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The Water Politics of China and Southeast Asia: Rivers, Dams, Cargo Boats and the Environment

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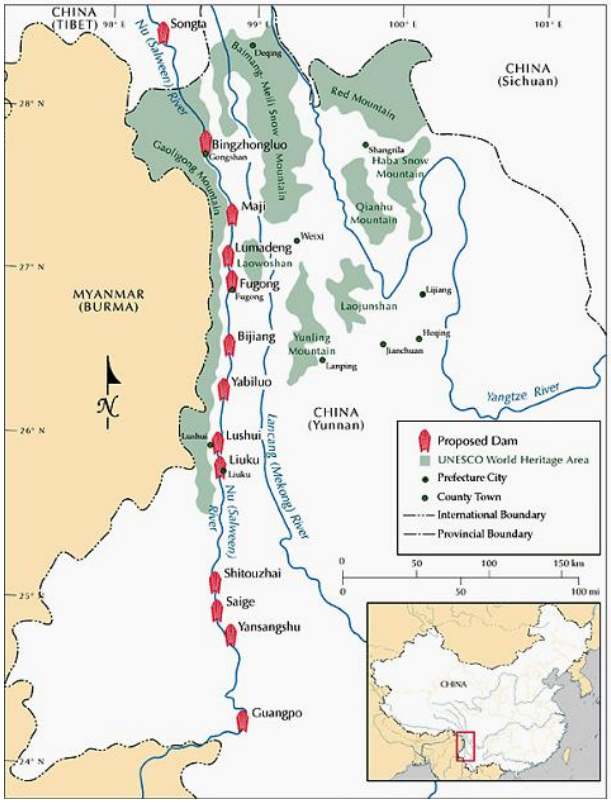
When the Worldwide Fund for Nature (WWF) released its list of the world's top ten rivers at risk in late March, attention in Australia naturally focused on the fact that the Murray-Darling River system was one of those listed. Very little attention was given in the Australian media to the other nine rivers so identified, which included the two longest rivers in the Southeast Asian region, the Mekong and the Salween. Both these rivers rise in the Himalayas in Chinese territory before flowing into Southeast Asia, and play a vital role for the populations in their basin areas; for the 60-70 million in the Mekong's basin of nearly 800,000 square kilometres, and for the 6-7 million in the Salween's basin of 272,000 square kilometres. The WWF's claims about the risks facing the rivers it lists as 'in danger' are bound to generate controversy, with proponents of hydroelectricity sourced from dams bound to express scepticism. Nevertheless, current and future developments associated with both the Mekong and the Salween are certainly worthy of examination. For there is irrefutable evidence of the problems that can be caused by the construction of large-scale dams on previously free-flowing rivers. Moreover, a review of current developments associated with the Salween and the Mekong rivers is desirable at a time when environmental issues are increasingly a concern internationally. Such issues have particular relevance in Southeast Asia, both within individual countries and in terms of relations between individual Southeast Asian countries and their great neighbour, China.



Map 1: Proposed dams along the Nu (Salween)
Source: International Rivers Network
http://www.irn.org/img/nu/nu_map_pol.gif

In two Lowy Institute Papers, *River at risk: the Mekong and the water politics of China and Southeast Asia* (2004), and, *The paramount power: China and the countries of Southeast Asia* (2006), I discussed the many and complex range of relationships evolving between China and its Southeast Asian neighbours. These relationships are multifaceted, involving politics, in the broadest sense, trade and economics, particularly as these relate to energy, and increasingly, for the mainland states, present and future environmental issues. A striking feature of all these relationships is the rapid pace of developments, so that snapshots of events taken at a particular moment rapidly become out-of-date. In this paper, and against that fast-changing background, I concentrate on two prominent current issues, principally involving China, Burma (Myanmar), and Thailand, and the Mekong and the Salween, as trans-national rivers.

The first of these issues relates to the controversies associated with plans for the construction of dams on the Salween River, the last free-flowing river in Southeast Asia; the second to developments associated with the greatly increased navigation of the Mekong River now taking place between southern Yunnan and northern Thailand. In the case of the Mekong, it is important to recognise that the rapid changes that have taken place in connection with navigation of the river should be seen as part of the much greater prospective changes to the river as a whole. These include the continuing program of dam construction being undertaken in China and new proposals which are contemplated in studies undertaken by the Mekong River Commission (MRC), the World Bank (WB) and Asian Development Bank (ADB). Additionally, developments associated with various tributaries of the Mekong are a cause for concern. (These latter issues associated with the Mekong, and which are separate from the navigation developments, are discussed briefly in the Appendix to this paper.)

Long neglected outside the circles of advocacy Non-Governmental Organisations (NGOs), the environment has increasingly become an issue of political importance in Southeast Asia and, now, in China. While it would be an

exaggeration to suggest that environmental concerns can, by themselves, determine government policy, there is no doubt that they have an importance that plays a part in decision-making, as demonstrated in the accounts that follow. The salience of this observation is given weight by the emphasis placed on environmental issues by the Chinese premier, Wen Jiabao, in his recent address to the National People's Congress on 5 March 2007, when he said, 'We must make conserving energy, decreasing energy consumption, protecting the environment and using land intensively the breakthrough point and main fulcrum for changing the pattern of economic growth.' And in Thailand, a country which receives detailed attention in this paper, the environmental movement has played an increasingly active and politically important role for well over a decade, particularly in constraining the government from developing further dams to produce hydroelectric power within Thai territory.

The Salween

Like the Mekong, the Salween River rises in Eastern Tibet at a height above 4,000 metres, where for several hundred kilometres it runs parallel to both the Mekong and the Yangtze, forming part of what is known as the 'Three Parallel Rivers' region. After passing through Yunnan, where it is known as the Nu Jiang, or 'Angry River', a reflection on the speed of its flow, it enters and flows through Burma. For a distance of some 120 kilometres during its passage through Burma it forms the national boundary between Burma and Thailand. It then resumes its course through Burma alone, finally emptying into the Gulf of Martaban at Moulmein. (For the purposes of this paper, I refer to the river under discussion as the 'Salween', when discussing its entire length and that section which flows through Burma and beside Thailand. I use the name 'Nu', or 'Nu Jiang' when discussing the river and its course in China. The river is also known as the 'Thanlwin' within Burma, a usage restricted to that country, but sometimes appearing in news reports generated in Burma but carried elsewhere.)

Although the second longest river flowing through Southeast Asia, the Salween at an approximate total length of 2,800 kilometres – this length is disputed, with some estimates giving its length as 3,200 kilometres – is much shorter than the Mekong (4,900 kilometres). The topography of the regions through which the Salween flows is sharply different from much of what exists along the Mekong's course, particularly after the latter leaves China when it flows through a largely flat, immediately surrounding landscape. Until it reaches its delta in Burma, the Salween flows almost entirely through sharply rising gorges on either side of its banks. In Tibet and western Yunnan some of these gorges rise to a height of 3,000 metres above the river. Even in the region where the Salween flows between Burma and Thailand, where the height of the surrounding gorges is much reduced, the topography is such that it still provides an ideal physical setting for dam construction.

(See Photograph 1 of the Salween taken at Ban Sam Laep, on the left [Thai] bank, where the river forms the boundary between Thailand and Burma.)

Photograph 1: Salween at Ban Sam Laep

Of great importance to any discussion of the Salween's future as a prospective site for a series of dams is the rich biodiversity existing along its entire course. In addition there is a remarkably diverse set of minority ethnic population groups in the regions through which it flows, both in China and Burma. Indeed, the presence of ethnic minorities along the Salween in Burma has been the touchstone for the vigorous opposition to the plans for the construction of dams on the river from a varied range of advocacy NGOs, most particularly in Thailand. Both in Burma and in China there is concern among human rights advocates that dam building will lead to the displacement of populations. And this prospect, as discussed later, is seen by critics of the Burmese regime as yet another example of that government's efforts to impose control over dissident minorities.

Map 2: Potential dam sites of the Salween River

Among advocacy NGOs concerned with environmental issues there has been considerable focus on the Three Parallel Rivers region already mentioned. This area was inscribed on the list of World Heritage sites in 2003 for its identity as the 'epicentre of Chinese biodiversity' which is 'also one of the richest temperate regions of the world in terms of biodiversity'. On the basis of a map published by the International Rivers Network, the designated Heritage area does not include the Nu itself, but rather is located close to the river's right, or western bank, as well as taking in areas further east, close to the Mekong and the Yangtze. (See Map 1 entitled 'Proposed dams along the Nu (Salween)', showing the course of the Nu and the sites of proposed dams in China.)

In both Burma and Thailand, areas bordering the Salween are rich in reserves of teak. And as is the case with the Mekong, the Salween is a major source of fish -- many of which are migratory -- for the populations living by or close to it, particularly in the rich agricultural region of its delta.

What is planned, and why?

The possibility of constructing dams on the Salween River to generate hydroelectric power has been under discussion for some time, certainly for well over a decade. The plans under discussion fall into two categories: those for dams to be constructed in China, and those to be constructed either within Burma or on that section of the Thai-Burma border formed by the river. For the moment, and as detailed below, substantial uncertainty remains as to just how many of the dams will actually be built. What is more clear are the reasons why there are plans to build them, and why these plans have excited opposition. In the case of the dams projected for the Nu in China, the available evidence suggests that these have been conceived in the planners' minds essentially for the provision of power to industry within Yunnan province.

While Yunnan province, with its high concentration of minority peoples, was neglected by the Chinese central government for many years, it is now seen as an important region in Beijing's 'Develop the West' strategy. And in this regard, it is now targeted for industrial development, particularly around the provincial capital, Kunming. Developing dams on the Nu for hydropower accords with the reasons behind the construction of the dams that have already been built or are under construction on the Mekong. (The dam currently under construction at Jinghong, in southeastern Yunnan, will be an exception to this general rule since it is designated to supply power to Thailand when completed.)

Among the dams planned for Burma, or on the Thai-Burma border, two are to be located in the Shan State. One will be at Tasang — which may consist of two linked reservoirs — while another, so far simply designated as the 'Upper Thanlwin hydropower project,' will be constructed further north on the river. Its exact location has not been given in news reports. Both are projected to be connected to the Mekong Power Grid, a project promoted as one of the programs developed within the Greater Mekong Subregion (GMS) forum, with the backing of the ADB. Under this program, power generated by dams in Burma, China and Laos will supply electricity to Thailand and Vietnam. The dams planned for construction on the Thai-Burma border, at Wei Gyi and Dagwin, and possibly Hutgyi (also transliterated as Hut Gyi and Hatgyi), are projected to supply power to an even larger grid, the ASEAN Power Grid, a plan embraced by ASEAN with the goal of supplying electric power from a grid serving all ten member countries by 2011.

China

Details of China's current plans for dams

on the Nu Jiang are not readily accessible, and the status of these plans is made more uncertain because of the lack of public information about the extent to which they are under reconsideration. The fact that there is this lack of information and uncertainty about Chinese plans is not surprising and conforms to a similar state of affairs in the early stages of the planning for dams on the Mekong. In the case of the Chinese dams on that river, very little was known about them outside of China until more than a decade after construction began on the first dam in the 1980s. This state of affairs reflects a Chinese view that it has no obligation to make public statements about developments within its own territory until a time of its own choosing. The account that follows is therefore open to qualification if and when new information becomes available.

It appears that a detailed proposal to build 13 dams on the upper section of the Nu was first put forward in 1999, by the State Development and Reform Commission. This were then elaborated in August 2003, when officials in Yunnan put forward plans which were subsequently approved by the central government. The absence of information about the dams outside China was made strikingly clear when former Thai Prime Minister Thaksin admitted in December 2003, at a time when there was much public discussion about China's plans for 13 dams on the Nu, that he had no knowledge of China's intentions. With the announcement of the plans it became clear that several of the dams would be located close to the Three Parallel Rivers heritage region, and their construction was set to involve the relocation of some 50,000 people.

To the considerable surprise of outside observers, the announcement that dams would be built on the Nu brought an unprecedented series of protests from within China itself, including from the Chinese Academy of the Sciences, two prominent Chinese NGOs, the China Environmental Culture Association and Green Watershed, as well as some prominent individuals. And an even greater surprise followed, given China's poor record on showing concern for environmental issues, when the Chinese premier, Wen Jiabao, announced at the beginning of April 2004 that the plans to build 13 dams would not proceed and that the project was to be reconsidered. Nevertheless, and without any further official statements having been made, a range of reports suggested that plans remained for four dams to be built on the Nu. In the absence of official statements it is necessary to rely on press reports in an effort to identify which dams were still likely to be built. And it may be that five, rather than four dams, will still be built.

So, despite the unavailability of firm information about China's plans, it would certainly be wrong to assume that they have been completely shelved. There is evidence that officials in Yunnan were not reconciled to the announcement by Premier Wen, at least in the period shortly after he made it. According to an Associated Press report from 9 April 2004, the director of the Nu River Power Bureau in Yunnan, Li Yunfei, stated that he had not heard of any changes to the plans to

construct dams. While this may only suggest that decisions taken in Beijing sometimes reach outlying provinces very slowly, there are other indications that preliminary preparations, at least, continue along the course of the river.

A detailed report of a journey along the course of the Nu in China in 2006 makes clear that preparations of various kinds, apparently linked to future dam construction, continue to be made. Published in the online journal, *The Irrawaddy*, of 28 February 2007, Rudy Thomas gives an account of visiting 12 of the 13 sites originally designated as dam sites. Despite his reference to having visited 12 sites, Thomas in his article only refers specifically to activities at five sites as he travelled upstream from just above the Burmese border with China: these sites were at Yan San Shu, Saige, Abilou (this toponym is clearly a misprint for Yabilou), Maji and Songta. At none of these sites was actual dam construction taking place, in the sense that dam walls were being erected. Rather, what Thomas describes appears to be work preliminary to construction, such as core sampling, road construction and tunnelling.

In his article Thomas provides information on the planned size of two of the dams, those at Maji and Songta, that is consistent with the details provided by the International Rivers Network, by far the most active of all international advocacy NGOs in relation to river issues (see Table 1). At Maji, located 'north of the riverside town of Fugong', the planned dam will have a 300 metre high wall and will displace 20,000 people. While at Songta, 'just north of the border that separates the Nu River Prefecture and the Tibetan Autonomous Region', the planned dam's wall will be 307 metres high, with a reservoir stretching back 80 kilometres. If these details are correct, the two proposed dams are very large, with dam walls roughly the same height as the Xioawan dam currently under construction on the Mekong. The dam at Xioawan is frequently spoken of as set to be the second largest dam in China after the Three Gorges dam on the Yangtze. Another very recent reference to the Chinese dams on the Nu, in *Asia Sentinel*, states that Chinese construction crews 'began the first efforts to dam the river this week', that is, in the last week of February 2007. Without further information, it remains unclear whether this report adds to the information provided by Thomas, or whether the reference is essentially to continuing preliminary construction works.

In contrast to the sizeable body of literature that exists discussing, and frequently condemning, the Chinese dams built on the Mekong for their predicted long-term detrimental environmental effects on the countries downstream of China, there has so far been little material published that analyses what dams built on the Nu will mean for the countries downstream of China: Burma and Thailand. The suggestion in the *Asia Sentinel* article cited above that the Chinese dams 'are expected to raise government hackles in Rangoon', is not borne out by other similar information or judgments. Given Burma's extremely close relations with China, on which it is

dependent in so many ways, it seems unlikely that the Burmese government would express a critical view of Chinese intentions, even if it did, indeed, hold concerns about the dams. At the same time, while NGOs which take an active role in relation to the proposed dams for Burma and Thailand make passing reference to possible developments in China, they have not developed arguments dealing with the possible effects of the Chinese dams in the downstream regions in the same manner as has been done in relation to the Mekong, and the effects on the countries downstream of China. Nevertheless, and when, as seems most likely, at least four dams will be built on the Nu, it is reasonable to expect that there will be more vocal and developed criticism from advocacy NGOs, particularly in Thailand. This criticism is likely to be directed both at the possibility that Chinese dams will affect fish stocks in the river and at the human rights issues involved in population displacement.

There is little basis on which to assess China's likely reaction to the protests that have been lodged in relation to the dangers to the heritage status of the proposed dams to be built in the Three Parallel Rivers region. As already noted, these protests have come from within China as well as from external bodies. The concerns expressed by the World Conservation Union were probably the most important of those coming from organisations outside China and which were considered at the twenty-ninth meeting of the World Heritage Committee meeting in Durban, in 2005. At that meeting the World Heritage Committee agreed to send 'a reactive monitoring mission' to evaluate the 'progress made on the conservation of the property', and to 'assess the impact of planned dams on the outstanding universal values of the site, its integrity and downstream communities'.

Before the monitoring mission made its visit to the Three Parallel Rivers region, China submitted a statement to the World Heritage Committee, in January 2006, which stated that there were no plans for dams in the eight areas that make up the World Heritage site. The statement noted, however, that plans had been developed for hydropower stations (dams) adjacent to the site. Of these hydropower stations, to a total of 17, three were being considered for the Nu, with the others under study for the Jinsha (the upper reaches of the Yangtze) and the Lancang (Mekong) Rivers.

Following their visit to the Three Parallel Rivers region, the two-person monitoring team, composed of a representative each from UNESCO and the World Conservation Union, reported that the Chinese authorities with whom they consulted indicated an intention to reduce the area of the heritage area that had been inscribed on the World Heritage List in 2003 by approximately 20%, and more particularly that:

> While the Mission noted the repeated commitment of accompanying officials to applying stringent Chinese laws and policies

> towards protection of the World Heritage Site, the evidence of intrusions from mining, tourism and proposed changes to inscribed boundaries and the lagging release of hydrodevelopment plans, continues to raise concerns about the future integrity of the inscribed property. The existing mining operations within some of the inscribed properties also suggest the possibility of listing the property on the List of World Heritage in Danger.

At the Thirtieth Session of the UNESCO World Heritage Committee, in July 2006, and in the light of the monitoring mission's report, the committee noted that although Chinese officials had given assurances that any future dams would not affect the World Heritage Site, this could not be corroborated since the mission's members were not given any Environmental Impact Assessments or maps relating to the proposed dams that China intends to build. In addition, 'evidence from maps, the inspection of hydro-power development exploratory works, unclear boundaries and advice on proposed dams in the vicinity of the World Heritage property suggest that direct and indirect impacts of dam construction on the property may be considerable'. Concluding that China's positive conservation measures 'are regrettably overshadowed by grave concerns about the, as-yet unreleased, plans for hydro-development', the Committee called on China to submit a report by 1 February 2007 giving details on its plans for dams within the Site area.

To date, I have not been able to find evidence that China has submitted the report the UNESCO committee requested. A lengthy report in the *China Youth Daily* of 17 July 2006 suggested that there was disagreement between national and local authorities about the possibility of building dams in the Three Parallel Rivers region, and that no 'national approval' had been given for the construction of dams on the Nu. If reports such as those already noted suggesting, at the very least, that preparatory work for dam construction is already taking place are correct, this could be taken to mean that concerns to develop hydropower have trumped conservation considerations. If so, there is the likelihood that China will endeavour to retain the Three Parallel Rivers region's heritage classification by excising the areas closest to the Nu, and other rivers from it. Whether this will be acceptable to the UNESCO Committee is difficult to assess, as is the degree of Beijing's concern not to alienate international feeling as the 2008 Olympics draw ever nearer. The *China Youth Daily* reporter chose to be optimistic in concluding his article cited above with the comment that:

> In the end the World Heritage Convention (sic) did not use its 'yellow card,' giving everyone a

> chance to rest a little easier, though we hope that at the next convention we will hear some good news about the Three Parallel Rivers Region.

Yet to conclude in this Panglossian fashion that 'all is for the best in this best of all possible worlds' may neither be justified, nor a reliable index of central government thinking on environmental issues. The World Heritage Committee appears to act in an essentially apolitical fashion in placing sites on its endangered list, and there is no certainty that it will not be ready to act in the same way in relation to the Three Parallel Rivers region. At the same time, and just as Wen Jiabao's decision in 2004 to halt plans for the construction of 13 dams on the Nu was a surprise to many observers, the emphasis placed by the Chinese premier on environmental questions in his recent address to the National People's Congress on 5 March suggests that it cannot now be assumed that the central government will simply disregard the World Heritage Committee's concerns.

Thailand

Until the overthrow of the Thaksin government in September 2006, Thailand was deeply involved in planning for the construction of five dams on the Salween -- three in Burma and two on the border between the two countries -- after the river flowed out of China. This involvement reflected Thailand's growing energy needs and concerns on the part of its Electricity Generating Authority (EGAT) to avoid building dams in Thailand itself, where they had become a highly controversial issue. Discussions about these dams began in 1994 when Thailand signed a preliminary agreement to purchase electricity from dams on the Salween that would be built in Burma. (Prospective sites for dams on the Salween are shown in Map 2.)

It was not until December 2005 that EGAT and the Burmese Ministry of Electric Power signed a Memorandum of Agreement for the construction of a dam at Hutgyi, in Burma, as the first of five planned dams on the Salween, either in Burma or on the Thai-Burma border. Later, in September 2006, EGAT was reported as finally formalising plans for the five dams, and as having stated that previous plans were being discarded since they could have been regarded as Thai interference in Burma's domestic affairs. Under the December 2005 agreements between Thailand and Burma, preliminary plans were drawn up for dams that would be constructed at Hutgyi, Tasang, and a further unnamed location in Shan State, in Burma, and at Weigyi and Dagwin, where the river runs between Burma and Thailand. With an estimated total cost of US$10 billion, the dams were projected to be able to produce 10-15,000 MW of power, with Thailand receiving up to 90% of the energy produced. The remaining 10% generated was to be provided free to Burma. As of August 2006 an agreement was in place for the first dam to be built at Hutgyi by the major Chinese construction firm, Sinohydro, partly with Chinese funding, with work set to begin in

December 2007.

The plans for the Salween dams, as they stood before the overthrow of the Thaksin government in September 2006, attracted vigorous criticism from advocacy NGOs, particularly those concerned with human rights, but also in relation to environmental issues. Prominent opposition political figures, such as former chairman of the Thai Senate Foreign Relations Committee, Kraisak Choonhavan, were also active in condemning the planned dams. The Tasang dam will, when constructed, be the largest dam in Southeast Asia, with a wall rising 228 metres and the capacity to generate 7,100 MW. During 2006 preliminary roadworks for access to the dam site at Tasang were carried out by a Thai real estate and construction firm, MDX. Now, in April 2007, reports have emerged stating that work has commenced on the dam proper. This news has coincided with the announcement of the signature of a Memorandum of Understanding between the Burmese government and two Chinese firms for the construction of the Upper Thanlwin dam mentioned earlier in this paper, and which will have a generating capacity of 2,400 MW.

Both the Tasang and Upper Thanlwin dam sites are in Burma's Shan State, a region which has already experienced large-scale forced population relocation as part of the Burmese government's concern to exercise control over dissident, and potentially dissident, minority populations. A variety of NGO reports estimate that up to 300,000 people have been forcibly relocated in Shan State over the past decade.

Human rights issues, as these relate to ethnic minority dissidents, have also been raised in the case of the planned Hutgyi dam. The area in which the dam is to be built is home to members of the Karen minority, who have long opposed Burmese control, and there have been reliable reports of the Burmese government engaging in forced relocation of the population in the area as roads are built and villages are destroyed to make way for large-scale agriculture. One indication of the problems in the general Hutgyi area has been the increased flow of refugees across the border into Thailand. And as a sign of the militarisation of the area an EGAT employee engaged in survey work for the Hutgyi dam was killed by a landmine in May 2006.

Following the military coup that ousted former Prime Minister Thaksin, the Energy Minister in the new interim Thai government, Piyasvasti Amranand, announced in October 2006 that he did not intend to go forward with the agreements reached between Thailand and Burma for the construction of five dams on the Salween. This announcement was greeted with surprise, but appears to accord with Piyasvasti's reputation as an independent-thinking technocrat with well-established qualifications in the energy field. His independence was underlined by his decision to resign from his position as a deputy permanent secretary in the Prime Minister's Office, in 2003, following policy disagreements that

included energy issues, particularly as these related to Thaksin's hopes to privatise EGAT. In making his announcement, Piyasvasti mapped out his own view of how Thailand should meet its future energy needs, placing greater emphasis that had previously been the case on purchasing energy from Laos and sourcing gas supplies from the Middle East and from Cambodia, Indonesia and Vietnam. Nevertheless, and despite Piyasvasti's announced decision not to proceed with the agreements Thailand had previously reached with Burma in relation to the suite of dams on the Salween, it has become clear that his government is still committed to the Hutgyi dam on the Salween. And as already noted, construction of a dam at Tasang with the involvement of a Thai construction company has apparently begun.

Beyond the fact that this commitment will continue to be contested by human rights groups, and recently formed the basis of a major protest by advocacy NGOs on 28 February, the policies being followed by the interim Thai government that has replaced the Thaksin regime are clearly less accommodating to Burma than those of its predecessor. This policy, characterised by Thaksin as 'forward engagement', looked to Thailand's closer association with the Burmese regime in a range of economic activities, of which dams on the Mekong was one of the most important. Other areas in which 'forward engagement' was to define policies included the proposed involvement of Thailand in the exploitation of gas reserves in the Bay of Bengal and also in projected mining and logging ventures. Given the increasing readiness of some ASEAN members to criticise the State Peace and Development Committee (SPDC) regime in Burma, it will be of considerable interest to see whether this change in Thailand's policies, with the decision to draw back in relation to the Salween dams as a key element, results in further pressure on Burma to make at least some gestures towards reform. There are few signs that this is likely.

Navigating the Mekong

When *River at risk* was published in 2004, clearance of obstacles to navigation in the Mekong River between southern Yunnan and northern Thailand had just been completed. This operation followed the signature, by China, Burma, Laos and Thailand, in April 2000, of the *Agreement on Commercial Navigation on the Mekong-Lancang River*, which envisaged the eventual clearance of the river as far as the former Lao royal city of Luang Prabang. Despite the Environmental Impact Statement for the clearance program delivered in 2001 -- in which China had a major input -- being sharply criticised by outside observers, clearance began the following year. Financed entirely by China, and with the work largely undertaken by Chinese work crews, 23 separate rapids, reefs and other obstacles were removed from the river bed to make possible year-round navigation of the Mekong by vessels up to 150 Dead Weight Tons (DWT) as far as Chiang Saen.

Although the original plan for this first

stage of the clearance operation envisaged obstacles being removed from the river as far as the Thai river port at Chiang Khong (and its Lao neighbour located directly across the Mekong, Huay Xai), unresolved boundary issues have meant that a final, major set of obstacles just upstream from Chiang Khong remain â€• the boundary issues involved appear to relate to concerns on the part of Thai authorities that the removal of these obstacles might affect the *thalweg*, which is the national boundary between Thailand and Laos, as well as affecting the territorial status of sandbanks that regularly appear in the river during periods of low water. For the moment, with these obstacles still in place, Chiang Kong effectively functions as a terminal for Lao river vessels, but it is not accessible to large Chinese vessels that berth at Chiang Saen.

It also seems likely that no action has been taken to clear this remaining obstacle since there is a recognition that Chiang Khong will relatively soon become an important link in the road system that is being developed to run from Kunming, the capital of Yunnan province in China, to Bangkok. This highway will pass through Laos and will eventually cross the Mekong over a bridge at Chiang Khong. Approval for the construction of this bridge has already been given by the Thai government. As for the rest of the river clearance plan that was the subject of the agreement concluded between China, Burma, Laos and Thailand in 2000, and which would have seen clearance extend into Laos as far as Luang Prabang, there are no current signs that any of the parties are pressing for this to take place.

In terms of the parts played by the four parties to the 2000 navigation agreement since the clearances were completed, the roles of China and Thailand have been much more important than those of Burma and Laos. Burma's interest in the Mekong, despite the river's forming a national boundary, is limited by the fact of sparse settlement in the region past which the river flows. For the Burmese authorities the Irrawaddy River is of greater importance as a navigable waterway, a fact that is important to the Chinese, also, who see it as a future link in a road/river transport system that would give it access from Yunnan to the Bay of Bengal. As for Laos, as noted below its vessels appear unable to compete with Chinese cargo boats over the cleared section of the river.

In terms of the expansion of navigation on the Mekong since 2004, what has occurred is remarkable, even though there is a dearth of accurate and fully up-to-date statistics to quantify developments. In China there are now two fully functioning river ports capable of handling cargo vessels throughout the year. These are at Jinghong, the last major settlement in southern Yunnan, and Guan Lei, an almost entirely new town only recently carved out of the surrounding jungle. Major dockworks were still being built when I visited Guan Lei, in February 2003, to board a cargo boat for travel down the Mekong. These dockworks have now been completed. And in Thailand substantial developments at Chiang Saen have made that river port,

and current terminal for vessels coming downriver from China, both an important trade link and a settlement in the process of demographic transformation.

As recently as 2006, most Chinese vessels coming to Chiang Saen were still loading and unloading their cargo a little upstream of the town. They did this by mooring next to a section of the river's bank that had been concreted for stability. There, with gangs of labourers employed to shift the cargo, it was carried over planks stretched between the boats and the shore. This very basic method of shifting cargo was apparently designed to circumvent paying port charges. This was despite the existence of port facilities constructed by the Thai authorities as long ago as 2004. These facilities are now in full use, as I witnessed them in January of this year. They consist of two covered pontoon docks equipped with conveyor belts and ramps suitable for truck traffic. At the time I observed the port in action, the pontoon docks were servicing eight vessels. Despite the presence of the conveyor belts linked to each dock, much of the cargo handling was still being carried out by labour gangs, with the bulk of the cargo being unloaded from China consisting of fresh fruit and vegetables.

Some heavier goods were being loaded on to trucks on the docks and trucks were also being used to bring Thai palm oil and sacks of soybean meal as backloading of the Chinese vessels for their return trip. A mobile crane was also in use for even heavier items than those picked up or delivered by truck. In the light of the current activity around this existing port, there are plans to build a further facility downstream from Chiang Saen, which will be capable of servicing vessels up to 500 DWT. Although some of my informants spoke of work already being under way for this new port, with feasibility studies supposed to have been completed by 2006, I did not see any indication of this during my visit to Chiang Saen. (See Photograph 2 of Chinese vessels moored at the existing Chiang Saen facilities in January 2007.)

Photograph 2: Chinese vessels at Chiang Saen

As a reflection of the Chinese dominance in this river trade, when I was in Chiang Saen, there were no fewer than 24 Chinese vessels in port and strung out over a distance of some kilometres along the river. This was in contrast to the three Lao vessels I observed, and the total absence of Thai vessels. Anecdotal accounts from Thai informants to whom I spoke in both Chiang Saen and Chiang Khong suggest that the imbalance between Chinese and Thai vessels travelling on the river is of the order of 90% to 10%. In general, Thai vessels are smaller and less powerful than their

Chinese counterparts; this fact was the cause for some controversy and resentment during the 2003-04 dry season, when the Mekong fell to unusually low levels. Although this fall was certainly connected to an unusually short wet season and subsequent drought, there is no doubt that the low levels also reflected the fact that the Chinese authorities were holding back water discharges from their dams on the Mekong, at Manwan and Daochaoshan. They did this so that they could then release water in sufficient quantity for Chinese vessels to travel to and from Chiang Saen. The less powerful Thai vessels were unable to make the same transits in the relatively short period the river's water levels remained navigable.

There are no reliable statistics for the number of Chinese vessels using the port on an annual basis, though it is certain that the figure of 3,000 vessels claimed for 2004 -- an increase from 1,000 the year before -- has most certainly been exceeded. As for the figures for the trade that passes through Chiang Saen, unofficial figures compiled by researchers for the Indochina Media Memorial Foundation, in Chiang Mai, for 2006, show a balance heavily in Thai favour, with imports from China totalling approximately US$36 million, while exports to China were approximately three times larger at US$115 million. These figures take little account of the impact China's imports are having in northern Thailand, a point emphasised by former senator Kraisak Choonhavan, in conversations I had with him in both 2005 and 2007. He draws attention to the fact that the bulk of Chinese goods shipped into northern Thailand is made up of fruit and vegetables. These are often landed at prices against which local farmers cannot compete. This is particularly the case with garlic and onions, though there have been periods when poor growing conditions in China reversed this situation.

In March 2006 a little-publicised agreement was signed by Burma, China, Laos and Thailand to permit the transport of oil from Thailand to southern Yunnan. Under this agreement, the amount of refined oil to be shipped from Chiang Saen was set at 1,200 tons each month. Although a relatively small amount, the agreement immediately sparked environmental concerns, not least because the oil was to be shipped in barrels rather than in specially constructed vessels, so that a collision or grounding of vessels carrying oil would pose a major risk to the Mekong and its fish stocks. So far there has only been a report of one shipment having been made, of 300 tons -- with 150 tons of oil being loaded on each of two vessels. But Chinese officials have indicated that they have much bigger plans in mind and have spoken of future shipments of up to 70,000 tons per year. In speaking in these terms, a Chinese official linked the shipment of oil from Thailand to southern Yunnan with his country's concern about the possibility of Middle Eastern oil shipments through the Straits of Malacca being blocked by the United States should there be conflict between China and Taiwan. Leaving aside the likelihood of such a development occurring, the suggestion that 70,000 tons shipped up

the Mekong would represent a major answer to China's energy security concerns appears to be a notable exercise in hyperbole. Today, even a moderately sized tanker carries that amount of oil. Possibly more to the point is the fact that Thailand subsidises the cost of oil so that shipments made by way of the Mekong will be landed in Yunnan at a lower price than would otherwise be the case for oil brought overland from Chinese coastal ports.

Of considerable interest is the impact that the Mekong River trade is having on Chiang Saen town, and more generally within Chiang Rai province, within which the town is located. Until the early 1980s Chiang Saen, which I visited several times during that decade, was little more than an overgrown village beside the Mekong River. Once the site of a small, fourteenth century kingdom, whose walls remain to the present day, it and the river plains surrounding the town were the site of repeated clashes between Thai and Burmese armies in the eighteenth century, to the point where the settlement had almost disappeared by the nineteenth century. Although, by the late 1990s, Chiang Saen had grown in size and was used in a limited fashion as a terminal for trade between southern Yunnan and northern Thailand, its status was transformed by the navigation clearances completed in 2004. Most particularly, its growth in size has been accompanied by what, for want of a better word, may be described as its 'Sinification'.

Chinese immigration into Thailand has, of course, a long history What is striking about developments at Chiang Saen, and in Chiang Rai province as a whole, is the rapidity with which a new Chinese element has become part of the demographic and commercial landscape. This change was well described by Joshua Kurlantzick, of the Carnegie Institute, in an article published in the *Bangkok Post* in October 2005, in which he wrote of the sudden burgeoning in the number of Chinese restaurants in Chiang Saen, signs in Chinese advertising cheap telephone calls to Yunnan and the apparently dominant presence of Chinese nationals in the town's commerce. The picture Kurlantzick offered appeared entirely justified in the course of my own visit in January 2007. But, more to the point, it is also the view of the range of Thai informants with whom I discussed the impact of Chinese in-migration, both legal and otherwise, into Chiang Saen and Chaing Rai province. These informants, who included a senior Thai politician, business figures in both Chiang Mai and Chiang Khong, and Thai NGO representatives, provided an anecdotal picture of unregulated Chinese immigration into Chiang Saen, with illegal immigrants marrying Thai women in order to regularise their status and become eligible to own land. In no case were my informants able to quantify the number of Chinese immigrants who had settled in the area around Chiang Saen, but there seems no basis for doubting the basic validity of their accounts.

One reason this is so is the quite clear indication that illegal and undocumented Chinese immigration into Burma, Laos

and Thailand has been taking place for some time. It is now accepted that Lashio and Mandalay in Burma have Chinese populations exceeding 50% and 25% respectively. As recorded in *The paramount power*, illegal Chinese immigration into Laos is a real, if undocumented, fact, with the new arrivals ranging from poor rural peasants to minor businessmen. Chinese settlement in northern Thailand, in Chiang Rai province, is taking place at a time when there has been a major increase in Chinese commercial activity in the region, with the most active role being played by interests based in Yunnan. While the announcement of plans, such as those for an industrial estate in Chiang Saen, may not always proceed at the pace their promoters promise, the overall picture is one of Chinese corporations playing an increasingly active role in the region. According to Dai Jie, deputy director of Yunnan Provincial Bureau of Foreign Trade and Economic Cooperation, a three-phase project consisting of a 'commodities city, duty-free zone and a supplier's centre,' close to Chiang Saen town, is set to be completed in 2014.

As already noted in relation to the shipments of oil up the Mekong from Chiang Saen to Yunnan, the environmental costs of the commercial activity now centred around Chiang Saen are a subject for concern among the active Thai advocacy NGOs that monitor developments linked to the Mekong River. More generally, these groups draw attention to the decline in fish catches along the course travelled by vessels between Chiang Saen and Yunnan, and particularly in relation to catches in the area immediately around the town. They also argue that as a result of changes in flow patterns along the river between Chiang Saen and Chiang Khong river banks and sandbanks used for horticulture in dry seasons continue to be adversely affected. These variations in flow patterns are, the NGOs argue, the product both of the dams that have already been built in China and of the negative hydrological effects of the clearances that have been undertaken to facilitate navigation.

Concluding Remarks

The developments discussed in this paper point to the manner in which environmental issues, and frequently those issues combined with concerns relating to human rights, are playing an increasingly important part in the politics of the Asian region. Concern for the environment is no longer a fringe issue, and there is no more striking illustration of this fact than the domestic opposition that was mounted within China to the proposed dams on the Nu, and which sparked the important but unexpected reaction by the Chinese premier, Wen Jiabao, to step in and put plans for the construction of 13 dams on hold. Attention has also been drawn in the paper to the important part played by Thai environmental activists in relation to their government's policies, both towards the Salween and the Mekong.

Although the broader issue of climate change has dominated global discussion of environmental issues, the politics of

water, of its use and its availability are receiving ever-greater attention. And this is likely to be increasingly the case as the future use of rivers in China and Southeast Asia intersects with policies linked to energy and increased irrigation. The centrality of rivers and their exploitation to a broad range of political issues is strikingly illustrated in the two cases examined in this paper. In the case of the Salween, energy resources in China, Burma and Thailand, human rights in Burma and intra-ASEAN relations are all issues that stem from the contested future of a river. And for the Mekong, while attention has previously focused chiefly on China's dam-building activities, the new navigation regime has raised environmental issues while playing a part in the increasing Chinese presence in northern Thailand. That UNESCO should now be involved in what is currently an unresolved issue over the heritage status of the Three Parallel Rivers region, through which the Nu, Mekong and Yangtze all flow, is a testimony to increasingly broad reach of environmental factors.

Neither the Salween nor the Mekong are close to the parlous state of China's Yellow River, which is suffering from the combined effects of overuse, recurrent droughts, and the decrease of snow-melt as Himalayan glaciers contract in size. The river's dire condition has prompted consideration within China of the possibility of a transfer of water from other rivers, including even one as far distant as the Yangtze, in an effort to return its flow to a healthy state. So while the Mekong and the Salween are currently in a notably healthy state by comparison with the Yellow River, and indeed, the lower reaches of the Yangtze, their futures are not automatically assured. The fact that both are vital to the well-being of the countries through which they flow make the matters examined in this paper issues of real consequence.

At another level, the issues examined in this paper reinforce the judgments made in *The paramount power*, as China's involvement with the countries of Southeast Asia continues to grow. So, at the same time as China seeks to develop hydropower on the Nu within its own territory, it is closely involved through Chinese-based commercial companies in the developments taking place on the Salween beyond its borders. And, as is clear from the information provided on developments associated with navigation of the Mekong, China is both integral to the navigation process itself and becoming ever more deeply involved in the commercial life of Thailand's Chiang Rai province, in which the river port of Chiang Saen is located. All of these developments reinforce a judgment that China continues to build on its previous successes in dealing with the countries of Southeast Asia — particularly those of the mainland region — to project further its influence on a peaceful basis and in cooperation with those states.

THE PLANNED HYDROPOWER PROJECTS ON NU RIVER

Name of hydropower project	Installed capacity (MW)	Annual power output (100 mln kWh)	Height of dam (m)	Investment (RMB/kW)	Investment (RMB/kWh)
Songta	4200	178.7	307	4685	1.101
Bingzhongluo	1600	83.4	54.5	3271	0.628
Maji	4200	189.7	300	4393	0.972
Lumadeng	2000	100.9	165	4565	0.906
Fugong	400	19.8	60	5733	1.158
Bijiang	1500	118	71.4	3958	0.831
Yabiluo	1800	90.6	133	3334	0.662
Lushui	2400	127.4	175	3661	0.689
Liuku	180	7.6	35.5	5236	1.24
Shitouzai	440	22.9	59	5273	1.103
Saige	1000	53.7	79	3645	0.68
Yansangshu	1000	52.0	84	4354	0.837
Guangpo	600	31.5	58	4788	0.912

Source: *Yunnan Wang* (Yunnan Net)

APPENDIX

A brief overview of current, and controversial, issues associated with the Mekong

The content of this paper has, in relation to the Mekong, been essentially concerned with navigation and associated developments. At a broader level, the release of two key documents during 2006 seems likely to spark further controversy in relation to the uses made of the river and the institutions that play a role in determining its future. These documents are: a Mekong River Commission (MRC) draft document, 'Integrated Basin Flow Management Report No. 8, *Flow-regime assessment*,' of February 2006, and a joint World Bank (WB) and Asian Development Bank (ADB) working paper, 'Future directions for water resource management in the Mekong basin, Mekong Water Resources Assistance Strategy', released in June 2006.

The first of these two documents has been released at a time when there is very active discussion about the future role of the MRC, in particular the extent to which it can play a role in which its trans-national responsibilities can supersede the interests of its four, individual national members. And, most importantly, it bears on the question of the extent to which the MRC should play a role in promoting development (infrastructure such as dams and water diversion projects) as opposed to its role to date as, essentially, being a repository of knowledge about the Mekong River and its basin. The particular salience of this latter issue is illustrated by the fact that the MRC document discusses in detail a range of predicted and costly effects that *could* occur in Cambodia -- where fish form the overwhelming source of the population's protein intake -- in the event of three different 'flow regimes'.

The WB/ADB Working Paper, which, most usefully, should be read in conjunction with the MRC paper just discussed, states in its 'Executive Summary' that the 'bottom line message of this Mekong Water Resources Assistance Strategy is that the analytical work on development scenarios has, for the first time, provided evidence that there remains considerable potential for development of Mekong water resources'. In the light of this conclusion, and conceived in terms of the river's trans-national character, the paper urges a move away from 'the more precautionary approach of the past decade that tended to avoid any risk associated development, at the expense of stifling investments'. While not disregarding risks, the paper argues that 'balanced development' should be 'the driving principle for the management and development of the Mekong River Water

resources in the coming years'.

The issues involved in these two documents go the heart of the Mekong's future and that of the people of the Mekong basin. As such they deserve extended analysis, which is beyond the compass of this brief note. For the moment it is sufficient to observe that should the assumptions in the two documents prove to be incorrect the cost in human terms could be high indeed. One of the reasons for this sombre conclusion is to be found in the problems that are already apparent in the case of infrastructure development on two rivers that are tributaries of the Mekong, the Se San and the Sre Pok, which rise in Vietnam but flow into the Mekong in Cambodia.

As discussed in *River at risk*, Vietnam's decision to build dams on Mekong tributaries has resulted in substantial and damaging effects on Cambodian communities living downstream. Despite the warm political relations between Cambodia and Vietnam, no solution has been found to the problems caused by the presence of these dams and the consequences of water releases from them. With the prospect of a very substantial increase in the number of dam projects being undertaken in Vietnam and Laos, some of which are on Mekong tributaries that are trans-national in character, the need to put in place a future, equitable governance of the Mekong system as a whole — an issue central to the MRC and WB/ADB documents — is clearly of great importance. The manner in which this issue is resolved, or a failure to do so, will be of the greatest importance for the 70 million people who live in this great river's basin.

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