frameworks

As is broadly true of most other sectors of the project, the planning and legislative work has largely been accomplished in regard to the definition of the NBCA area and associated corridors and the authorisation of the management institutions required has been given. So far, so good. But, as elsewhere, further progress is at present held up because of the uncertainties about whether or how soon the World Bank will approve involvement in the project. The IAG's view is that, without prejudice to the Bank's decision, further work is highly desirable in the meantime and can be justified both on social (poverty alleviation) and environmental (biodiversity conservation, for economic as well as scientific reasons) grounds.

Since 1998 there has been substantial progress on paper and some on the ground. The promulgation of two prime ministerial Decrees relating to the watershed marks a big step forward. First, on 29 December 2000, Decree No.193/PM formally established the extent and status of the various areas affected by the NT2 Project. The IAG had pressed for protection of the watershed and its extensions in 1998 and the IAG and POE representatives on the WB Logging Survey Mission of May 2000 had recommended to the Prime Minister that such legislative action be taken at an early date. The Decree is a comprehensive piece of work which largely follows the agreement in principle between the GoL and the World Bank of 1996 (Aide memoire dated 25 November 1996) and makes clear that not only the NNT National Biodiversity Conservation Area (NNT NBCA) but the wildlife corridors to the Phou Hin Poun and Phoun Hin Nam No NBCAs have full Conservation Area protection. This is an important development which enhances the global significance of the whole project in biodiversity conservation terms. The reservoir area (at full capacity) is recognised "for the purpose of electricity generation" and the resettlement area and associated forest area "for the people directly affected by the NT2 Project". This is all very satisfactory.

It might be noted at this point that the area left out of the Decree, while not strictly part of the NT2 watershed, has important biodiversity values also and was originally seen as a logical extension of the project area for protection purposes. The IAG recommended in 1998 that the so-called Northern Extension be included in the proposed World Heritage site application. There has now been a restructuring which places the Northern Extension in another Province (Bolikhamsay). At the same time the area has been accorded legal protection as a Provincial Protection Area. Like the POE in its most recent report, the IAG commends the Bolikhamsay

authorities for this action and supports the POE's proposal that the GoL seek international assistance for the Bolikhamxay authorities to develop an effective programme for conserving the biodiversity of this area. It is hoped that security considerations do not postpone such action, or further action by the Province, indefinitely since there are reports of logging in the area.

By way of the second Decree (signed on 26 February 2001, just before the IAG arrived), the Prime Minister gave authority for the setting up of the long-planned Nam Theun 2 Watershed Management and Protection Authority (WMPA) "for the purpose of the conservation and protection of the nature and considerable cultures" in the watershed area. It is an impressive piece of work. It sets out the status, purpose and objectives of the Authority and authorises the WMPA to have responsibility for "the management, development and protection" of the watershed area. The objectives are worth recording in full:

- Protection and rehabilitation of forest cover in the Nam Theun 2 Watershed Area to assure adequate water flows with low sedimentation to or away from the Nam Theun 2 Reservoir;
- Conservation, maintenance and promotion of biological diversity coupled with the development of a national park appropriate for tourism and scientific research;
- Building and strengthening capacity of the Authority and those stakeholders contributing to management and implementation of the Authority's activities;
- Facilitation of improved livelihoods for inhabitants of the Nam Theun 2 Watershed Area by focussing on poverty reduction through environmentally sustainable development;
- Prudent management and effective use of funds for the purpose of furthering the above objectives.

These are, in the view of the IAG, an adequate delineation of the objectives of the Authority and its Executive Secretariat as widely discussed over the past year or two. The objectives are reflected in the functions and powers given to the Authority. The latter are to prevail over local administrative authority "except in respect of national security and defence" which is a legitimate caveat. Although not spelled out further in the Decree the references in the preamble to the various ethnic populations "considered as indigenous peoples with traditional and cultural differentiation" and to the conservation and protection of "the... considerable cultures in the area" are reassuring, given the provisions of the WB's operational directives on the protection of indigenous peoples in project areas. It will be a matter of interest for the IAG to monitor these provisions, particularly in relation to the Vietic speakers, as the project evolves.

Two aspects of the Decree are of particular interest in the context of monitoring. These were mentioned earlier (provisions for outside representation on the WMPA's Board and for an independent monitoring agency and an independent auditor, both to be of international standing). There are additional monitoring provisions in the draft Concession

Agreement. This level of transparency and accountability is to be applauded in the IAG's view.

The Decree adds up, as already noted, to being an impressive management document. It should be welcomed.

At the same time, the IAG is concerned that the development should not stagnate at this point while the WB goes to appraisal and makes its final decisions. The intervening period should be used. The Decree notes that the activities of the Authority are to be funded by NTEC "as required by the Concession Agreement", together with other funds from governmental and other public and private sources. The draft Concession Agreement certainly provides for the payment by the development company of substantial funds for the preparatory and construction phases plus the earlier agreed US\$1 million for each year of the operating phase, adjustable upwards (only) according to CPI movements, the purpose being to fund the WMPA and activities undertaken under its wing.

The dilemma, as in other sectors, is that no-one appears to be responsible for any funding until the CA is signed. So the prospect seems to be that valuable weeks stretching into months which could be utilised to begin setting up, hopefully convening the Watershed Authority on a preliminary basis and even initiating some low level practical activities will be wasted unless the process is kick-started. The IAG recommends that the GoL ministry responsible for launching the WMPA (agriculture and forestry) be given ministerial authority immediately to initiate administrative action to get the Authority up and running if only on a provisional basis. This would involve minimal costs but would save a good deal of time further down the track when time will be of the essence, not least in terms of capacity development at all levels.

3.2.2

Environmental and Social Management Operational Plan

On the basis of the agreed Plan for the Environmental and Social Management of the Watershed and NBCA (ESMP), GoL has developed a much shorter operational plan (ESMOP) to serve as a prioritised and focussed work plan for carrying out the provisions of the full ESMP. An IAG member was able to take part in a public consultation on this document when it was in draft in May 2000 and was satisfied that by and large it was heading in the right direction though budget figures were not agreed between NTEC and the GoL at the time and some reservations were held by the IAG member regarding the access options mentioned (see below). Tracing these drafts through to the draft Concession Agreement it is clear that there is not the detail in the CA on implementing watershed plans that there is in relation to giving effect to the RAP. This is because the company's obligations are largely for mitigation and funding watershed activities rather than for the hands-on implementation they are involved in relation to the RAP.

The IAG visited only two watershed villages (Ban Navang and Ban Makfeung) on this occasion. It will confine itself to commenting on three social aspects only of the ESMOP: the development of alternative livelihoods, the provision of health and education services and the linked question of future access to the villages.

The all too brief contact this time around with the communities nevertheless served to bring home to the IAG again how impoverished and deprived the villagers in the project area are even by Third World standards. Most still have virtually no health services, there are only a handful of schools in the area, literacy is very low and there is no food security to speak of. These are some of the poorest of the poor, so if the Bank has a commitment to poverty alleviation, as it has, then this is the sort of area it should be working in. Developing alternative livelihoods here is a vital necessity not a routine exercise, particularly because as is argued elsewhere the poverty levels of the communities have, for project-related reasons, declined at this point rather than risen. The IAG greatly regrets, therefore, that its 1998 recommendation to the Bank that the impressive start made at that time in introducing new livelihood models be further developed without a break was not followed. This was to set aside much of the work accomplished by a group of experienced and dedicated advisers from the World Conservation Union (IUCN) and Ecolao and their partners in the pilot villages in designing and setting up programmes to wean the people away from their destructive practices and achieve better nutrition and a higher level of food security. Trust and credibility have suffered as a result. The lack of continuity has produced a degree of disillusionment in the villages. As contended above, this makes it doubly important that the LIL project, a partial successor to the earlier programmes, succeeds and indeed be expanded. The case for investing in this and the earlier programmes was and remains based on poverty and biodiversity conservation imperatives which are cogent and relevant to the Bank's priorities whether or not the NT2 project goes ahead. The IAG trusts that this important point has been taken on board by both the GoL and the World Bank.

One aspect of the livelihood work which struck the IAG this time was how wedded the villagers in both the watershed and the plateau are to rice production and preferably year-round rice availability. There is a longstanding practical problem here: neither of these habitats is particularly adaptable, even with new production techniques and more irrigation to the level of rice production the communities seek. Year-round rice supplies have not been available historically in these areas so some dampening down of expectations and the successful introduction of alternative staples and other crops (fruit, vegetables) is a necessary component of alternative livelihood programmes. Some of the research has already been done by earlier programmes and at the excellent NTEC demonstration farm at Theun Douane. At the same time, helping meet the demand for rice growing to the degree it makes sense should be pursued. The eventual availability of cash from the adoption of some of the new livelihood models for purchasing rice from high production areas like the Gnommalath Plain will help meet the demand although transport problems may inhibit the more remote villages from following this course.

Which raises directly the other sensitive social question, how to deliver not just rice but the needed health and education services to the villages in the watershed in particular. The IAG was told by the watershed villagers they consulted that their priorities, in order, were: in Ban Navang, rice, irrigation (rice again!), and a school teacher; in Ban Makfeung, padi (rice), access, food and the promised health worker; they already have two teachers. The question is how the necessary upgraded services can be delivered to the communities without compromising the forests and other unique biodiversity which surrounds them.

The IAG has consistently argued over the years for the introduction into the watershed of appropriate or intermediate technologies which are low impact the provision of micro/micro hydro devices (there is a low cost Chinese model available) to bring lights to the villages, the use of small weirs employing gravity feed mechanisms for paddy irrigation rather than large weirs or fuel – hungry pumps, and particularly the upgrading of access through greater use of water-borne transport (especially once the reservoir has filled) and the upgrading of tracks, but only to the point where they can take all terrain motor-cycles, the ubiquitous two-wheel Kubota tractors and trailer and/or buffalo carts. The IAG recommends firmly against the building of roads into the watershed.

The basis for this stand is that the global experience is that roads inevitably produce widespread wildlife harvesting as hunters and wildlife traders exploit the access opened up. The literature is replete with horrendous accounts of how roads have provided the access to wipe out whole species. And in most cases the loggers have in the end had their way and gained access to forest resources when roads exist. Hence the IAG's position.

The IAG is disconcerted to see that while the revised ESMOP appears to favour a water-based access option with some tracks it still has as an option a road-based system which would see all-weather roads put through to the middle of the watershed. It notes that Provincial authorities have started constructing a road which would follow the Nam Noy up as far as Ban Dong but have run into practical difficulties. The POE confirms that all the gullies on the five kilometers thus far bulldozed have already washed out which underlines how expensive the construction and maintenance of such a road would be.

The IAG reaffirms its opposition to roading in the watershed and on balance supports the recommendation of the POE that high priority instead be given to accelerating conservation and essential village development activities in the NBCA by surveying and constructing a two-wheel tractor access route into the Nam Noy and Nam Pheo tributary basins. Such a track would be hand made and hand maintained rather than bulldozed.

To conclude these comments, it will be for the WMPA eventually to pick up the pieces of the various programmes designed to introduce alternative livelihoods and integrate them into the ESMOP's activities. The IAG's view is that there is much of the earlier programmes pursued by IUCN and Ecolao advisers which merits further investment and even the use of such agencies again, oriented as they are also to the other objectives of the WMPA (watershed and biodiversity protection). In the interim the LIL project carries the hopes of the three pilot villages and deserves the full attention of both the WB and the GoL. The major objectives of the WMPA are intimately linked.

3.3

The plateau/reservoir area: the challenge of resettlement

Dam projects have a history of not dealing adequately with the resettlement of people displaced by the rising waters. The World Commission on Dams in its report launched in December 2000, with World Bank and IUCN sponsorship, chronicles the sorry history in great detail. Its broad conclusion is that social and environmental factors must rank equally with

economic and financial factors in assessing energy options and its specific conclusion on resettlement is that adversely affected people must be recognised as first among the beneficiaries of the project.

The IAG talked with the people of the two villages expected to be resettled – Ban Sop Phene and Ban Sailom. It also visited the proposed new site for Ban Sailom, the selected pilot resettlement village. The level of impatience was high in both villages, the articulate elder women not pulling their punches as they described how much harder life has been as they have waited year after year for resettlement and how exhausted they are with walking longer and longer distances to extract NTFPs as the remaining forest patches in the plateau area are gradually cleared for inundation.

The IAG's position is that the Resettlement Action Plan, if faithfully, flexibly and imaginatively implemented, provides a sound basis for achieving a successful resettlement. It regrets that the proposal in its 1998 report that resettling an entire village at an early date was not adopted but notes that NTEC, under constant pressure from the villagers, have progressed well down the track on the new Ban Sailom site with land use and fresh water supply plans drawn up and other preparatory work underway. For their part, the villagers have used the current dry season to begin burning off low value trees and scrub on the site and have visited the impressive demonstration farm at Theun Douane to acquire new cultivation techniques especially for vegetable gardens. With preparations having progressed this far it is difficult to imagine how the situation will be handled here and elsewhere if the project does not go ahead in its present form.

If the IAG has a comment on the RAP's housing plan it is that the company's intention to bring electricity to a connection outside each new house is admirable (and appropriate) but the plan not to install even one light inside the houses until the householders are prepared to meet the attendant costs seems short sighted. Surely the benefits in terms of goodwill of installing a couple of the long lasting low-consumption bulbs in each house would outweigh the negligible costs involved and studies elsewhere show that the social benefits of even such minimal lighting are considerable. The company should revisit that one.

The RAP provisions and obligations are currently being nailed down in excruciating detail in the draft Concession Agreement. The draft seen by the IAG includes:

- An undertaking by the company that the EAMP complies inter alia with World Bank guidelines
- Provision for a heavy payment by the company by way of an irrevocable letter of credit as security against meeting its obligations and the environmental and social objectives of the project
- An undertaking by the company to survey, detect, render safe, remove and destroy all UXOs located in specified project areas
- Provision for the setting up of a Panel of Experts (environmental and social) to provide independent review of and guidance on mitigation and remedying of project impacts, implementation of each party's obligations etc.

- An undertaking by the parties to “materially improve the standard of living of the resettled” and to this end the setting of household income targets in US\$ terms for resettled households four years after resettlement and nine years after resettlement
- The establishment of an independent monitoring agency “of international standing” to check regularly the adequacy of the various poverty alleviation and mitigatory activities
- 33 pages detailing responsibility for all activities under the RAP
- The outline of a grievance procedure etc.

This is an extremely comprehensive and binding document (if signed) and represents a huge step forward in spelling out the respective obligations of the parties, and especially the company, for achieving successful resettlement. The provisions for international monitoring and a POE are welcome.

There is one ambiguous area which the IAG, with its limited time in Vientiane, was not able to clarify. The draft CA provides for the parties “to materially improve the standard of living of the resettlers and improve incomes of resettler’s households on a village by village basis above the national rural poverty level”. It is not clear to us whether this means that the undertaking to improve standards of living and income is to each and every household or more generally to lift living standards and incomes across villages.

The matter is not academic. The IAG’s assessment is that the RAP (and even more so the draft CA) meets in virtually every respect the requirements for the resettled of the WCD report except one: it does not appear to envisage the signature by government and the developer of performance contracts with individual families and the community specifying entitlements, delivery schedule and recourse procedures (see WCD Report, Dams and Development, p243). For its part, the IAG can see a good deal of point to the exercise, reassuring, as it would be to the villagers. The fact that the great majority are illiterate is another argument in favour of a contract; how else can they come to know exactly what their entitlements are from the plethora of documents around and the meetings they have attended over the years? They will simply need an available reader to explain what their household contract says. The IAG recommends that the company gives early consideration to this measure, bringing them further into line with the WCD standards as it would.

In summary, the IAG has from the beginning had considerable confidence in the RAP and the consortium’s capacity. It will fulfill its resettlement obligations, sensitive work though this sort of social engineering (shift from cultivation to permanent cultivation with diversification is a ‘social revolution’) in a different culture may be. The IAG retains that confidence and shall be interested to monitor the validity of their judgement in the years ahead.

3.4

The downstream areas: pluses and minuses

It has always been true that one of the net negative impacts of the project would be the heavily reduced flow in the Nam Theun below the dam once impoundment occurs. There is no permanent settlement for 40 kilometers below the dam site but the aquatic resources of this stretch are harvested (probably over-harvested) by communities along the nearby Route 8. A decrease in fish stocks would also affect some species of wildlife like fish eagles and otters. There is some suggestion that the current nutrient-constrained river system would benefit from the low flow-related eutrophication which will follow impoundment and that greater numbers of species like fish, crustaceans and molluscs will be found up to an undetermined threshold after which declines will occur (EAMP, p.6-104). This seems to be contrary to experience elsewhere in South East Asia and will need monitoring and compensation if losses occur. It seems likely that one fish species at least which dwells in fast-flowing waters will not survive here.

The POE's view is that in the rocky gorge of the Nam Theun in this section the reduced flow of the river will have little or no effect on the riparian forest or other vegetation and the minimum flow to be maintained will also ensure that there is little effect on wildlife. A benefit of the dam will be that at flood time the reservoir will be able to retain the whole flood in three years out of five and will at least attenuate the flood in other years, thus relieving to a degree the effects of excessive flooding in the downstream areas all the way down to the Nam Kading and the Mekong itself.

The IAG has not focussed in detail in past reports on the social and economic impacts of the inter-basin diversion of the Nam Theun's flow. As now redesigned, the release of up to 285 cubic metres from the power station at the foot of the Nakai escarpment into a regulating reservoir weir and thus down a 27 km. long channel (partially concreted and upraised) down the Nam Phit to the Xe Bang Fai (XBF) will impact adversely in some important respects. It will also have the potential to water rice and other dry season crops and hence raise productivity virtually throughout the journey to the Mekong well south of Thakhek. The release of a minimum flow of 15 cubic metres per second down the Nam Khatang should benefit the villages along its banks in the dry season.

How do the pluses and minuses balance out? The IAG helicopter flew along the upper reaches of the Xe Bang Fai, above the project area, where it was apparent that water from pumping stations at the river's edge were transforming an otherwise arid dry season scene into a swathe of green rice fields. It is clear that in the richer alluvial soils of the downstream plain areas investment in irrigation pays off more in productivity terms (some say 8 to 10 times more) than in the thinner and poorer soils of the catchment and the plateau. The upraised section of the channel will enable largely gravity-fed irrigation in an area of the fertile Gnommalath Plain six or seven times greater than is now possible in the dry season. Similarly, dry season irrigation over the length of the XBF basin will be possible. There are plans for further irrigation works in the Gnommalath and Mahaxai areas and the Southern Provinces Electrification project will (with WB input) help develop rice growing through enabling pumping in the lower reaches of the XBF. In short, the potential for stimulating extensive dry season rice and other

production in the large basins and plains downstream of the power station has emerged as a big development plus in the overall NT2 equation.

What of the wet season? Project redesign has reduced the impact on flow constancy which it was initially feared the EGAT's insistence on the power station switching to a peaking regime would produce, while NTEC told the IAG that it has also agreed that the power station will stop generating and outflows when natural flooding in the XBF reaches 2,270 cubic metres per second, the level at which over-bank flooding would normally occur. That is a helpful move.

Nevertheless, it is clear that "natural" wet season flows of the XBF, with the NT2 diverted flow added, will have a serious effect on access to riverside gardens in the XBF basin. (See below for the effect on fisheries.) NTEC have recently agreed to pay increased compensation for the loss of garden access in the upper and lower reaches of the XBF⁹.

As for other downstream social impacts, the detailed entitlements to compensation for "loss of land or infrastructure or economic loss or disturbance" in the downstream zones and areas impacted by access roads and dam and powerhouse construction and in the area impacted by the transmission line construction are now helpfully spelled out in the draft CA. Those affected will be variously entitled to housing, land, trees, disturbance allowances or replacement costs for infrastructure or economic losses. The provisions appear equitable as long as the options are made clear and there is adequate information and consultation. Again the WCD recommendations on contracts with project-affected people (or with communities, if more culturally appropriate) bear examination by NTEC.

3.5 Summary

In summary, the view of the IAG is that by far the most complex and sensitive social impacts of the project are occurring and can be expected to occur in future not among those to be resettled in the plateau area or those affected below the powerhouse but among the people of the upland villages of the watershed. It is not coincidental that it is in this area that least progress in developing alternative livelihoods and lifting living standards has been achieved. The lack of continuity in development assistance programmes, the remoteness and inaccessibility of the villages and the project-related measures (bans on hunting, wildlife trading and logging, pressures against slash-and-burn cultivation) which have had the effect on occasion of inducing deeper poverty not alleviating it, are all contributory factors.

The IAG therefore lays stress on:

- maintaining, upgrading and expanding the LIL project;

⁹ NTEC might be well advised to consult the WCD's Dams and Development, p.242, for some useful comment on past experience elsewhere in paying cash compensation, the global experience being that cash payments have proved ineffective in re-creating lost assets and opportunities in less monetarized economies and should be avoided. As the IAG understands their intentions, NTEC plans to discuss the compensation issue further with riverside communities.

- setting up the WMPA as soon as possible, even if only on an interim basis, and initiating activities for which the Authority is responsible;
- starting work on upgrading boat/track access to the villages to facilitate the delivery of health, education and agricultural extension services once funds from the developer become available and revenues from the project eventually begin to flow.

As the IAG has had occasion to say before, the social and livelihood programmes in the NBCA are not an add-on but a quite fundamental element of the whole project and in the final analysis one of the ultimate justifications for it. Without success in these social areas, prospects for conservation of the invaluable biodiversity in the NBCA are not good because the temptation for still impoverished communities to harvest these natural resources on their doorstep will be too strong to resist.

4. ENVIRONMENTAL ISSUES AND RISKS

4.1 The Watershed

Flying over and venturing into the fringes of the extensive pristine forests of the NNT NBCA is an uplifting experience. Here is one of the most intact such sanctuaries of tropical biodiversity left in the world. The question is how intact is the NBCA and its associated areas and what environmental impacts and risks from the NT2 project will occur outside the (now extended, taking in two wildlife corridors) NBCA itself? And what can be done about all this?

For the first time comprehensive responses to these issues have been brought together in the final version (two volumes) of SEATAC's Nam Theun 2 Hydroelectric Project Environmental Assessment and Management Plan (EAMP). The EAMP has just been completed and one copy (only) was made available to the IAG on arrival in Vientiane. It is a most useful work, collating as it does most of the numerous environmental and social studies undertaken over a period of a decade and more in relation to NT2 and including new material as well, and addressing mitigation/protection/offset responses.

The EAMP draws on upwards of 40 technical studies, plus additional sources such as POE reports. There are few gaps in its coverage. There is little point in the IAG attempting at this stage in the process to second guess all the major issues raised. Instead the IAG concentrates below on those environmental issues where they judge that faster and earlier action may be needed or where they assess that there are risks which cannot necessarily be covered at this point. As before, the IAG will look at these issues project area by project area, starting from the NBCA.

The IAG is gratified that, following the submissions of last May's Logging Mission, the GoL has gazetted the NBCA area, with the wildlife corridors incorporated, for protection. This action is a measure of the Government's commitment to the project, since the area involved is substantial and the natural resources it contains are quite invaluable. Now comes the hard part: giving them effective protection on the ground.

The IAG has stressed above that one very important element of this is weaning the people away from their destructive hunting, gathering and cultivation practices by helping them develop alternative livelihood models which are proven, which are culturally attractive and which remove the necessity for collecting cash, generating protein and other supplements from the forests. This applies as much to the plateau people as the watershed dwellers: particularly when the reservoir fills, access by boat to the Dividing Hills and the lower reaches of the NBCA from the resettled villages will become much easier. One of the interesting new maps in the EAMP is one showing (the reduced) hunting travel time once the reservoir has filled (EAMP, Figure 6-7).

Another potential group of hunter-gatherers is the inhabitants of the huge workers' camps which will be associated with the dam and powerhouse construction sites. The latter will have upwards of 4000 workers (plus

retainers and hangers-on) based not too far from the escarpment area while the dam site will have valuable forest areas within a few minutes' walk.

How important conservation education will be not just in the NBCA but in the resettlement villages and construction sites was brought home to the IAG when it visited the pilot resettlement village, Ban Sailom. Generosity to visitors is a cultural feature of the people, but nature conservation is not: the IAG members were nonplussed to be handed three or four very beautiful living and blooming orchid plants each, garnered from the forest. This was touching, but not in accord with one of the basic objectives of the project. Nature conservation education is a part of the LIL programme and is built into training programmes for the watershed, the plateau and the resettled peoples. But, as the EAMP puts it, this will be "a long term commitment with a lag in returns in basic behavioural changes of several years, it is an investment". The IAG strongly supports the public education programmes as set out in the EAMP (pp. 10-41, 10-42) and would merely note that if the recommendation immediately below (involvement of the Lao military in patrolling) is accepted, then the sort of video, slide and poster education programme envisaged for the village people will also be required for the military to enable them to carry out their biodiversity protection task.

The threat to the NBCA does not only come from the people of Laos. It is of interest that the EAMP does not appear to address directly the biodiversity deprivations into the NBCA by wildlife hunters and traders from across the border, although this is undoubtedly the most serious threat to the unique biodiversity of the watershed. Reports from the area indicate that the incursions have not declined and several markets in Vietnam and on its border with China sell wildlife from Laos ranging from "golden turtles" to birds of various species to animal parts. One observer on the ground found that intruders were catching fish in the upper reaches of the watershed rivers and salting them for selling across the border.

The POE has also been concerned over the years at these cross-border incursions. In its most recent report (January 2001) the POE recommends that as a high priority, village-based anti-poaching patrols be revived and expanded. The IAG would go one step further. The earlier anti-poaching patrols were made up of villagers, local police and local militia. Many of the villagers have since given up their guns in the interest of conservation. The IAG's view is that the extent and nature of the poaching (the perpetrators are armed) and the encroachment on the sovereignty of Laos it represents call for the involvement of Lao military in the patrolling operation. We appreciate that this is a sensitive matter but can see no other early or realistic way of stiffening the resistance to poaching. We recommend accordingly that the GoL look seriously at this option. Intensive briefing of the military would be required.

Wildlife monitoring and management, if the term is relevant in an area as remote and still essentially unknown as the NBCA, are among the responsibilities of the newly decreed WMPA. But the WMPA (when it is established) will face a capacity problem on the wildlife conservation side. The IAG was concerned to learn that a restructuring of the units within the GoL involved in nature conservation had reduced significantly the numbers of trained people in government employ to perhaps a third of those formerly available. This is most untimely. Furthermore, there appears to be a problem in getting the scattered units of the GoL involved in forest and

wildlife conservation (the Environment Department of the Science, Technology and Environment Agency, the biology people in the Lao University, the Division of Forest Resources Conservation in MAF etc) working together. Without suggesting which agency should have the lead, the IAG encourages GoL Ministers to foster inter-departmental co-ordination in the interest of helping overcome the capacity deficiencies in and around the NT2 project.

4.2 Developments in the forestry sector

The IAG was encouraged by several developments on the forestry front. A recent letter to the World Bank signed by the Deputy Prime Minister pulled together some previously loose ends and provides a basis for beginning to resolve some of the forestry sector's considerable problems at the national level. At the same time, the IAG, monitoring the follow-up to the NT2 Logging Mission of May 2000, found that the Prime Minister's Office Order (No. 0885/CPMO of 19 May 2000) which had called for "a cessation of wood exploitation" in the areas identified by the mission as sites of illegal logging had been effective in stopping the great majority of the illegalities. The IAG checked out the Nam Malou area by low altitude helicopter surveillance and found only two trucks removing old logs. There was no evidence here of the unmistakable signs of recent logging and the IAG saw no other evidence of illegalities. In discussions with the Nakai District people it emerged that 700 cubic meters of illegal logs had been confiscated and the loggers arrested. In the IAG's view such public actions will serve as an effective way of ensuring that the PMO achieves its objectives.

Monitoring of the logging ban for the years ahead will also be important. The PMO gave "approval in principle" to the Mission's proposal that annual joint monitoring and control of wood exploitation activities be undertaken in the NT2 forest reserve areas with GoL, NTEC and the WB, represented by two international experts from the POE and the IAG, taking part. The IAG notes that, nine months on, it is time to begin giving effect to this measure and encourages the GoL to do so.

The pressures to log are ongoing. The Taiwanese company (Chang Lin) which has build a very large timber processing complex outside Laksao was good enough to let the IAG go over its plant. Only one of the three large buildings had machinery in it and here it was largely Fokienia which was being processed for export to East Asia. The plant's main concession area is in Xieng Khouang, 200 kilometers away but it is drawing Fokienia from all over the country. The plant can process other species said the manager but it is not yet doing so. The Fokienia export returns are paying the bills.

The Laksao plant is a symbol of the over-capacity in Lao PDR in wood processing. If and when this plant is fully up and running the volumes of timber it could handle will be very large. The GoL is addressing the issue nation wide but the IAG members reflected that the major remaining large stand of Fokienia, for example, is in the upper reaches of the NNT NBCA. The temptations are there and there remain large sections of the NBCA close enough to existing roads to be logged. The EAMP also notes the prevention of logging above the FSL is critical to preserving forest resources on the Nakai Plateau and calls for its strict enforcement by the WMPA. The need for effective and ongoing monitoring remains.

4.3

World Heritage status

The IAG has in earlier reports called for an early move to seek World Heritage status for the NBCA and its corridors. Having researched World Heritage requirements and discussed approaches and the state of readiness inside GoL Departments, however, the IAG is inclined to agree that a formal application, as contrasted with preparations leading to an application in several years time, is premature. The reality is that after some unfortunate experiences elsewhere, UNESCO's World Heritage Committee will not grant this exalted and desirable status nowadays until it is convinced not only that the site has been well researched but that there is an effective management structure in place to help ensure that the global biodiversity values identified in the area are maintained.

It cannot be claimed that such a structure yet exists in the NNT NBCA, although as already noted, the plans and legislative authorities for setting up the WMPA are in place. In these circumstances it seems logical to the IAG that the GoL's energy and resources for the next two to three years should go into establishing an effective management regime in the proposed World Heritage site, the actual application being lodged when it has a greater chance of being accepted, for instance in 2004. The IAG advocates this approach.

The IAG is also of the view that, again looking in part to World Heritage status but also for conservation reasons, early consideration might be given by the WMPA to accelerating the baseline monitoring and research into the NBCA's wildlife and to helping fine tune and begin implementing the management plans for the key wildlife species identified in the EAMP (pp.6-107,108). Some of the key mammalian (e.g. elephant, saola) and bird species (e.g. the White-winged Duck) are likely to be affected at a very early stage by the commencement of project construction and associated activities. It would seem sensible to have the Wildlife Conservation Society contribute to this work since it was this NGO (which now has just signed an MOU with the GoL) which undertook much of the initial research in the NBCA. Together with the World Conservation Union (IUCN) of which Laos has been a State member for many years and which has representation in Vientiane, the WCS could also play a valuable role in environmental education and in capacity building in relation to both the NBCA and plateau conservation programmes. Some NTEC funds are available at an early stage for this type of work.

4.4

Global support for NBCA

In its second report (December 1998) the IAG suggested that the potential of mechanisms like carbon sequestration schemes and debt-for-nature swaps be examined by the GoL in collaboration with the World Bank as further means of seeking global compensation for the designation of the NNT NBCA and its corridors as a strictly protected biodiversity and carbon sink area. While these possibilities remain worth further exploration, it is more urgent to begin to put in place now legislative and other measures to protect the NBCA's flora and fauna from illegal and unrecompensed exploitation by international pharmaceutical and crop development organisations or companies. Ratification of the Biodiversity Convention is only the first step. Providing a national legislative framework to enshrine the Convention's

benefit sharing and fair compensation principles is also necessary---and, as other developing countries have discovered to their cost, negotiating binding and equitable contracts with pharmaceutical and crop research companies can be a challenge.

The IAG recommends that the GoL considers drawing on the expertise of the World Resources Institute (WRI) in Washington DC in approaching this subject. The WRI's publication Biodiversity Prospecting (WRI,1993) is a primer on the issues involved in seeking returns from biodiversity treasures and on negotiating equitable contracts. IAG members would be happy to put the GoL in contact with the relevant WRI contacts if they wish to proceed to explore this path.

In the interim, it was striking to the IAG (particularly its Indonesian member) to find how little seemed to be known in the villages visited on this occasion about traditional medical uses to which freely available plants in the NBCA and the plateau may be put. When other medical services are virtually non-existent traditional medicine has a very important role. There will be traditional knowledge available in Laos or neighbouring countries --- the IAG recommends that it be accessed. Sponsorship of teaching visits to the villages of the watershed and plateau by a traditional medicine specialist would doubtless be available from one source or another.

4.5 The plateau / reservoir

4.5.1 EAMP findings on selected issues: vegetation and water

The environmental impact on the plateau of the NT2 project has already been substantial through the removal of a high proportion of the commercially useable forest and the consequential destruction of wildlife habitat. It will be even more so when 450 km² of plateau land is converted to lake. If there are any advantages derived from the delays in implementing the project they revolve around the removal of a much greater percentage of the biomass in the inundation area and the time for more capacity building at all levels¹⁰.

A new consideration arising from the completed EAMP (p 6-82) is that it has been found that the magnificent coniferous habitat in the plateau is important (relatively) to birds. This is an argument for husbanding the remaining stands of merkusii pine. The EAMP (p6-114) calls for the protection for logging of all remaining merkusii stands above the maximum operating level of the reservoir and not required for the siting of resettlement infrastructure. Merkusii and other mixed plantations would be established on logged or degraded lands near the resettlement sites. While agreeing with this in principle, the IAG would point out that some existing merkusii

¹⁰ In a no-project scenario, of course, without the offset of the conservation of the adjacent NBCA area with its high biodiversity values, the clearing of much of the remaining forests and other vegetation from the planned inundation area would represent a big environmental setback. Much of the area can be reforested in due course but it has seldom proved possible around the world to re-establish destroyed habitats to the old growth values they had originally.

stands were originally to be exploited by resettlers as sources of cash income in the first years of resettlement. The IAG's view is that some flexibility (on an agreed and negotiated basis) may be necessary until the plantations come on stream; there would still be close to 40,000 hectares of merkusii and mixed conifer/broadleaf forest above inundation level if several hundred hectares were set aside for resettlement village exploitation.

The rising waters will destroy existing riparian and wetland areas along the Nam Theun in the plateau areas. These are of high value for wildlife, mammalian and avian; the expectation is that new riparian and wetland habitats will be created as inundation occurs, although the wet season/dry season fluctuations and draw downs will produce seasonal variations to the extent of these habitats. Baseline monitoring for wildlife and ecosystem dynamics will be undertaken to set goals and standards for wildlife populations but there are some risks of species loss here – not least the very small colony of white-winged ducks.

The quality of the water in the reservoir and discharged downstream into the Nam Theun and the Xe Bang Fie is an important consideration in environmental terms, having implications for greenhouse gas emissions (see section 5), for human consumption, for reservoir sedimentation, for irrigation and for wildlife and particularly fish. The EAMP is largely upbeat on this score, claiming that recreation and drinking water guidelines will be met in the reservoir, while below the turbines the water in the downstream channel will be suitable for irrigation. Experience elsewhere in South East Asia suggests that it is only in the dry season that releases from storage reservoirs like the NT2 one are acceptable for downstream aquatic life but the EAMP argues that the modelling shows otherwise in this case, with good surface water quality conditions high in oxygen and low in nutrients throughout the year (EAMP pp.6-58, 6-77). It is contended that it is not necessary to remove more vegetation for the betterment of water quality within the reservoir but that merchantable timber should be removed, along with other commercially harvestable logs, in order to use the resource.

4.6 Fishery risks

The IAG has no scientific basis for questioning the above EAMP findings but, on the basis of its collective experience, is cautious about the prospects for the fisheries in the various project zones and particularly in the waters below the power station where the ecology will be considerably altered by the inter-basin transfer of large volumes of modified (and cooler) water. The sensible actions are being recommended and initiated. The POE's recommendation that a pre-impoundment baseline study of the fishery resources of the lower Xe Bang Fai basin be undertaken has been picked up by NTEC and an agreement with the recommended specialist is to be signed shortly. But the fact that such a study has had to be undertaken at this stage illustrates the paucity of basic information and data which could form the basis of a confident prediction on fisheries.

It seems likely that species in the Nam Theun below the dam which prefer fast flowing habitats will suffer losses. The prospects for the reservoir fishery and large sections of the Nam Theun tributaries subsumed into the reservoir appear much better, indeed the EAMP studies forecast an initial rise in fisheries productivity and an increase in fish diversity after a decade

or so. It is reassuring that no exotic fish species are to be introduced advertently into the reservoir.

NTEC expects an improvement in fish catch in the Xe Bang Fai fisheries, a degree of optimism not shared by the IAG, but will maintain a minimum flow in the channel when power is not being generated and will monitor any changes in catch and compensate for any losses. Since fish is the primary source of protein for people along the river the risks are high and potentially damaging to livelihoods so the IAG recommends that NTEC keep a close eye on this aspect of the project and be prepared to undertake further mitigatory and precautionary measures which emerge from the study to be undertaken.

4.7 Downstream areas

The POE has recently studied and reported on impacts in the various zones of the Xe Bang Fai. The IAG endorses the panel's findings and recommendations which particularly call for a survey of the extent and importance of riverbank gardens along the length of the XBF, for adequately funded fisheries surveys and for the integration of irrigation-cum-fishery projects into GoL planning for the project to take advantage of over 20,000 hectares of irrigable land in the middle and lower zones (POE's fifth report, recommendations 16-18).

4.8 Summary

As was the case with the social impacts, the major environmental issues and risks relate to the NBCA. The NBCA and its corridors are largely intact and represent a global treasure. This is highly encouraging. Nevertheless, some vigorous actions are now required if this is to remain the situation. Public education on the principles and practices of nature conservation is an urgent requirement. To counter cross-border hunting and wildlife trading, joint patrolling with Lao military and villagers acting together is recommended by the IAG. The case already made for an early start to be made in getting the WMPA up and running has as much relevance to the environmental field as the social. This has special significance in terms of the timing of an application for World Heritage status for the NBCA---it is unlikely that such status would be conferred until and unless an effective management regime is in place across the watershed.

Other major environmental issues and developments include the IAG's finding that the ban on illegal logging across the project area seems to be largely effective at this point. No evidence was found of any recent logging in the areas where it was observed last May and an arrest had been made in Nakai of a suspected violator of the ban. Potentially more worrying in the medium term is the over-capacity in wood-processing facilities in Laos, with the very large new plant near Laksao a constant reminder of this fact to project staff. A further area of concern to the IAG is the risks inherent in the impacts the project will have on fisheries particularly in the downstream areas. Initiating baseline monitoring of fisheries in the area is a welcome and overdue move but it will not of itself reduce the element of risk. The IAG is also of the view that an update on predictions for greenhouse gas emissions from the project is called for, it being several years since the

original study was made---and this being a preoccupation of the WCD in its report. Finally, the IAG's view is that the recent restructuring and downsizing of GoL agencies with responsibilities in the nature conservation and environmental areas was most untimely and it feels that this underlines the necessity for the new agencies to be both better resourced and better co-ordinated , not least in view of their responsibilities in respect of the Nam Theun 2 project.

5. GLOBAL CONSIDERATIONS

5.1 Greenhouse gas emissions

In its original report (1997) the IAG noted the innovative step the WB had recently taken with IUCN, in setting up a World Commission on Dams. The WCD has reported and has recommended inter alia that since the emission of greenhouse gases from reservoirs due to rotting vegetation and carbon inflows from the catchment has now been identified as an ecosystem impact (on climate), storage dam projects should be investigated to establish the likely level of GHG-emissions. Making such predictions is an evolving but far from exact science. NTEC had a study made five years ago (why has it taken this long to surface?). It was probably state-of-the-art when it was undertaken in 1996. It compared the amount of GHGs likely to be released into the atmosphere by the conversion of 450km² of Nakai land to lake with the amount which would be produced by fossil-fuelled electricity energy generation of an amount equal to that generated by NT2. The finding was that the NT2 reservoir emission would probably be less than half of the emissions of a thermal power station of comparable power and much less as the decades pass. But the equation has changed in the intervening five years. On the one hand, there is much less biomass left in the inundation area than was expected five years ago but the significance of this is difficult to assess, because the WCD report notes that the net effects of removal of vegetation are still not well understood. The WCD report notes further than shallow, warm tropical reservoirs are more likely to be major GHG emitters than deep cold boreal dams, so the 1996 comparison with emissions from reservoirs in French Guyana and Ivory Coast was logical enough in a sense but these habitats are still very different from the Nakai plateau habitat. Furthermore, the WCD report points out that comparisons with gas combined cycle generation plants are now more relevant than with the fossil-fuelled plants used for comparisons in 1996.

In short, the IAG's view is that NTEC would do well to seek an updated version of the earlier study taking into account technological and scientific advances made in the intervening period. In this regard it notes that the calculations of the contribution of new reservoirs to climate change should desirably, in WCD's view, include an assessment of the natural pre-dam emission (or sink) in order to determine the net impact of the dam.

5.2 Measuring NT2 against WCD standards

Predicting greenhouse gas emissions aside, the Nam Theun 2 project measures up well against the standards and guidelines set by the World Commission on Dams. Reading Dams and Development with a knowledge of the procedures and frameworks for decision-making followed in NT2 is a reassuring exercise. It reinforces the IAG's longstanding judgement that the World Bank, the GoL and the developers have gone to unusual lengths to ensure that the social and environmental problems which have been encountered in the case of many earlier WB dam projects have been investigated early on and either dealt with or mitigated in this case. In a very real sense, the procedures, not least in terms of consulting all parties at all stages and ensuring equitable and "better off" arrangements for affected people, have anticipated the requirements of the WCD report, which

go beyond WB Operational Directives. And the WCD report itself acknowledges that the environmental offset approach involved in according protection to the biodiversity-rich NBCA and its corridors is a useful precedent: "The (NT2) plan has the potential to benefit both forest ecosystems and the lifespan of the dam through reduced sedimentation." (Dams and Development, Box 3.1, p75).

The IAG sees no point in second-guessing the POE in assessing in detail how the project measures up to WCD standards and guidelines. There are several crossovers between the WCD exercise and the NT2 one. The alternative energy use expert who undertook the original study of the alternatives to the Nam Theun 2 project, Dr. Engelbert Oud, later became a member of the WCD Secretariat and was heavily involved in drawing up the options section of the WCD report. One of the WCD Commissioners, the eminent ecologist Professor Thayer Scudder, is a long time member of the POE for NT2. Dr. Oud drew up for the POE a complex matrix reviewing the WCD guidelines against Nam Theun compliance. This is annexed to the POE's most recent report. While somewhat cryptic in form the matrix is comprehensive and authoritative. On the few aspects where the matrix records non-compliance or "exceptions" the IAG largely concurs (e.g. there remain reservations about the Xe Bang Fai fishery's prospects; and the IAG view, apparently differing from the POE one on this issue, is that an update is now desirable on the five-year old greenhouse gases report. It was interesting to note that the matrix recorded as "programmed" the drawing up of benefit-sharing contracts with affected people. It is not clear whether these contracts are to include the spelling out of entitlements and performance requirements as called for by the WCD. The IAG was, incidentally, intrigued to discover that it did not appear to qualify as "an independent panel" which had "reviewed and endorsed mitigation plans." Perhaps the fact that the IAG reports to the WB President ruled it out.

The overall POE conclusion is that the NT2 project "meets WCD criteria and guidelines better than any other large dam on the drawing boards anywhere in the world." The IAG concurs in this judgement.

6. CONCLUSIONS

The IAG was set up to provide the President of the World Bank with an independent assessment of and recommendations on the World Bank's handling of environmental and social issues in the proposed Nam Theun 2 hydro power project and the risks involved.

This was the Group's third visit to Lao PDR. Its members feel privileged to be part of an extensive external input into one of the most unique projects on the world development scene. The Nam Theun project is unique not just because of the environmental offset arrangement which would help preserve one of South East Asia's handful of remaining intact tropical forest areas, replete with mammalian and untold other biodiversity. (Few botanists, for example, have yet penetrated the NBCA). Those involved in its evolution are resolved to face up to the environmental and social shortcomings of other large dam projects and endeavour to turn them, where this is feasible, into pluses not minuses. Even the developer has, from the beginning, been determined to go beyond WB operational directives by undertaking to help ensure that the affected people will not be "no worse off" than before but significantly better off, thus anticipating a standard now set by the World Commission on Dams.

The World Bank has, in concert with the GoL, sensibly required an array of technical studies to be undertaken in sector after sector, well over forty in number. There has been virtually no dissension from the widely held view that this is an outstanding project technically, designed to earn foreign exchange for a country with few options and to help preserve some of the most outstanding intact stands of tropical forest and associated biodiversity left anywhere on the planet, aimed at alleviating the situation of one of the poorest groups of people in one of the least developed countries in the world, and with creative mitigatory or compensatory mechanisms built in where impacts are unavoidable. The accumulation of information and positive findings on NT2 is highly impressive. It cannot lightly be set aside. The World Bank, to its considerable credit, has learned many of the lessons of the past and internalised them, its resolve over the years to get this one right is reflected in its considerable investment in the preparatory processes.

The Bank has had its moments of hesitation. It quite rightly required the GoL to get its macro economic house in order three years ago when Laos, at the foot of the regional economic and financial totem pole, was heavily impacted by the Asian financial crisis and was slow to take remedial measures. That situation is now, in the view of international financial institutions represented in Vientiane, under control.

The Bank is still seeking some reassurance about the commitment of the Government to the project and to compliance with its undertakings. The Bank seeks, for example, legitimately enough, to have some assurance that the revenues from the project will be channelled largely into poverty alleviation and not simply become, for example, a general Budget deficit offset. The IAG's conclusion is that there are adequate existing and planned means of monitoring revenue usage in place at this point. It is the GoL's publicly stated policy, reaffirmed to the IAG by the Deputy Prime Minister and Minister of Finance, that the revenues will go into poverty alleviation. For its part, the Bank and other financial institutions are now working very closely with GoL agencies on developing a poverty alleviation strategy and

new allocative procedures. The public expenditure management performance of the country is being actively reviewed and strengthened with outside help. There is greater transparency at all levels, though the Lao Government has to go further in making public its use of external ODA flows in particular. The Round Table process of bringing donors into active collaboration with Laotian development agencies on strategic issues is beginning to work well.

So there are, in the IAG's opinion, adequate means for the World Bank to keep in touch with evolving development policies and procedures before the NT2 revenues begin to flow five years and more down the track. And the Bank has the opportunity to help further strengthen the allocative and public expenditure systems in the meantime.

At the project level there is a very high level of both internal and external monitoring already provided for. External agencies and/or auditors of international standing are to monitor the watershed management system, any illegal logging, the resettlement programme, the environmental and social management programmes, site preparation and construction PMM's (Protection or Mitigation Measures) and the operational phase of the project. Some form of the existing POE and IAG will also presumably continue into the implementation phase of the project. In short, the comprehensive monitoring system with its external components should provide a good level of reassurance to the WB on the faithful implementation of this venture. Such reservations as the IAG retains relate to the early need to boost the livelihood and nature conservation programmes in the watershed, the requirement to counter cross-border poaching in the NBCA, possibly through the use of mixed military/village patrols, the desirability of seeking an update on the forecast of greenhouse gas emissions from the project, a general uneasiness based on experience elsewhere about the future of the fisheries in and around the project and some on going concerns about the pace of capacity building at all levels. None of these problems or potential problems is insuperable.

In short, the IAG agrees with the weight of opinion so carefully garnered over almost a decade by the GoL, the Bank and the developer in favour of the project proceeding. There are still risks involved. There always are in ventures involving environmental and social engineering, whether they are undertaken in a so-called developed country or a developing one. But the IAG's considered judgement is that the point has now been reached, through countering social impacts and combining mitigation with environmental enhancement, where it may cogently be argued that the risks of not proceeding with this excellent project in its present form outweigh the risks of going ahead. Were the project to proceed without World Bank participation as at present planned it would almost certainly be substantially redesigned, refinanced and implemented on a very different basis from that so meticulously and meritoriously put together over the past decade. Among the losers would be likely to be the forests and other biodiversity of the NBCA, the vulnerable and desperately poor communities of the watershed, the plateau and some at least of the downstream areas, and the credibility of the World Bank across much of the donor community and among the numerous technical, scientific and engineering groups which have been involved in putting this project together. The project should proceed to appraisal, and to fruition.