

1998

## Opening the Lancang (Mekong) River in Yunnan :: problems and prospects for Xishuangbanna/

Merrick Lex Berman  
*University of Massachusetts Amherst*

Follow this and additional works at: <https://scholarworks.umass.edu/theses>

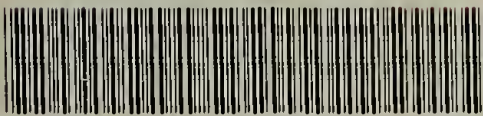
---

Berman, Merrick Lex, "Opening the Lancang (Mekong) River in Yunnan :: problems and prospects for Xishuangbanna/" (1998). *Masters Theses 1911 - February 2014*. 1321.  
<https://doi.org/10.7275/6870846>

This thesis is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Masters Theses 1911 - February 2014 by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact [scholarworks@library.umass.edu](mailto:scholarworks@library.umass.edu).



UMASS/AMHERST



312066015819189



**OPENING THE LANCANG (MEKONG) RIVER IN YUNNAN:  
PROBLEMS AND PROSPECTS FOR XISHUANGBANNA**

A Thesis Presented

by

MERRICK LEX BERMAN

Submitted to the Graduate School of the  
University of Massachusetts Amherst in partial fulfillment  
of the requirements for the degree of

MASTER OF ARTS

May 1998

Department of Asian Languages and Literatures

**© Copyright by Merrick Lex Berman 1998**

**All Rights Reserved**




OPENING THE LANCANG (MEKONG) RIVER IN YUNNAN:  
PROBLEMS AND PROSPECTS FOR XISHUANGBANNA


A Thesis Presented

by

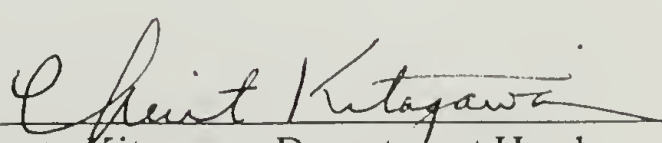
MERRICK LEX BERMAN

Approved as to style and content by:

  
Donald E. Gjertson, Chair

  
Piper Gaubatz, Member

  
Lucien Miller, Member

  
Chisato Kitagawa, Department Head  
Asian Languages and Literatures

## ACKNOWLEDGEMENTS

Many thanks to Alvin Cohen and Cheng Ching-mao for years of encouragement and support. Also thanks to Lucien Miller for his kindness and enthusiasm. For their advice, comments, and information, I would also like to extend my gratitude to Piper Gaubatz, James Hafner, E. Bruce Brooks, Edwin Gentzler, and the late Prof. Tong Enzheng. As a recipient of a 1997-98 Fulbright research scholarship to Taiwan, I would also like to take this opportunity to thank everyone who made it possible for me to continue my research for this thesis and related topics on Southwest China's transport infrastructure, including Shen Zhongwei, Chen Chao-Zung, Wu Jying-jyi (and the whole FSE staff), with a special note of thanks to the Institute of History and Philology at Academia Sinica, Taiwan, for use of their computer and library facilities, and to my sponsor at Academia Sinica, Fan I-Chun.



ABSTRACT

OPENING THE LANCANG (MEKONG) RIVER IN YUNNAN:  
PROBLEMS AND PROSPECTS FOR XISHUANGBANNA

MAY 1998

MERRICK LEX BERMAN

B.A., UNIVERSITY OF MASSACHUSETTS AMHERST

M.A., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Donald E. Gjertson

Regional cooperation to develop the Lancang (Mekong) River in China and five neighboring states of mainland Southeast Asia has swept the Chinese border region of Xishuangbanna Prefecture into a period of rapid change. Once an isolated region of lush tropical rain forest, Xishuangbanna will face increasing pressures of land, water, and air traffic; industrialization; urbanization; and subsequently risks of pollution, deforestation and environmental degradation. This study examines the plans for future development, the existing infrastructure, and the use of the river by the local residents, in order to identify the areas of greatest contact and possible conflict that will result from the opening of this international shipping corridor.

## PREFACE

This study is divided into four sections, the first of which places the sudden interest in developing the Lancang (Mekong) corridor in its current international context. As the six countries of the Greater Mekong Subregion (GMS) have begun to cooperate on economic development, they have found increasing support from both regional and international organizations. Although a variety of basic infrastructure projects have already been agreed upon in the transport, energy, tourism, telecommunications, and human resource development sectors, one of the projects which has already made considerable headway is the opening of the shipping corridor on the Lancang (Mekong) River. During the last two years, new border agreements and navigation agreements have opened the flow of trade goods along the route from Xishuangbanna in the north, to Chiang Khong, Thailand and Huay Xai, Laos in the south.

In the second part of this study, the physical geography of the river basin, as well as its existing transport and energy infrastructure will be looked at in greater detail. The soaring cliffs, rapids, and surging currents which characterize the northern reaches of the Lancang River in China preclude any navigation except at a few protected ferry crossings, while the widening of the river and lessening of the degree of slope makes the Xishuangbanna region the farthest north that navigation has traditionally been able to penetrate.

The history and economy of Xishuangbanna are examined in the third part of this study, focusing on the Dai kingdom which dominated the area for many centuries. The Dai people of Xishuangbanna, with their highly developed social and political structures, were the northern members of a network of four loosely associated Dai kingdoms. With the formation of modern "states," borders divided the four kingdoms



into the territories of China, Laos, Thailand and Myanmar, and then the Dai people were further isolated by the Communist consolidation of the Yunnan frontier. Although they have been forced to dissociate themselves from their cross-border neighbors for many decades, the Dai people are now being held up as models for the traditional "ethnic trade," which is supposed to form a cultural and linguistic basis for the booming border trade now sweeping Yunnan.

The fourth section of this study will evaluate and compare the various points of view being expressed by the Chinese authors writing on the subject of opening up Yunnan's border regions to international trade and tourism. This section will focus on the inconsistent objectives that have been set forth to open up the Lancang (Mekong) corridor, (for example, the contradictions implicit in a policy of connecting ethnicity and trade), and will contrast the sensibilities of Yunnan native authors with national level development and policy experts, and provide a background for analysis of emerging trends throughout the region. Such trends include the impact of world market forces, urbanization, and tourism on the local society. In conclusion, the effects of shipping traffic on the Lancang River ecology will be considered and contrasted with the philosophy of preserving Yunnan's natural environment by developing eco-tourism. As an appendix to the main text, the latter position on nature conservation will be spelled out by a complete translation of Yang Fuquan's 1995 article, "Eco-Tourism and the Protection of Yunnan's Tourist Resources."

TABLE OF CONTENTS

	<u>Page</u>
ACKNOWLEDGMENTS . . . . .	iv
ABSTRACT . . . . .	v
PREFACE . . . . .	vi
LIST OF FIGURES . . . . .	x
LIST OF MAPS . . . . .	xii
LIST OF ABBREVIATIONS . . . . .	xiii
Chapter	
I. NEW WAVE OF INTEREST IN DEVELOPING THE LANCANG (MEKONG) REGION . . . . .	1
A. Greater Mekong Subregion (GMS) Cooperation . . . . .	1
1. Growth of Border Trade Between China and the Mekong Countries . . . . .	3
2. Emerging Players in GMS Development . . . . .	5
B. Opening the Lancang (Mekong) River . . . . .	8
C. Endnotes to Chapter I . . . . .	12
II. THE LANCANG RIVER: GEOGRAPHY AND INFRASTRUCTURE . .	17
A. Geography of the Lancang Basin . . . . .	17
B. Transport on the Lancang River . . . . .	19
1. Bridges . . . . .	19
2. Ferries . . . . .	20
3. Existing River Transport . . . . .	21
C. Industrial and Energy Infrastructure . . . . .	23



1. Energy Sector . . . . .	23
2. Industry . . . . .	27
D. Endnotes to Chapter II . . . . .	32
III. THE PEOPLES, HISTORY, AND ECONOMY OF XISHUANGBANNA (XSBN) . . . . .	37
A. The Xishuangbanna Dai People . . . . .	37
1. Historical Background . . . . .	37
2. Social Organization of the Dai-Lue Kingdom . . . . .	38
3. Network of Dai Kingdoms . . . . .	39
B. Formation of Modern Borders . . . . .	40
C. Communist Consolidation . . . . .	41
D. Ethnicity and Trade . . . . .	43
1. Background of "Ethnic" Border Trade in XSBN . . . . .	43
2. Ethnic Trade as a Key to Opening the Border . . . . .	46
E. Endnotes to Chapter III . . . . .	48
IV. SOCIAL AND ENVIRONMENTAL CONSEQUENCES OF DEVELOPMENT . . . . .	54
A. Labor Issues in the Border Region . . . . .	54
B. Poverty and Economic Development . . . . .	55
1. Strategies for Economic Growth . . . . .	56
2. Transport Sector as a Key to Growth . . . . .	58
C. The Trend Toward Urbanization . . . . .	60
D. Meeting of the "Frontier" and the World Economy . . . . .	63
E. Tourism and Opening XSBN . . . . .	66
F. River Ecology . . . . .	69
G. Use of the Lancang River in Dai Society . . . . .	70
1. Shipping . . . . .	70
2. Bathing, Washing and Fishing . . . . .	72

H. Eco-tourism and Alternative Views on Development . . . . .	75
I. Endnotes to Chapter IV . . . . .	108
APPENDIX: "ECO-TOURISM AND THE PROTECTION OF YUNNAN'S TOURISM RESOURCES" by Yang Fuquan . . . . .	113
BIBLIOGRAPHY . . . . .	133



## LIST OF FIGURES

Figure		Page
1.	China - Myanmar Trade . . . . .	81
2.	China Trade With GMS Countries . . . . .	82
3.	River Crossing at China - Viet Nam Border . . . . .	83
4.	China - Thailand Trade . . . . .	84
5.	Kawagarbo Mountain Towers Over the Upper Lancang . . . . .	85
6.	Cliffs Along the Upper Lancang and Its Tributary Streams . . . . .	86
7.	The Lancang Valley South of Yongping . . . . .	87
8.	Giant Banyan in XSBN's Forest Near Daluo . . . . .	88
9.	Length and Drainage of Lancang / Mekong . . . . .	89
10.	Goatskin Rafts For Crossing the Yangzi In Northern Yunnan . . . . .	90
11.	Woven Bridge Over the Dulong River In Yunnan . . . . .	91
12.	Rope Bridge Across the Upper Mekong . . . . .	92
13.	Greasing a Rope Bridge with Yak Butter On the Way Across . . . . .	93
14.	Horses Being Slung Across the Mekong & Salween Rivers . . . . .	94
15.	Iron Bridge Across the Yangpi River . . . . .	95
16.	Ship Service at Guanlei, XSBN . . . . .	96

17. Myanmar Inland Water Freight Volume  
and Containers Handled . . . . . 97

18. Hydropower Stations on the Lancang River,  
Existing and Proposed Development . . . . . 98

19. Manwan Hydropower Station . . . . . 100

20. The Jinghong Bridge Over the Lancang . . . . . 101

21. Yunnan Forward Position Border Processing Bases  
and Mekong Subregion Urban Populations . . . . . 102

22. Traditional Dai Architecture . . . . . 103

23. Traditional Mekong Rafts . . . . . 104

24. Bathing in the Lancang River . . . . . 105

25. Washing Vegetables in the Lancang River . . . . . 106

26. Huayao Dai Women Dragging For Fish . . . . . 107

LIST OF MAPS

Map	Page
1. The Lancang (Mekong) River in China and Southeast Asia . .	2
2. The Lancang River in Yunnan . . . . .	11
3. River Transport in Xishuangbanna . . . . .	22
4. Hydropower Development on the Lancang River . . . . .	25
5. Surface Transport and Airports in XSBN Region . . . . .	30



## LIST OF ABBREVIATIONS

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
CFFA	<i>China, Facts &amp; Figures Annual.</i>
DZSH	<i>Daizu shehui lishi diaocha: Xishuangbanna.</i>
EIU	Economist Intelligence Unit
ESCAP	Economic & Social Commission for Asia & the Pacific (U.N.)
FBIS	Foreign Broadcast Information Service
FEA	<i>Far East and Australia.</i>
FEER	<i>Far East Economic Review.</i>
GMS	Greater Mekong Subregion
GTJJ	<i>Xishuangbanna guotu jingji kaocha baogao.</i>
MRC	Mekong River Commission
MZYJ	<i>Minzu yanjiu gongzuo de yuejin.</i>
NGO	Non-Governmental Organization
SLORC	State Law and Order Restoration Committee (Myanmar)
TAT	Tourism Authority of Thailand
TYPN	<i>Thai Yunnan Project Newsletter.</i>
UNDP	United Nations Development Program
XSBN	Xishuangbanna
YNDZ	<i>Yunnan di zhou shi xian gaikuang.</i>

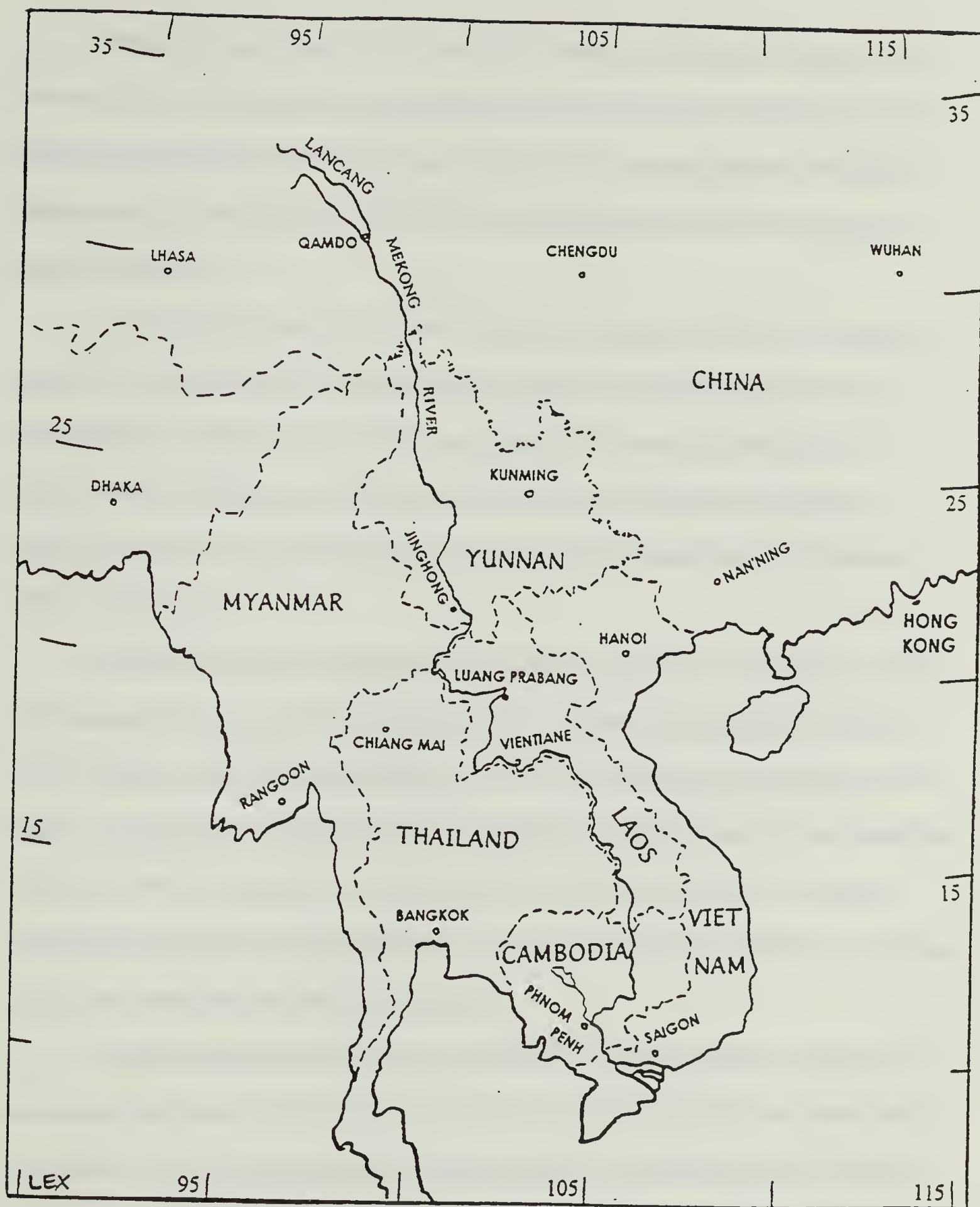
# CHAPTER I

## NEW WAVE OF INTEREST IN DEVELOPING THE LANCANG (MEKONG) REGION

### A. Greater Mekong Subregion (GMS) Cooperation

For more than half a century, many plans have been put forward to harness the Mekong (also known as the Lancang), the vital river that rolls down from the mountains of central China and links all five countries of mainland Southeast Asia. Due to the political and social turmoil that has shaken the entire region for many decades, the majority of these development programs were put on hold, while the development that did take place often resulted in the deforestation and further degradation of the river basin, rather than in improving it.<sup>1</sup>

During the last several years, the Mekong has once again become a focus of attention as the six riparian countries of the Mekong (Cambodia, China, Laos, Myanmar, Thailand, and Vietnam) have found a mutual advantage in opening up the river basin for development, and are working to establish subregional economic cooperation in a political environment that promises some degree of stability. The basic change in the region has been the sudden growth of border trade, and the promise of shorter, cheaper connections between China and its southwestern neighbors. If the Mekong can be opened up for transport of raw materials, agricultural products, manufactured goods, and passengers, then a new engine to drive the regional economy can be created and the recent boom of trade with the landlocked Chinese province, Yunnan, can be sustained.



(Based on *Zhonghua renmin gongheguo qihou tuji*, 1978: 6.)

Map 1. The Lancang (Mekong) River in China and Southeast Asia



## 1. Growth of Border Trade Between China and the Mekong Countries

Toward the end of the 1980's, unofficial border trade increased significantly in Yunnan. This revival and the subsequent boom of China's trade with Southeast Asia followed decades of unsettled relations, during which the establishment and discontinuation of trade relations proceeded like a wild roller coaster ride over a series of political upheavals.

For example, a boom in trade with Myanmar began in 1987, with the beginning of the Burma Socialist Program Party's liberalization of foreign and domestic trade policies.<sup>2</sup> Burma's trade with China rose by 72% over the previous year. In 1988, when the ruling *junta*, the State Law and Order Restoration Committee, or SLORC, officially opened the border to trade with China, trade jumped up another 65%.<sup>3</sup> (See Fig. 1)

In the case of Laos, which had been receiving technical assistance from China for the construction of the "Mao Zedong Road" in Phong Saly during the 60's and 70's,<sup>4</sup> relations with China deteriorated in 1978, when Laos showed support for Viet Nam. Full diplomatic relations between Vientiane and Beijing were not re-established until May 1988.<sup>5</sup> Although the volume of trade between China and Laos does not rank them as significant trading partners, nonetheless a strategic interest in developing the surface routes in northern Laos, remains.<sup>6</sup>

As for border trade with Viet Nam, official trade at the Hekou / Laokai port was suspended by the Sino-Viet War of 1979, and was not officially reopened until May, 1993.<sup>7</sup> Reflecting the gap in official relations, no trade figures for Viet Nam were listed in China's Statistical Yearbook from 1980 to 1990. Trade had already shifted into high gear by the time normalization of relations was announced in November of 1991,<sup>8</sup> and has been soaring ever since. (See Fig. 2) The craze in border trade with Viet Nam has rapidly overwhelmed the existing infrastructure,

causing huge bottlenecks at the official crossings. Although the rail crossing at Hekou / Laokai has been re-opened by 1994, and the rail gauge was widened to a one-meter standard, it has not recaptured its former significance as the lifeline between Hanoi and Kunming. In 1993, the majority of traffic was being run across the Nanxi River by ferry boat and reloaded onto lorries at the other side (see Fig. 3),<sup>9</sup> but by late 1997, unofficial trade was no longer in evidence and had been replaced by regulated daily crossings of trains, trucks, and pedestrians.

If we take into account China's trade relations with Thailand, (formally established in 1975), then the urgent interest to open up a low cost shipping route between the two countries becomes perfectly clear. Combined imports and exports for 1992 and 1993 exceeded US\$ 1.4 billion.<sup>10</sup> In 1994, the trade volume skyrocketed above the US\$ 2 billion mark, an increase of 50% over the previous year. (See Fig. 4) Since the vast majority of this trade is conducted by shipping across thousands of miles of sea lanes, and is further obstructed by backlogs in the domestic rail network in China, both sides see advantages in the Lancang (Mekong) corridor, particularly for Chinese exports of raw materials produced in Yunnan or the greater southwest.<sup>11</sup> In this sense the Lancang (Mekong) is viewed as an engine to drive north-south trade and investment.

During the 1990's, yet another factor impacted several of the Greater Mekong Subregion (GMS) countries. Viet Nam, Laos, and Cambodia were forced to seek out new partners when the trading arrangements of their former top trading partners -- the Soviet Union and Eastern European countries -- suddenly fell into disarray.<sup>12</sup> This only served to increase the momentum of unifying the subregional economy, and was a motivating force for the ratification of new border treaties. A Lao-Chinese treaty signed in December 1993, formally established the border line (of 416km) surveyed

the previous year. As for the border between Myanmar and Laos, formed by the Mekong River, and which runs south from China to Thailand, the demarcation of its 263 km length was not officially established until October 1995.<sup>13</sup>

The resolution of these border disputes has created a tremendous potential for the formation of a greater "economic quadrangle," sometimes called the "golden quadrangle," which would link some 50 million people in a vast region of 600,000 square kilometers.<sup>14</sup> This "golden quadrangle," juxtaposed with some irony on top of the "golden triangle," is just another name that has been invented to portray the economic forces already at work in the subregion. The momentum for cooperation that is building up among the GMS governments is also drawing considerable interest in private business circles, such as the launching of a mutual investment fund in Singapore,<sup>15</sup> and the founding of the Economic Quadrangle Joint Development Company.<sup>16</sup>

As one researcher, Mark Nguyen, puts it:

"For the first time this century, the nations of Southeast Asia..., as well as China's southern province of Yunnan, are not only on relatively good terms with each other, but are willing to co-operate with the international community to further advance their market-oriented policies of growth and development."<sup>17</sup>

## 2. Emerging Players in GMS Development

As the Mekong region faces the possibility of major new infrastructure projects being launched, many forces are drawn into the picture. Within China there are national level policies and security issues involved, and yet, interestingly, it has been Yunnan Province, not Beijing that has been participating in the subregional development conferences.



In this respect, it is not surprising that the governor of Yunnan Province, He Zhiqiang, outlined a plan to develop the "Lancang Economic Belt" in May, 1993. The plan called for developing mining operations in the mountainous upper section of the river basin; to concentrate on building hydropower stations and wood processing facilities in the middle section; and to open up the lower section passing through Xishuangbanna (XSBN) to international shipping.<sup>18</sup> The announcement coincided with an expedition undertaken by a China, Laos, Myanmar, Thai joint observation group, which had been surveying the Lancang (Mekong) from February to May of the same year. And though Yunnan's governor seemed to be taking the lead in proposing the Lancang Economic Belt, his comments were echoed by the Chinese Premier, Li Peng, who had been in attendance at the Yunnan provincial government meetings where the policy was drafted.<sup>19</sup>

On the local level, there is little evidence of officials in XSBN taking part in the planning of the new regional agenda.<sup>20</sup> As for the people living in the areas where there is likely to be the greatest social and environmental impact, there isn't even a shred of information available. In stark contrast, international support for developing the Mekong is gathering steam, busily concocting huge road networks and energy grids all over the map.

Beginning in 1992, a series of conferences and deliberations have been held among the six GMS countries with the aim of coordinating their infrastructure investments. By the time of the 4th conference (September 1994),<sup>21</sup> the momentum had built up to the point of implementing priority projects, and the beginnings of an institutional base to sustain the process of subregional cooperation was already being formed.

With institutional support from the Asian Development Bank (ADB), the United Nations Development Program (UNDP), the Economic and Social

Commission for Asia and the Pacific (ESCAP), the Tourism Authority of Thailand (TAT), and the Mekong River Committee (MRC), a new wave of interest in developing the GMS is gathering strength.

In May 1996, the ADB extended a technical assistance grant of US\$800,000 to provide training in areas of concern (from a regional perspective) on environmental problems.<sup>22</sup> At the August 1996 conference, held in Kunming, (provincial capital of Yunnan,) the ADB vice president, Bong-Suh Lee, announced the extension of US\$300 million in loans, the most substantial economic backing for the GMS projects so far, and which was referred to as merely "seed money," to attract much larger investments.<sup>23</sup>

Educational support has appeared in the form of the "Institute of Economic Development and Cooperation", established in a memorandum of understanding between the governments of Thailand and New Zealand in August 1996. The Institute is now located at Khon Kaen University and trains managers from the public and private sectors of the participating GMS countries.<sup>24</sup> Although not directly involved with the GMS development projects, considerable contributions to the study of the upper Mekong have been made by the Thai-Yunnan Project of Australian National University and the Upper Mekong Research Project, funded by the Australian Research Council.<sup>25</sup>

In addition to the support of these agencies, a recent meeting between the newly revived MRC<sup>26</sup> and representatives of the Association of Southeast Asian Nations (ASEAN) in Kuala Lumpur suggests that more support from neighboring countries, such as Malaysia, might:

"...propel a bigger wave of emerging ASEAN multinational companies into the region,"<sup>27</sup>

which would have far-reaching consequences for the region in terms of capital for investment and industrial growth.

As grants, loans, and private funds gravitate toward the GMS projects, inevitable choices will be made as to which sectors will be developed first. The main sectors, for which detailed projects were discussed and recommended at the 3rd conference on subregional development (April 1994), were transport, energy, environment, trade & investment, and tourism. To these should probably be added telecommunications, which became a high priority at the GMS meeting held in Phnom Penh (July 1996).<sup>28</sup> Since many of the infrastructure projects will require huge capital investments, and long periods of time for completion, the earliest signs of progress have been seen in the Water Transport Subsector's "Upstream Lancang (Mekong) River Navigation Improvement Project", a project which not only requires a comparatively low initial investment, but which was already partially underway as early as 1990.<sup>29</sup>

### **B. Opening the Lancang (Mekong) River**

On the short list of priority GMS projects, the opening of the Lancang (Mekong) River, which will connect China's Yunnan Province to Thailand via Laos and Myanmar, is at the very top. In China, the navigable section of the Lancang passes through Xishuangbanna Autonomous Prefecture (XSBN), the highly variegated terrain of intermontane basins near the southwestern border of Yunnan Province. The Mekong basin area to the south of China, comprising part of the infamous Golden Triangle (Myanmar, Thailand, Laos), has been isolated not only by ongoing insurrections but also by miserable roads, total lack of communications, and deliberate political and military containment.<sup>30</sup> In the optimistic terminology of the GMS



projects, it has been re-christened the Golden Quadrangle, connecting China, Laos, Myanmar, and Thailand. Nonetheless, without great capital investments in infrastructure, the Golden Quadrangle will be unable to link up a network of surface roads in the near future.<sup>31</sup>

River traffic, on the other hand, has been the basic means of transport in this area for ages.<sup>32</sup> Though impeded by rapids and falls, which made the Mekong impassable to larger ships, there is no question that local residents, familiar with the dangerous spots, could navigate on small craft in the intervening sections, stopped only by the tremendous force of the current.<sup>33</sup> More importantly, despite the difficulties of navigation, and the negligible volume of commercial traffic:

"...a most important function of the barge and pirogue traffic is to connect the many small villages along the Mekong which are not accessible either by road or airplane."<sup>34</sup>

Therefore, it is important to keep in mind that the river remains a lifeline for the residents of the basin when considering the means and objectives of enlarging the traffic into a major corridor for international shipping and transport.

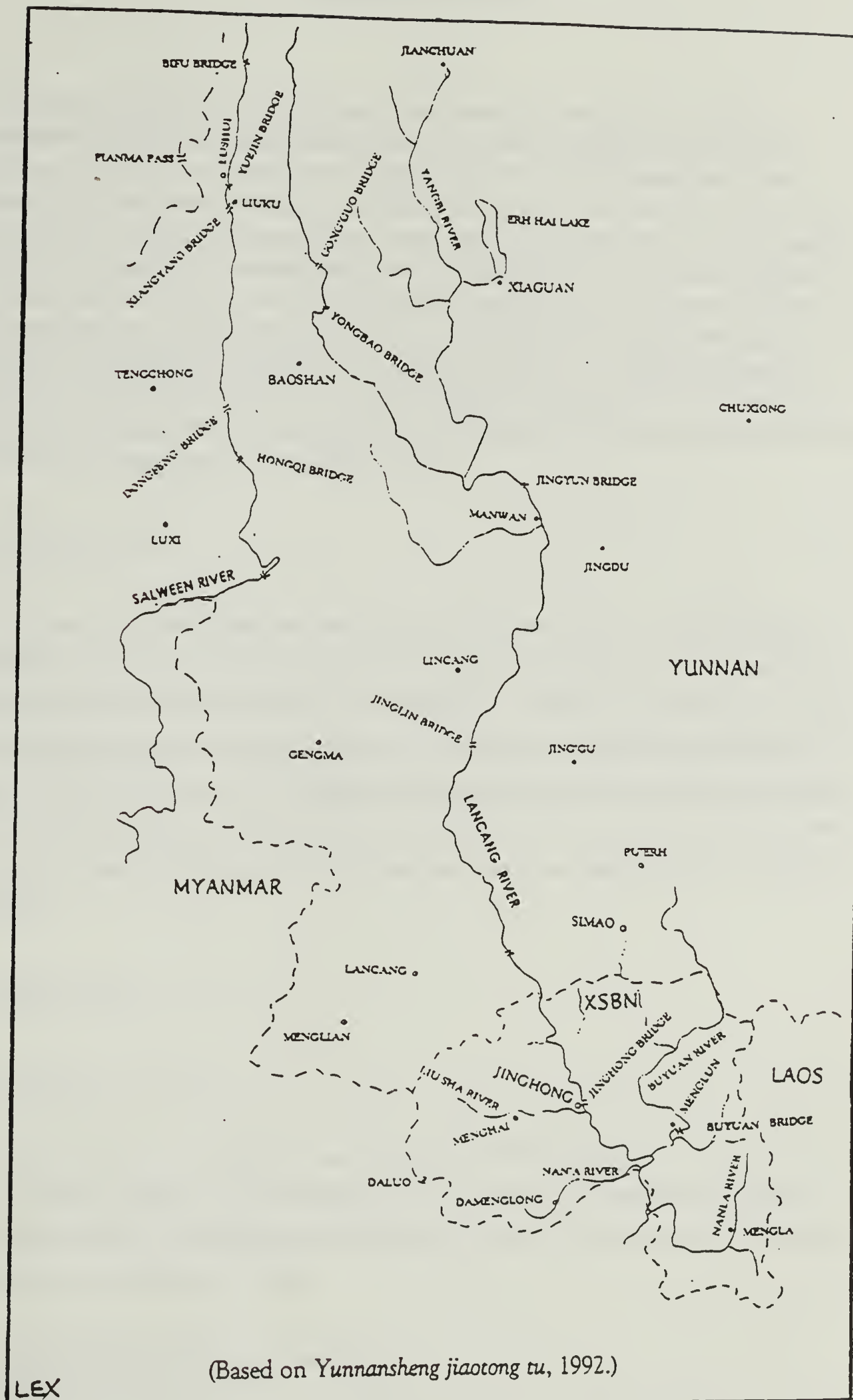
Building on the volume of small-scale traffic, which has arguably been in existence for ages, China and Laos began joint surveys and tests of the route between Jinghong and Huay Xai in 1990. Shortly after the 1st GMS conference in Oct 1992, a survey team was formed of geographers, hydrologists, and technicians from China, Laos, Thailand and Myanmar, who conducted a series of joint surveys and tests along the international shipping route during the spring of 1993. Meanwhile, the political representatives of the four governments, have succeeded in creating a legal framework for river transport, and established an administrative committee to address navigational issues on the Lancang (Mekong) in January 1994.<sup>35</sup> In October 1994, a "free navigation" agreement was agreed upon by senior officials of the four nations, which officially opened up four ports in China, two ports in Myanmar, five ports in Laos, and two ports in Thailand to navigation by one another's ships.<sup>36</sup> An "experimental"

shipment of apples from Jinghong to Chiang Saen Thailand took place in 1995, the same year which showed a dramatic rise in reported shipments along the route, from 500 tons in 1991, to 40,000 tons in 1995.<sup>37</sup>

The cost-effective link between China and three adjacent countries has led to greatly increased traffic on the Mekong, and proposed improvements, which include blasting rapids and shoals with dynamite, seek to increase the year-round capacity of the route to accommodate 100-300 ton vessels.

But just as the opening of the Lancang gains momentum, and a host of other infrastructure projects in the GMS are beginning to be implemented,<sup>38</sup> there is a corresponding need to evaluate the ecological and social impact that they will have on both the river and the residents of the region. Some work of this type already exists for the downstream parts of the Mekong,<sup>39</sup> but very little has been done on the upstream part of the river, which spills from glacier-covered mountains of Tibet and reaches tropical rain forests along the international border.

As the Lancang (Mekong) route is upgraded and linked to ports and road networks downstream, economic, ecological, and social impacts will effect areas along the river basin. This study will focus on one section of the Lancang River: the 180 km section that flows through XSBN Autonomous Prefecture, in Yunnan Province, China. The existing environmental, economic, and social conditions in the Lancang basin of XSBN will be examined in order to assess the potential impacts of opening the region to international traffic.



Map 2. The Lancang River in Yunnan



### C. Endnotes to Chapter I

1. The causes of deforestation are many, and though it is hard to say whether development, the destruction caused by war, or clearing of land for housing and agriculture are the worst contributors, nonetheless, the loss of forest land in the Mekong region has been disastrous. Cambodia has lost more than 50% of its forest cover since the 1960's; Vietnam's forest cover has dropped from 44% to 24% during the last five decades; the northeastern part of Thailand, Isan, saw a drop of forest cover from 65% in 1951 to merely 8% in 1985....estimates for the entire Mekong basin show a decline from about 50% in 1970 to only 27% in 1985, with consequent problems of erosion and flooding. See: Jacobs, 1995: 137. Another example of degradation is found in the Pak Mool Dam, which was completed in 1991 and has resulted in the bankruptcy of several thousand fisherman. See a related article in *Thai Development Newsletter*, no. 26 (1994): 11-13.

2. FEA, 1995: 627.

3. A summary of Sino-Burmese trade is found in Chen, 1995. In the preceding decades, trade relations had been destabilized by the activities of a Chinese-funded Burmese Communist Party (BCP), not to mention a series of armed insurgencies and the constant presence of sophisticated opium producers and their private armies. The turmoil of the 1967 protests in Yangon and the founding of the BCP are detailed in Pettman, 1973: 32-39. The insurgencies in Myanmar are recounted in Lintner, 1990. For a full account of the drug trade in Southeast Asia, see McCoy, 1991: 162-192, 283-386.

4. Yang, 1993: 8.

5. FEA, 1995: 513-514.

6. Safe travel through northern Laos remains an elusive goal, and the prospect of the quiet historic capital, Luang Prabang, becoming a truck stop between the greater economic powers in Kunming and Thailand is viewed by some observers with great ambivalence. See Lintner, 1996.

7. FBIS CHI-93-094 (May 18, 1993): 14.



8. FEA, 1995: 1013.
9. See Zhang, 1993.
10. FEA, 1995: 992.
11. A new rail line between Kunming and Nanning, (opened Jan 1998,) will improve access to the South China Sea, and will significantly increase shipping access between Yunnan and ports in Thailand and South Asia. As for construction of more direct surface connections, improvement of the Jinghong-Tachilek-Mae Sai road is underway, but presently cannot match the carrying capacity for bulk cargo of the Mekong. According to Liu Daqing, of Yunnan's Transport Bureau, Navigation Section, the bottlenecks in the rail networks linking Yunnan to various seaports are so severe that Yunnan is faced with as much as a 50% gap in export capacity. He estimates: "By the year 2000, the two (landlocked) provinces of Yunnan and Guizhou, just in terms of phosphorous and coal, will have an export shortfall of at least 8.7 million tons, a very serious situation...and since the roads are not good enough for long-distance hauling, it makes the development of the Lancang shipping route -- 'facing South Asia, join the competition' 面向南亞，參加競爭-- rise before our eyes as vitally important." Author's translation of Liu, 1991: 508.
12. Tan, et al, 1995: 226.
13. Nguyen, 1996: 200-201.
14. Parts of Thailand, Myanmar, Laos, and Yunnan comprise the "golden square" 金四角. A Description of the "golden quadrangle" is found in Tang, et al, 1995: 32.
15. The Crosby Fund, offered by Crosby Asset Management. See (Singapore) *Business Times*, (May 17, 1996) (via Lexis Nexis).
16. Nguyen, 1996: 204.
17. Nguyen, 1996: 199.

18. FBIS CHI-93-063 (Apr 5, 1993).
19. FBIS CHI-93-092 (May 14, 1993), and FBIS CHI-93-096 (May 20, 1993). This is confirmed by the May 28th, Central News Agency article: "Premier Li Peng, from the highest strategic level, approved all of Yunnan's proposals to establish the Lancang basin as a vital national district for development and opening up." In *Qiao bao* (May 29, 1993): 4. The article describes Li Peng, Premier of China's State Council, as participating in the Yunnan Provincial government's formulation of a policy to establish the Lancang as a "foreign directed economic belt."
20. The Prefectural governor of XSBN, Zhao Cunxin, wrote an article on developing the Lancang [Zhao, 1991]. His long-term plan called for creating a tropical resources base in XSBN, as well as developing tourism, hydropower, and river transport. His views largely reflected the official government policy and were, if anything, very conservative. On the other end of the spectrum, the vice-mayor of Jinghong, Dao Yumin, is promoting more direct surface connections from Yunnan, through the Burmese Shan states to Thailand. Citing the surrender of the drug-baron, Khun Sa, in January of 1996, Dao suggested that a route south from Jinghong through Damenglong and the Myanmar towns of Mong Yawng, Mong Hpayak, and Tachilek to Mae Sai is now feasible. Dao said that a new border crossing would be opened on the route in January 1997. See: "China Pushes New Route to Thailand," in *Straights Times*, (November 11, 1996): 25 (via LexisNexis).
21. Held in Chiang Mai, 15-16 September, 1994. See: Asian Development Bank, 1994b.
22. Reported in *Bangkok Post* (May 24, 1996) (via LexisNexis).
23. At the Aug 1996 GMS conference, held in Kunming, the ADB vice president, Bong-Suh Lee said that ADB had prepared US\$300 million in loans to invest in the region during the next three years, calling the GMS the "last frontier of economic development....We can expect such investment to grow rapidly and reach a target of at least \$1.3 billion by the turn of the century." Gunther Hecker of the ADB's transport and communications section said, "The \$300 million is the trigger element for others to follow. We lay the seeds." Reported by *Reuters* (August 30, 1996) (via Clarinet).
24. New Zealand has pledged NZ\$10 million (US\$7 mil), and Thailand has pledged another 5 million *baht* (US\$250,000) of funding for the institute. Reported by *Agence France Presse*, (August 28, 1996) (via LexisNexis). In February, 1997, the Institute was officially opened in Khon Kaen, Thailand.

25. The only journal devoted to studies of the society, economy, and linguistics of the Dai and Thai people living in the upper Mekong region is the *Thai Yunnan Project Newsletter (TYPN)*, founded in 1987. Edited by Gehan Wijeyewardene, the *TYPN* is published by the Department of Anthropology, Research School of Pacific and Asian Studies, Australian National University, and is available on the internet at [ftp.coombs.anu.edu](http://ftp.coombs.anu.edu). The Upper Mekong Research Project was established in 1991, when co-directors E.C. Chapman (Director, National Thai Studies Centre, Australia National University) and Peter Hinton (Anthropology Department, University of Sydney) were awarded a grant from the Australian Research Council. See: *TYPN* 17 (June, 1992): 30.

26. The history of the MRC is recounted in Jacobs, 1995.

27. Reported by *Straights Times* (Singapore), (September 8, 1996) (via LexisNexis).

28. Reported by *Reuters* (August 5, 1996) (via LexisNexis).

29. According to the Yunnan Yearbook 1992, "Building on the foundations of a 1990 China/Laos joint survey of the river during dry season, and shipping trials with cargo-laden vessels that tested the Lancang --Mekong shipping route, on August 2nd, 1991, three ships loaded with 155 tons of garlic, cement, and other goods cast off from Jinghong, sailed for 402km, and arrived at Huay Xai, Huoa Kong, Laos on Aug 6th. There they took on a load of 30 tons of ground coffee and returned to Jinghong." Author's translation from *Yunnan nianjian*, 1992: p253.

30. For a description of the physical conditions of the Shan states in Myanmar, see Bertil Lintner's account of his travels: Lintner, 1990.

31. Road projects are listed in Asian Development Bank, 1994a.

32. The Chinese sources consulted for this study, with one exception (Yao, 1948), unanimously state that river traffic on the Lancang did not exist before the establishment of steam-powered ferries in the 1950's. On the other hand, Western visitors to Jinghong consistently report the use of 50-foot long pirogues. See, for example, Colquhoun, 1885: 98.

33. At Nan'akou, on the Chinese border, the annual average flow rate has been measured at 2020 cubic meters per second [data from Liu, 1991: 513]. Since hand-poled pirogues were the usual river craft of the villages along the Mekong in upper Laos, [Halpern, 1961: 32], there must have been limits beyond which the craft could not be pushed, though there remained the option of towing or portage. According to one 19th century observer, "...poling...dug-outs against the stream of the Me Kawng...



between the worst rapids a good three miles an hour is kept up...in many places the boats are unloaded and hauled over by ropes, an occupation in which a day or two is often expended." [Smyth, 1898: (v.1) 161]. According to the same author, from Jinghong to Luang Prabang "the actual journey need only occupy five days; the journey up, from twelve to fifteen..." [Smyth, 1898: (v.1) 164]. See an account of a 1940's journey on the Lancang, translated below in Chapter IV, "Use of the Lancang River in Dai Society."

34. Halpern, 1961: 33.

35. *Asian Development Bank*, 1994: 147.

36. The ports opened were:

China: Jinghong, Simao, Menghan, Nan'ahe.

Myanmar: Wan Seng [100°35'E by 20°50'N], Wan Pong.

Laos: Ban Say, Xieng Kok, Moaung Mom, Huay Xai, Luang Prabang.

Thailand: Chiang Saen, and Chiang Khong.

Reported by Nusara Thaitawat, *Bangkok Post*, 13 Oct 94 (via LexisNexis).

37. See: *Business Vietnam*, (September 1996) (via LexisNexis).

38. See the full list of Transport Sector Projects in Asian Development Bank, 1994a: 89.

39. The Nam Pong post-audit study, conducted in the mid-70s, is perhaps the most comprehensive examination undertaken on the economic, social, & environmental impacts of a multipurpose reservoir in the Mekong region. It was built at Nam Pong, Thailand [102°50' E by 16°45' N] and opened in 1966. See: Jacobs, 1995: 144-45. Other basic research on the basin related to Mekong development can be found in Fujioka, 1966.



## CHAPTER II

### THE LANCANG RIVER: GEOGRAPHY AND INFRASTRUCTURE

#### A. Geography of the Lancang Basin

The Lancang River originates in eastern Tibet or Qinghai, where its highest tributaries wind down the valleys of the Tang'gula Mountains.<sup>1</sup> In the Xikang region of eastern Tibet, the upper reaches are known as Zachu or Za'emuchu. Near the border town of Xika, (29°N by 98 25E), the Lancang enters Yunnan and plunges through deep gorges, hemmed in on both sides by mountains.

The same tectonic collision between the South Asian and Eurasian continental plates that forms the Himalaya, causes an abrupt fold in the topography in the north-western part of Yunnan, and forms a series of north / south ranges there known as the Hengduan Mountains. The highest mountain in Yunnan, Kawagarbo, is found here. Towering 6,740 meters over the west bank of the Lancang River, Kawagarbo's east face is covered with a giant glacier.<sup>2</sup> (See Fig. 5) On the east bank of the river, across from Kawagarbo, is Dêqên, the highest elevation county seat in Yunnan, at some 3,480 meters.<sup>3</sup> In this formidable terrain, where the water rushes down narrow chasms strewn with boulders, hundreds of meters below the nearest footpath, it is easy to understand why river transport was not developed.<sup>4</sup> (See Fig. 6)

The Lancang flows south from Kawagarbo, through the Dulong Gorge<sup>5</sup> and continues nearly due south for hundreds of kilometers, hemmed in by mountain ranges with peaks of 3,000 to 4,000 meters. At Yongping, the north / south mountain ranges break up into smaller, differentiated ranges with peaks of 2,000 to 2,500 meters, and the river makes a bend southeastward. (See Fig. 7)

Along its southeastward course below Yongping, the mountains on the east bank are higher than those on the west bank. Reaching the Wuliang Mountains, the Lancang turns due south again, and begins a winding course that forms the border between Lincang and Simao Prefectures. Below the port town of Xiaoganlanba, the river enters XSBN Prefecture, flanked on the west by high plains at 1,050 to 1,200 meters elevation, and with mountain peaks in the range of 1,600 to 2,200 meters. To the east of the river are a convoluted series of very fragmented mountains ranging in height from 1,200 to 1,500 meters, among which are many *bazi*,<sup>6</sup> or basins at an average elevation of 550-610 meters.

The valley of the Lancang basin, stretching from Xiaoganlanba south to Nan'ahekou at the Myanmar border, has ranges of 1,100 to 1,400 meters on both banks, and gorges of 300 to 500 meters. The climate of this region is primarily subject to the Indian monsoon, and its mountains were once covered with lush rain forest. In addition to cultivated tropical crops such as fruits, rubber, aromatics, and tea, XSBN's native flora has been preserved in networks of deep, zigzagging valleys. XSBN's treasure house of botanical diversity, though much depleted in recent decades, still offers a tremendous resource for botanical research and eco-tourism if carefully preserved.<sup>7</sup> (See Fig. 8)

South of the Chinese border, the Lancang River is known as the Mekong, or "mother of waters," and flows through Myanmar, Laos, Thailand, Cambodia and Vietnam, before finally merging into the South China Sea at the Mekong River Delta south of Ho Chi Minh City. A comparison of the Mekong and Lancang sections of the river reveals that roughly half of the river's length lies in each, but that the drainage area in mainland Southeast Asia is approximately four times as large as the estimated drainage area in China. Of the drainage area inside China, Yunnan's accounts for more than 50%. (See Fig. 9)

## B. Transport on the Lancang River

Knowledge of transport on the Lancang River in the northern half of Yunnan is aided by early Chinese accounts,<sup>8</sup> by the records of the Dali Nanzhao Kingdom,<sup>9</sup> and by numerous accounts of both colonial period and modern explorers, most notably Joseph Rock, F. Kingdon Ward, and deCarne.<sup>10</sup> There are accounts of notable crossings of the Yangzi, Lancang, and Nujiang, either by bamboo rafts or inflated skin-floats, usually as part of a military campaign and undertaken with great loss of life. Eyewitness accounts of upstream crossings are found in the works of Joseph Rock, who lived in northern Yunnan for nearly twenty years and left detailed maps and photographs of his numerous expeditions.<sup>11</sup> (See Fig. 10)

The available evidence suggests that fords and crossings of the rivers existed at various favorable points, that crossings were in many cases seasonal and dependent on conditions of weather and current, and that they were both arduous and extremely dangerous.<sup>12</sup> This is further supported by the numerous bridges found all along the steep valleys and gorges of northern and western Yunnan, of the sort which proliferated throughout Burma, Tibet, and the greater Himalayan region. (See Fig. 11)

### 1. Bridges

Bridges are widely used throughout the upper Lancang region. The simplest type of bridge technology employed to cross the wild rivers were rope slide bridges, along which entire caravans---piece by piece, horse after horse---were slung from one side of the rocky chasm to the other. (See Fig. 12) The average bridge:

"...is 150 feet above the river bed and one glides down at express speed to less than 50 feet on the other side. Those unaccustomed to crossing by such...means, strapped to an oak-wood slider greased with yak butter, are all but cheerful at the prospect... those used to crossing such ropes suspended high



above the river, pass back and forth as unconcerned as we would cross a courtyard. The rope is often greased by the man sliding across, he would put liquid butter from a bamboo tube into his mouth and, holding his head above the rope, would let the butter run out of his mouth onto the rope (See Fig. 13) Only mules, horses and heavy weights reach the other bank without aid. Lightweights remain suspended on the sagging rope in the middle over the roaring torrent. This necessitates pulling oneself up hand over hand to the other side....The horses are not less frightened than their riders, for they kick the air with tails up and open mouths, and lie down exhausted from fear on the other side."<sup>13</sup> (See Fig. 14)

In addition to rope bridges, iron chain bridges were built on the key caravan routes.<sup>14</sup> These are found primarily in the Nanzhao sphere of influence around the modern town of Dali. Some ruins of iron bridges are found southwest of Dali, spanning the Yangbi River on the road to Yongping, and across the Lancang between Yongping and Baoshan. (See Fig. 15) The ruins of a strategic iron bridge northwest of Lijiang, on the caravan route to Tibet are found on the Yangzi river near Qicong.<sup>15</sup>

## 2. Ferries

Although Chinese scholars writing on the subject of developing the river do not mention transport on the Lancang before modern times, rope bridges are not used south of the Wuliang Shan area, where the width of the river, and the variable height of the banks make them impractical. Without bridges, how did anyone get across?

Based on a map from 1945, a decade before mechanized shipping appeared on the lower Lancang, there were nine ferry crossings marked in the Chinese section of the river below 24°N, while none were marked for the section above 24°N.<sup>16</sup> Since the number of ferry crossings increases dramatically along the lower Lancang, we must assume that some form of navigation did exist there. The gap in Chinese records and observations can be explained by the fact that the Chinese did not actually occupy the XSBN region until the 1950's.<sup>17</sup>



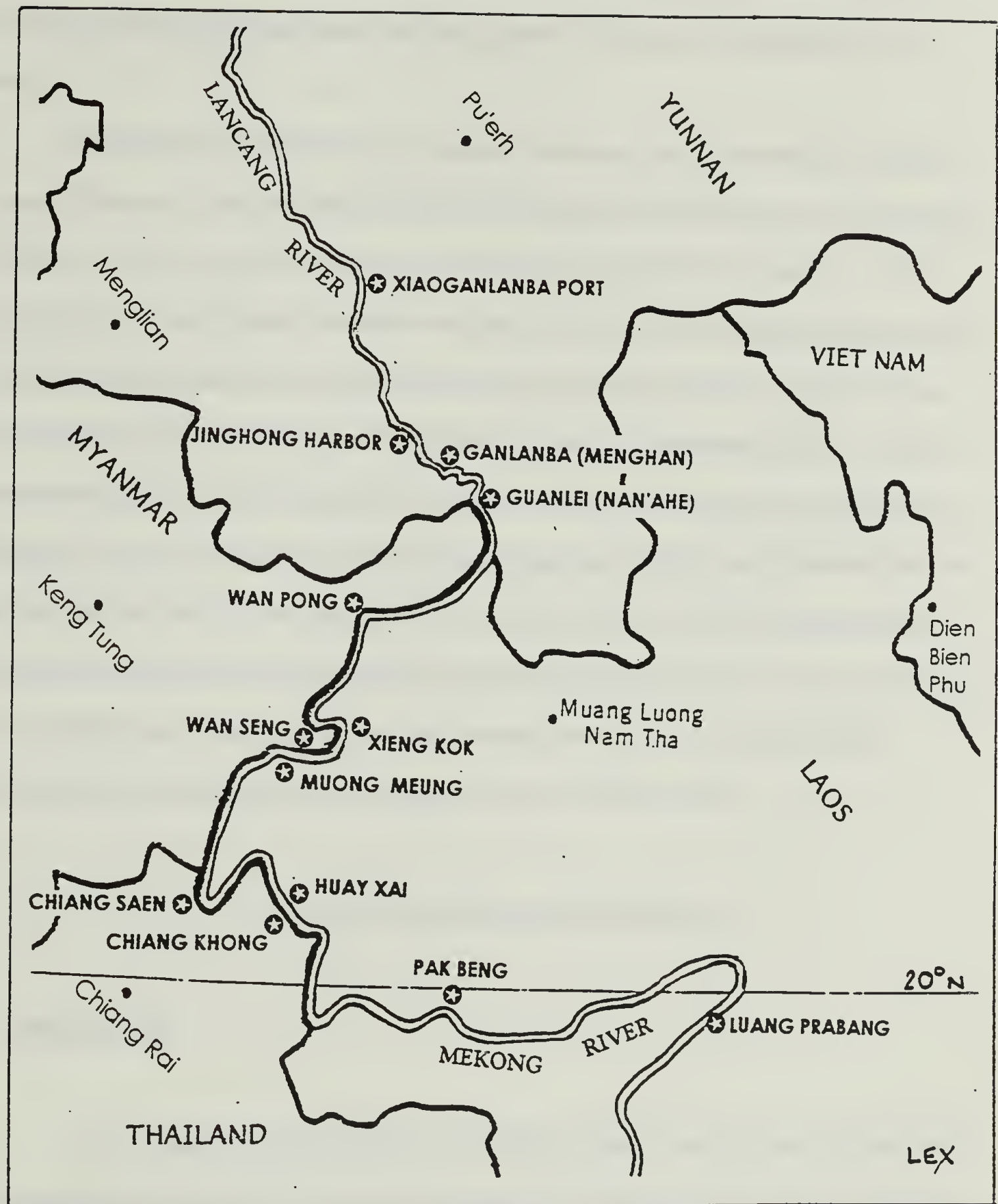
Since the introduction of mechanized ferries in 1955, stations at Yunjinghong, Ganlanba, Menglun, Guanlei, and Simao have gone into operation. Several ports have been expanded and rebuilt, including the new Xiaoganlanba Port, which can handle 80,000 tons and 150,000 passengers annually.<sup>18</sup>

In the village of Guanlei, workers ride the ferry upriver to seek employment, then float back down river on tire inner-tubes, and the townspeople hurry on board to purchase daily necessities whenever the boat arrives.<sup>19</sup> (See Fig. 16) The example of Guanlei, suggests that the vital commercial connection provided by shipping services is the only means of communication for some of the mountain regions. Inaccessible by road, especially during the long rainy season, these conditions duplicate those found on the nearby sections of the Mekong in Laos and Myanmar, where people in the riverine communities travel on the river in pirogues (with or without outboard motors), river barges, and rafts.<sup>20</sup>

### 3. Existing River Transport

Beginning in 1955, when the first ferry capable of carrying automobiles went into operation at Yunjinghong, the use of mechanized shipping on the river developed very slowly. The first steamship was introduced in 1962, and the use of the river for shipping began to be organized in 1965.<sup>21</sup> During the 1970s, further development of the 188km section from the Myanmar border to Ganlanba allowed ships of 50-140 tons to dock. During high water seasons, the docks could handle ships of 300-500 tons. By the late 1980s, ships of 300 tons could land year-round.<sup>22</sup>

In 1988, there were 28 freighters in operation. Their net capacity was 281 tons, and 785 passengers. There were also 10 barges with a net capacity of 740 tons. The vessels were organized under a state-run shipping company with two teams, which were also responsible for maintaining the anchorages and repair shops.<sup>23</sup> The number



(Adapted from *People's Republic of China Atlas*. Washington: CIA, 1971: 22)

Map 3. River Transport in Xishuangbanna

of boats in use on the Lancang remains rather small, but it is important to keep in mind the extent to which shipping is being developed on the Mekong, immediately to the south, and also to the huge inland shipping system of Myanmar, immediately to the west.

In Myanmar, freight volume on inland waterways has risen steadily in recent years. Moreover, container traffic handled in Myanmar doubled between 1991-92 and 1992-93, and was expected to have doubled again by 1994-95.<sup>24</sup> (See Fig. 17) Significantly, even as Myanmar continues to play an important role in providing access to the Indian Ocean for Chinese goods, Yunnan province has received delivery of three 800-ton barges built by Myanmar Shipyards, the first of a nine-barge order. Yunnan has meanwhile ordered nineteen other vessels.<sup>25</sup> What will Yunnan do with 800-ton barges? If they do not intend to use them in Myanmar, then the only feasible options are to operate them on the Lancang River or the Yuan River. Will Yunnan attempt to emulate the booming Myanmar inland shipping business and move to containerization? If so, XSBN has the prospect of not just several thousand tons of cargo passing through their pristine forests every year, but up to a million tons!

### C. Industrial and Energy Infrastructure

#### 1. Energy Sector

The ambitious plan to develop hydroelectric stations on the Lancang has been strongly supported by the Provincial and Central governments, and has also received funding from foreign aid programs and lending agencies. He Zhiqiang's 1993 strategy to develop the Lancang River "Economic Belt" called for completing the Manwan and Dachaoshan power stations, and the Xiaowan reservoir.<sup>26</sup> These are part of an ambi-



tious overall plan to build a series of ten hydropower stations along the Lancang River, at positions ranging 30 km to 800 km north of the Myanmar border. (See Fig. 18)

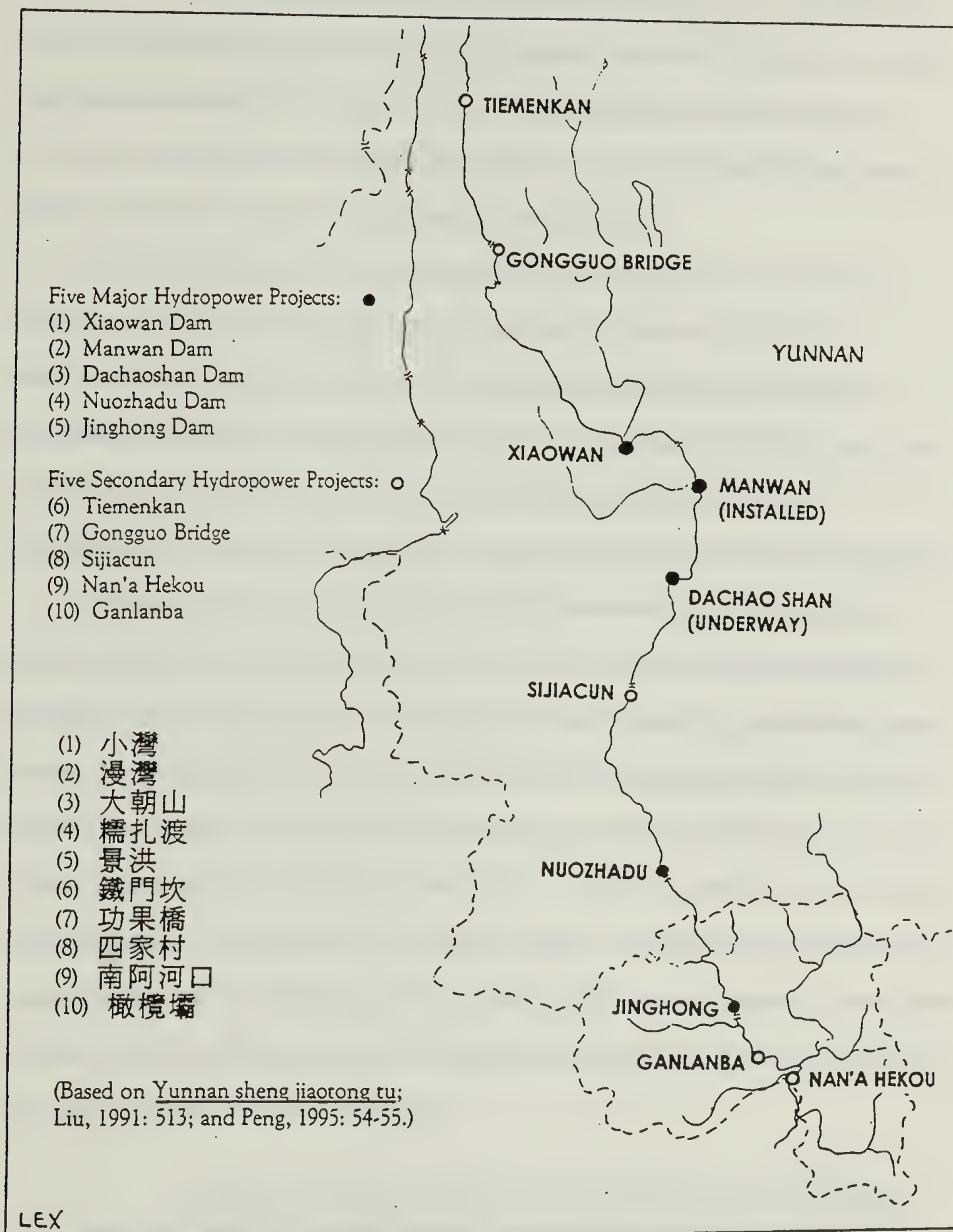
Construction of the Manwan Dam, begun in 1986, was completed in 1995. With an effective storage capacity of 150 million cubic meters, and an installed generating capacity of 1.5 million kilowatts, the Manwan serves as a model for other, larger hydrostations that will someday span the upper reaches of the Lancang. (See Fig. 19)

Construction of the Dachaoshan dam, with a planned generating capacity of 1.25 million kilowatts, began in 1993 and is still underway. The giant Xiaowan reservoir, is planned to have a 284 meter high concrete arch dam, which would be the world's highest, and a storage capacity of 15 billion cubic meters. Construction of the Xiaowan dam is scheduled to begin in 1996, with funding from the Japanese Overseas Economic Cooperation Fund. In addition, the Nuozhadu dam, planned to store 23 billion cubic meters of water that will supply the downstream power stations at Jinghong, Ganlanba, and Nan'ahekou, was in preparation in 1993.<sup>27</sup>

The construction of ten major dams on the upper Lancang will have major impacts on the river's ecology, on flowrates, flooding, and silting, and will also complicate the process of developing shipping routes. During the planning process, objections to the lack of basin-wide plans to integrate power stations and navigation were raised by Liu Daqing, of Yunnan's Transport Bureau, Navigation Section:

"...not only do surface roads need to be built up with investment capital, and connections made through to construction bases, quarries, and outlying areas; but in planning to open up a waterway there must first be a reasonable investment to establish shipping routes, and connecting water-routes should be made into a framework. Existing roads and construction bases on both banks of the river should be linked together in order to expedite the construction of each stage, as well as to create advantageous conditions to develop the resources along the shores. We cannot simply imagine building hydropower plants and opening up mines, and then set about building up transport as an accessory..."<sup>28</sup>





Map 4. Hydropower Development on the Lancang River

The prospect of such giant reservoirs on the Lancang River in Yunnan casts a long shadow over development projects being considered down river, on the Mekong. Laos, with tremendous potential hydropower capacity, hopes to build up its own series of power stations along rivers that drain into the Mekong, and to sell the excess electricity to energy-hungry Thailand; however, in doing so, the Laotian dams would further impact the volume of runoff into the Mekong basin.<sup>29</sup>

As a consequence of its own energy needs, Thailand has a keen interest in maintaining a basin-wide development scheme that will protect both the flow to hydropower plants and water reserves for its parched northern and northeastern provinces. In Cambodia, the unique lake, Tongle Sap, which is fed by the back flow of the Mekong during flood season, has been shrinking (due to silting and deforestation), and raising concern about decreases in the water level of the Mekong.<sup>30</sup>

Vietnam, last in line on the Mekong basin, has currently set high stakes on raising productivity levels in the Mekong delta, all of which would be threatened by any reduction of available water. The fact that so many hopes for major development schemes are placed on the availability of water from the Lancang (Mekong) is both a cause for anxiety and a motivation to cooperate among the six GMS countries. Only China, controlling 50% of the river's headwaters, remains in a position to develop the river unilaterally, but progress of the GMS economic cooperation talks, and the many agreements which have resulted, promise a much higher degree of mutual interest than has ever existed in the region before. Meanwhile, a major scientific research project has been launched in China, which will:

"...study and furnish solutions on: the distribution of water resources along the Lancang / Mekong River, location of power stations at different sections of the river, navigation and influences of river development exerted on the lower reaches."<sup>31</sup>

This research might help to ameliorate concerns that development is proceeding in a disorganized way and at an unchecked pace, but since the study is scheduled to continue until 1999, it will years before we see the project's findings and recommendations. In the meantime, we can expect to see continual increases in shipping and large-scale construction projects on the Lancang for the foreseeable future.

## 2. Industry

Industrial growth has, until recently, been concentrated in several urban areas in Yunnan. Kunming, the provincial capital, has seen the greatest industrial growth, while other industrial centers have emerged in Dongchuan, Xiaguan, Gejiu, and Yuxi. XSBN has not experienced such a rapid rate of industrialization. The majority of XSBN's population relies on subsistence agriculture and other traditional means of livelihood. Although this study will not address the issue of traditional subsistence agriculture in the Lancang River basin, it is important to keep in mind that the many new roads and shipping routes being built here, combined with increased mobility for the local people, is likely to create profound changes in the basic means of production and livelihood throughout XSBN.

The isolation and lack of basic infrastructure in XSBN has hampered industrial growth so far, but in the wake of establishing rubber and tea plantations, some processing and refining facilities have been set up. There are rubber processing plants and tea-processing plants that were set up in the 1970s and 1980s.<sup>32</sup>

The completion of the Kun-Luo Highway (from Kunming to Daluo), the Jinghong Bridge, and the Xiaoganlanba Port in Simao (See Fig. 20) is bound to increase both existing industrial production and encourage the growth of new industry. The question remains as to what type of industries will develop, whether they are purely based on resource extraction, are focused toward domestic or international



markets, and to what degree local cultures and social norms influence the types of goods being produced.

According to a long-range development plan outlined by Zhao Cunxin, XSBN's governor, and Wu Jinhua of XSBN's Industrial Bank, the new base of transport infrastructure should be utilized to develop the region as a tropical agriculture base, and tourism area. They propose building up a food processing industry and a "tropical ecological agriculture zone."<sup>33</sup> Their plan conspicuously lacks mention of large factories and industrial processing centers, and the fact that they emphasize the need to maintain the ecological balance between the existing environment and tropical agriculture is encouraging.

A radically different approach is taken by Peng Yongan, in his analysis of the productive forces in the border regions of Yunnan. He sees the backward economies in adjacent border areas as great targets for Chinese exports (an idea that succeeded in Myanmar.) Therefore, writes Peng:

"Yunnan's border ports are an important route for China's strategy to reach the Indian Ocean and to develop our foreign-directed economy. The huge markets beyond Yunnan's borders are a genuine motive force for opening its border region ports to foreign-directed trade."<sup>34</sup>

Peng goes on to outline ways to exploit various comparative advantages between the bordering economies, including exploitation of raw materials, cheap labor, infrastructure and distribution networks.

Peng also advocates the repositioning of certain industries from the hub at Kunming to the border region:

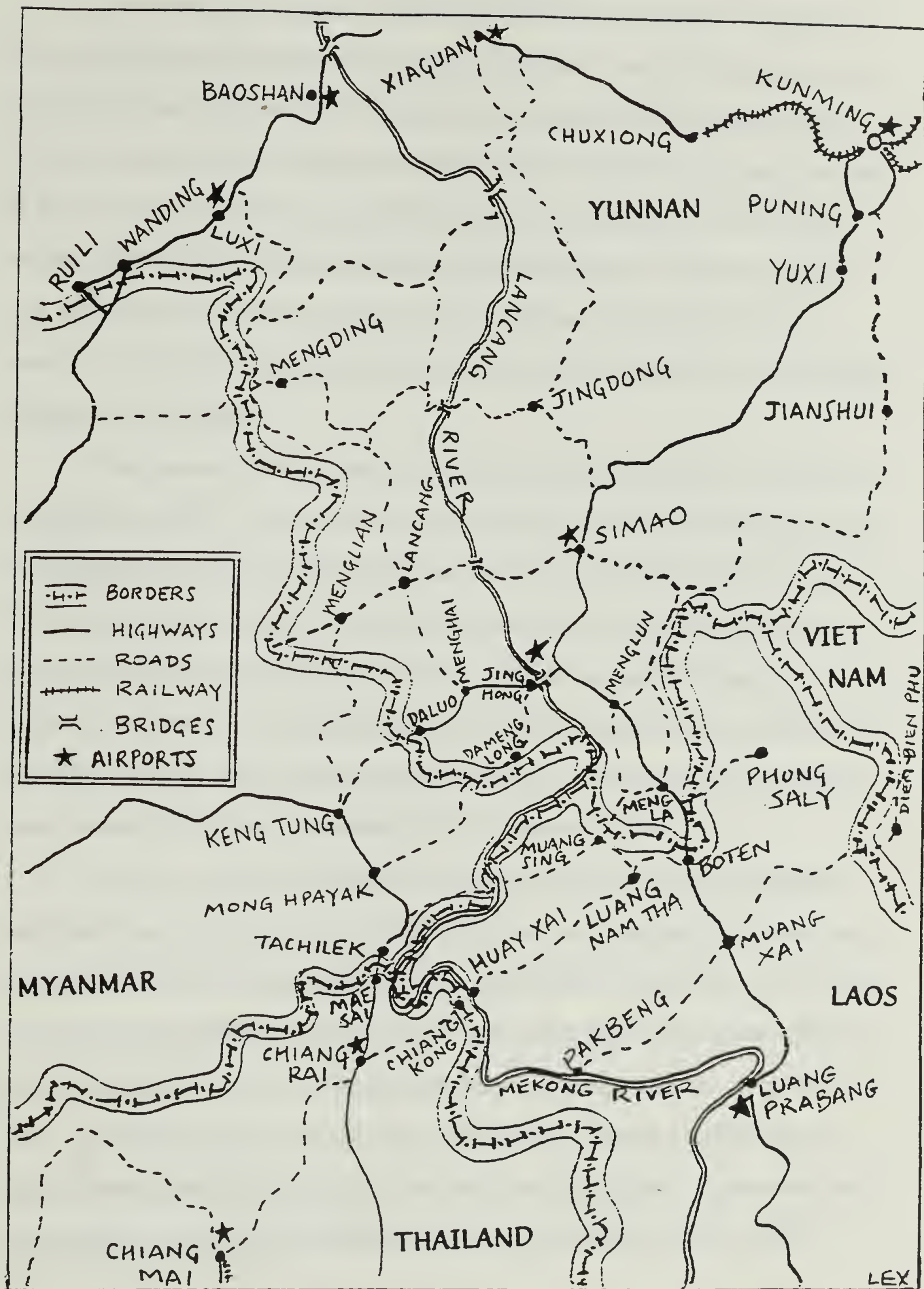
"Kunming has a number of lagging industries which should be retooled to produce new goods. As for export goods suffering from high transport costs, consideration should be given to vertical, as well as forward and backward linkages...some parts of production could be shifted to the border region, and the savings in transport costs would make the basic production costs more competitive in the international market."<sup>35</sup>



Although Peng analyzes in great detail the existing infrastructure, transport hubs, and resource bases along Yunnan's border, and evaluates them for potential placement of various industries, he does not explore any of the consequences that new industry would have on the region. By focusing on resources and means of transport, Peng's analysis is one of the most pragmatic available for those interested in industrial expansion, therefore his proposals for "Yunnan forward-position border processing bases" merits further consideration.

In terms of valley area and population, XSBN's capital, Yunjinghong, is much smaller than the Kai-Ge-Meng economic base. (See Fig. 20) Kai-Ge-Meng, (an abbreviation of the cities Kaiyuan, Gejiu, and Mengzi), is a large mining and industrial base, located on the railway between Kunming and the Viet Nam border. The area has a long history of development, and was famous for the miserable conditions of its tin mines before the Second World War.<sup>36</sup> The production capacity of Kai-Ge-Meng, and the railway (even though it dates back to 1910), are no doubt partly responsible for the surge in trade with Viet Nam since 1991.

Yunjinghong, on the other hand, is still a relatively small border city with a population of some 50,000. The major industry has been the expansion of state rubber and tea plantations, and during the 1980's, the allocation of small-holdings for rubber growing, all of which are intimately dependent upon the tropical climate.<sup>37</sup> The Prefectural Governor of XSBN, Zhao Cunxin, cites plantations of rubber, tea, sugarcane, tropical fruit and aromatics as the foundation of XSBN's industry, and he focused on the development of tropical crops, the travel industry, and food processing in his own twenty-year development plan.<sup>38</sup> For Zhao Cunxin, who is of Dai descent, maintaining the ecological balance in XSBN is essential for the long-term development of the tropical agriculture industry, currently it's main economic base.



(Based on Yunnan sheng kou'an fenbutu, 1993; and Yunnan sheng jiaotongtu, 1992)

Map 5. Surface Transport and Airports in XSBN Region



The relocation of 'lagging' industries from Kunming to XSBN, as suggested by Peng, would have a devastating impact on the environment, and is likely to meet with opposition, if not open conflict.<sup>39</sup> Indeed the placement of industry closer to the border, owing to an idea of mutual backwardness and comparative advantage, is novel. If both sides are so backward, then which side finds the advantage? Of course, the entire region might be found advantageous to some other place, such as the commercial and industrial hub of Kunming; however, if the Lancang/Mekong corridor is opened, wouldn't the advantage gravitate to the more advanced economies of Thailand, Singapore, and Malaysia?

The question of which direction the border prefecture of XSBN will gravitate is difficult to predict. On the one hand, the Chinese government is actively promoting idea that the Dai people of XSBN share the "same customs and the same language" as the Tai ethnic groups living in the surrounding countries. On the other hand, the forced assimilation of the Dai people into the Chinese-constructed concept of "minority nationality," the dismantling of the traditional social classes among the Dai residents of XSBN, and also the substantial immigration of Han Chinese into XSBN have seriously altered any conception of what it means to be Dai.

If, in fact, a new identification of a greater Dai or Tai ethnicity is generated, both locally and among the people of Thailand, then the strengthening of cultural and economic ties between them might serve to exclude Han Chinese, and in the long run create the sort of economic and political tendencies that decades of a closed "bamboo curtain" sought to stamp out. The real inconsistency appears to be the customary Han view of the Dai people as a sort of "tribal chieftanship," while the XSBN Dai considered themselves to be subjects of a thousand-year old kingdom. To evaluate such incompatible views, let us turn briefly to the history of the Dai people in XSBN.



## D. Endnotes to Chapter II

1. In September 1995, an expedition led by Michel Peissel claimed to have discovered the source of the Mekong above the Rup-sa Pass in Qinghai. The river is called Dza Nak in this area, and is hardly more than a streamlet in the rocky high plains. The sure identification of which feeder stream is the actual source of a 4,600km long river remains subject to debate, but nonetheless the trek in pursuit of the Mekong's source provides a useful depiction of the area. See "In Wild Asia, Caravan to a River's Source," by Marlise Simons. *New York Times* (April 17, 1995): A1.

2. Kawagarbo is the Tibetan name for the mountain, the Chinese name is Meili xueshan. The Mingyong River, which drains down from Kawagarbo into the Lancang, drops some 4,740 meters over the course of 12 km [Mu, *et al*, 1992: 104, 109]. From Kawagarbo Peak hangs the Mingyongqia Glacier (*mingyong* meaning "mirror" in Tibetan, *qia* meaning "ice"). Extending for eight kilometers down the face of the mountain, (from 5,500m elevation down to 2,700m,) the glacier is 500m wide and 73 square km in surface area [Mu, 1992: 108]. This formidable peak has yet to be conquered by mountain-climbers. A recent expedition by a team Japanese and Chinese climbers was forced to abandon their climb. See related articles in: *Yomiuri Shinbun* (December 5, 1996) and *Qiao Bao* (December 4, 1996): 26.

3. Formerly known as A'dunzi, this was a major trading outpost on the ancient "tea and horse" caravan route that connected Yunnan, Sichuan, and Tibet. See also Rock, 1947: 320-322; Mu, *et al* 1992: 100.

4. The terrain of northwest Yunnan is among the most rugged to be found on the globe. The noted geographer, T. L. Tregear describes it as: "Deep, steep-sided and heavily wooded valleys with fast-flowing, un-navigable, and often unfordable rivers... Many of these valleys are 5,000ft deep and perhaps only  $\frac{1}{4}$  of a mile wide at that height and within hailing distance. Yet it may demand a whole day's strenuous journey to get from one side to the other. Occasional swaying bamboo rope bridges, slung 500ft above the rocky chasm, help the traveler across" [Tregear, 1965: 265].

5. The treacherous Dulong Gorge, with paths too narrow for pack animals, is described in Rock, 1947: 315. This is not to be confused with the Dulong River, 70 km west, which drains from Yunnan into Myanmar's Nmai Hka.

6. Bazi, 壩子 the local name for small valleys or depressions between mountains, are a characteristic feature of Yunnan. A thorough examination of XSBN's geology and topography is found in GTJJ, 1990: 3-13. See also descriptions in Wiens, 1954 and Davies, 1909.

7. Description of the valley topography in GTJJ, 1990: 11. Details on the establishment of rubber and tea plantations, and the development of forestry industry in XSBN are found in Chapter Six: "The History of Development in XSBN and the History of Ecological Change." GTJJ, 1990: 181-237; and in Chapman, 1991. A brief glimpse of XSBN flora, including a photo of a tropical rain forest giant, *wang tian shu* [parashorea chinensis], are found in "XSBN, Kingdom of Plants" by Chen Haining, *China Pictorial*, 1 (1995) 48-49. The origins of the tea plant, which some have speculated first appeared in the XSBN / Thailand region, are discussed (with photos of the earliest known specimens) in Chen, 1984: 22-30. See also Etherington and Forster, 1993; Hill, 1989; and Chen, 1994 for discussions of tea in XSBN.

8. For a description of early river crossings in Yunnan, see "Development of Ancient Yunnan's Water Transport," Gu, 1992. Gu cites a crossing of the Nu River (Salween River) in the 23rd year of the Later Han dynasty's Jian Wu reign period (47C.E.) in which bamboo rafts were made and "thousands" died in the attempt. And also a route used in the Nanzhao period from Dali to Vietnam that took 52 day-stages. Gu must be referring to the Yuan River, the upper tributaries of which reach nearly to Xiaguan, and the lower reaches of which become the great Red River in Vietnam.

9. The historical annals of the Nanzhao kingdom, compiled during the Ming dynasty are fully examined in Backus, 1981. A contemporary Chinese account of Yunnan during the Tang / Nanzhao period is found in the report of an official retreating from a rebellion at his post in An-nan (present day Viet Nam). This account, known as *Man Shu*, has been translated [Luce, 1961].

10. Of two biographical works on Joseph Rock, one is mostly narrative [Sutton, 1974], and the other mostly illustrated with Rock's photographs [Aris, 1992]. Rock's major work on the Naxi (Na Khi) people, which is full of photographs and descriptions of the local terrain in Northern Yunnan, was published in Harvard-Yenching's monograph series [Rock, 1947]. A complete bibliography and map of F. K. Ward's travels can be found in Schweinfurth, 1975. The account written by Loius deCarne, a member of the first Mekong expedition of 1864, has recently been reprinted [deCarne, 1872]. Other valuable accounts of the region include: Davies, 1909; Wiens, 1954; and Mu, et al, 1992.

11. Rock's expedition crossed the Yangzi on small inflated goatskin rafts at a relatively placid part of the river [Rock, 1947: plate 143].

12. Upstream rapids are well illustrated in a report on a raft expedition through the Tiger Leap Gorge [Liu, 1987]. See also an account of the 1986 raft expedition through the Tiger Leap Gorge in Mu, et al, 1992: 34.



13. From Rock's description of a rope bridge at Cigu (Tz'u Ku), where the French Missionary, Dubernard, was murdered in 1905 [Rock, 1947: 315].

14. Iron bridges, which were built at least as early as the Nanzhao period (746 to 936 C.E.), have been found in the same region. A Tibetan engineer Tantonchyepo (1385-1464) built many bridges of this type, including one spanning 138 meters. For accounts of bridges, their locations, and construction techniques see Takebe, 1987: 174-177.

15. This bridge, though long since destroyed, was the sight of major battles to control the main caravan route to Tibet [Rock, 1947: 291-2] and [Mu, 1992: 46].

16. Although of questionable accuracy, it is interesting to note that on the 1945 AMS map series (later revised as the L500 1:1,000,000 series), for the section of the Lancang River from 28°N to 24°N there is **not a single** marked ferry crossing. But on the 24°N to 20°N map there are **twelve** marked ferry crossings, (nine of them occurring in XSBN, three of them marked south of the Chinese border). The aerial mapping done during W.W.II would have certainly covered the entire route, and the northern part was more frequently passed over than the southern part, being situated on the main air route from Sadiya (96°E by 28°N) to Kunming (102°E by 25°N), the route known as "the hump." If we add the well-known ferry crossings of Jinghong (XSBN) and Huay Xai / Chiang Khong (Laos/Thailand), then we'd find **at least** fourteen crossings in this area, though one might speculate that many more have, and still do exist. For use of the Mekong by riverine communities see especially Halpern, 1961 and Burliegh, 1971, and also Chapter IV, "Social and Environmental Consequences of Development," following.

17. An early discussion of modernizing XSBN and shipping to neighboring regions is found in Chen Bisheng's essay, "Weilai de dushi" [Future Cities] [Chen, 1941: 8-11]. The incorporation of XSBN into Communist China is presented in Moseley, 1973: 113-122.

18. Xiaoganlanba Port, which lies just north of XSBN in Simao Prefecture, was opened in 1992. See "Development of the Lancang - Mekong International Waterway" [Ding and Sun, 1995: 32].

19. Xu, 1990.

20. Halpern, 1961: 32-33. Descriptions and diagrams of upper Lancang Laotian boats can be found in Audemard, 1971: 54-58.



21. YNDZ, 1988: 53.
22. Lin, 1991: 422.
23. YNDZ, 1988: 53.
24. Myanmar's purchases of container ships and conventional vessels are also being subsidized by interest-free loans from China. See: EIU, 1995: 84.
25. EIU, 1995: 84.
26. FBIS, China 93-063, 5 Apr 93.
27. Details in Peng Jianqun, 1995: 55, and Fiske, 1993: 167.
28. Author's translation of Liu, 1991: 512.
29. Lintner, 1994: 70.
30. Jones, 1994: 11. See also "Asia's Looming Water Shortage," in *FEER* (June 1, 1995).
31. Xinhua News, 19 Dec 1996 (via *LexisNexis*).
32. Lists of industrial enterprises, including brief descriptions of their employees, equipment, and capacity can be found in *Yunnan gongshang qiye minglu*. The growth of the rubber plantations in XSBN are described in Chapman, 1991.
33. Zhao and Wu, 1991: 492-497.
34. Author's translation of Peng, 1995: 23.
35. Author's translation of Peng, 1995: 24.
36. According to a League of Nations public health expert sent to examine the mines in 1935, there was a population of 50,000 to 100,000 miners (half of them children), with a fatality rate of 30%. Their labors produced tin exports of 4,600 tons in 1934. For a description of a visit to Gejiu and trip on the Hanoi-Kunming railway, see Smith, 1940: 150-165.
37. Chapman, 1991: 41.
38. Zhao and Wu, 1991: 494-96.

39. The Jinping County Iron Alloy Plant, in Manhao, (on the Viet Nam border at the southern edge of the Kai-Ge-Meng valley), was destroyed by local residents in protest over pollution caused by the plant. The plant had been ordered to close, but soon was back in business and polluting as usual, which provoked the people into action. It is not hard to imagine that XSBN residents also would want to protect their natural environment, since their crops are dependent on specific ecological conditions. See column: "China in Transition," *FEER* (April 25, 1996: 29).

## CHAPTER III

### THE PEOPLES, HISTORY AND ECONOMY OF XISHUANGBANNA (XSBN)

#### A. The Xishuangbanna Dai People

##### 1. Historical Background

According to popular legend and the histories written in the Dai language, the founding of traditional Dai society is divided into three periods: the time before the arrival of Buddhism, an early Buddhist era, and the time the Dai Kings. According to one version, retold under the influence of Marx/Lenin/Mao Zedong ideology, the first period was called the *ganlan*<sup>1</sup> period, a time "without rulers, without Buddha, and without burdens (of class)." <sup>2</sup> This period is said to date to before 536 B.C.E. The second period is characterized as a time "with officials, with Buddhism, but without burdens (of class)," and is dated from 536 B.C.E. to 638 C.E. The third period "had rulers, had Buddhism, and had the burden of class divisions." Since we do yet not have written records or extensive archeological evidence to confirm the existence of the first two periods, the question of dating them is purely speculative.<sup>3</sup>

The first overlord, or *zhao pianling*, of the Dai-Lue people, established the Jin Dian Kingdom at Jing Rung (today's Jinghong) late in the 12th Century C.E.<sup>4</sup> At that time, the Dali Kingdom, having taken over the domain of the powerful Nanzhao Kingdom, still controlled most of northern Yunnan, preventing the arrival of Han Chinese to the areas that now lie in the western and southern parts of Yunnan. The *zhao pianling*, according to the Nanzhao records, deferred to the authority of the Nanzhao King and was given a "golden seal in the shape of a tiger head" to cement the relationship.<sup>5</sup>



Though not much is known about the political affairs of this kingdom, which came to be known as Sipsong Panna,<sup>6</sup> (or Xishuangbanna in Mandarin,) during the Mongol onslaught of the late 13th Century C.E., the Yuan government established Cheli Military Regional Administration at Jing Rung.<sup>7</sup> This nominal claim to suzerainty over XSBN has been used as evidence that the *zhao pianling* had been brought into a state of vassalage to the Chinese Empire. However, it has also been argued that far from becoming a subject of the Chinese, the *zhao pianling* and his descendants maintained real and independent control over Sipsong Panna for more than five centuries. This claim can be partly backed up by the fact that the region was never again invaded by China.

Indeed, it was not until the occupation of the area by the People's Liberation Army in the 1950's, when Han Chinese began to know anything about the internal political structure of Sipsong Panna, the operation of independent principalities, or even the local place names.<sup>8</sup>

## 2. Social Organization of the Dai - Lue Kingdom

The Dai Lue society of XSBN was traditionally separated into six social classes, from the aristocratic *meng*, to the slave class, *ka chao*.

"The original meaning of *meng* was the top of the skull, and so took its name from the highest and most valuable part of a person's body."<sup>9</sup>

The *meng* class included the *zhao pianling*, the princes, and their immediate descendants. The *meng* class, also known as *sadhu*, had to be addressed by all of the other classes as *zhao meng* (for males) and *meng lang* (for females). Similarly those addressing the *meng* had to refer to themselves with the diminutive forms of *pi* (knave) or *ka* (slave).<sup>10</sup>

The stratification of the Dai Lue society already possessed a high degree of complexity by the time the Jing Rung kingdom was established. That the *zhao pianling*, or "lord of the broad territory," was given the designation of a minor tribal chieftain by the Chinese, should not distort the history of the Dai people and reduce their social norms of many centuries to an over-simplified stereotype. In fact, the survival of the Dai - Lue into the present century, offers an interesting example of a people who were never forcibly acculturated into the dynastic Chinese empire, escaping the fate of other groups in the southwest region such as the Miao and the Zhuang.<sup>11</sup>

### 3. Network of Dai Kingdoms

Although Sipsong Panna remained outside, or at least at the very periphery of the Han Chinese sphere of influence, the kingdom maintained long-standing relations with other Tai states in the greater region. Prof. Hsieh Shih-chung has described a network of four loosely associated Tai Kingdoms, each with their own overlord. The Kengtung kingdom of today's Shan State in Burma, the Lan Zhang kingdom in today's north-western Laos, the Lan Na kingdom in today's northern Thailand, and Sipsong Panna in today's Yunnan Province operated together in a "tacit alliance," though each had their own supreme overlord, and the people within each kingdom maintained a strong sense of their own group identity.

According to Hsieh Shih-chung:

"These four small kingdoms frequently interacted with one another, both in interstate affairs and in popular contact, before modern nation-states were formed. People speaking mutually intelligible dialects felt free to move to and fro. This was an adaptation to encirclement by powerful neighbors: Burma,

Siam, Mons, Cambodia, and China. When one of the four northern Tai states was attacked, people could move quickly and safely to other territories to reside temporarily."<sup>12</sup>

With frequent contacts such as these, it is hard to imagine that the Mekong River was not also of primary importance for communications among the people of the federated Tai kingdoms. On the other hand, the distinct identities of these four kingdoms contributed to the pattern of fragmentation of the region when Western colonial powers began to draw artificial borders between them.

### B. Formation of Modern Borders

For the greater part of recorded history, China's borders remained shifting, amorphous zones of influence, waxing and waning based on long periods of alliance, rebellion, warfare, banditry, or simple inaccessibility. During the latter part of the 19th Century, XSBN's case was complicated not only by its geographic isolation and tremendous distance from the Chinese capital, but by the sporadic advances of colonial powers from the south and west.

Seeking to extend their reach from Burma and Indochina to the Chinese interior, French and British colonial interests launched expeditions into Yunnan. The British sought a route from India to the Yangzi River, through Burma and Yunnan; while the French dreamed of opening a "river road" to China by navigating the Mekong.<sup>13</sup> By the end of the Qing Dynasty, both Britain and France had annexed some parts of XSBN, and the treaties which were subsequently forced upon the Imperial government in Peking marked off borders of the areas in question for the first time.<sup>14</sup>

Ethnographers engaged in research of northern Thailand have provided insights into the partitioning of the region into sections of Laos, Thailand, Myanmar, Viet Nam, and Yunnan. For example, Nicholas Tapp, who wrote:



"...the impact of colonialism on the region has been considerable, in economic as well as political terms, and it seems clear that very different notions of territorialism must have prevailed in the region in the pre-capitalist period, whether these were the notions of the lowland rulers of states and empires, or those of smaller, more dispersed groups.... Yet today, the border is a reality, and has affected the lives of the ethnic minorities who find themselves on one side or the other or both of it, to a very considerable degree."<sup>15</sup>

This observation applies most convincingly to the Dai people, who have found their confederation split up into five different nations, and their people dislodged, and crowded out of their traditional land holdings. In XSBN, where the Dai people had been in the majority for many centuries, the arrival of Han Chinese drastically altered the demographic picture.

### C. Communist Consolidation

XSBN was first occupied by the People's Liberation Army in the early 1950s, and was established as the first of Yunnan's Autonomous areas in 1953. The capital, Cheli, was renamed Yunjinghong, a Chinese transliteration of its original name in the Dai language (which meant "city of dawn"). At that time, the Han population of XSBN was almost nonexistent.<sup>16</sup>

The administrative units of XSBN were set up in accord with the original twelve *banna*, plus three districts.<sup>17</sup> However, the process of setting up district level administrations took place slowly, and the *banna* were reorganized several times between 1953 and 1958. In 1958 XSBN was divided into the three main administrative counties: Jinghong, Menghai, and Mengla, which have remained unchanged to the present day.

The presence of Communist cadres engaged in promoting the new regime and in administrative organizing during the early 50's, was the first time Han Chinese had

taken up residence in the tropical valleys of XSBN. Although training of minority nationality cadres was underway at the newly opened Nationalities Institute in Kunming, the P.R.C. government also recognized the hereditary Dai ruler of XSBN, Zhao Cunxin, by presenting him with an official seal of office.<sup>18</sup> The Communist party fully recognized that the traditional social structure of XSBN, with its hereditary princes, land taxes, and social classes, was still intact, and the official policy was to "unite the headmen" of the *meng* and villages. This formed the groundwork for extensive land reforms, which divided up the royal holdings of XSBN among the *zhao meng* (or lesser princes), and then with their aid the local residents came into possession of the land they farmed.<sup>19</sup>

Despite the progress of land reform in XSBN, in 1956 nearly 20,000 households were found to be still paying land tributes to local leaders. The average tribute amounted to some 30% of the household income.<sup>20</sup> Even such burdensome traditions as paying tax tribute were deeply ingrained into the Dai people, but they were gradually wiped out during a period of active suppression of ethnic identity and re-education, when those of the *zhao* class had to renounce their aristocratic privileges.<sup>21</sup>

Even though the experience of the Dai people during the last fifty years has included the castigating of their traditions, breaking off their connections with the Tai peoples of bordering states, and fostering a synthetic Dai identity as an ethnic minority of the greater Chinese nation, still the Dai people and all the minorities of Yunnan have, in recent years, been called upon to preserve and display their ethnicity and "traditional customs." What the Han Chinese see as traditional are certain stereotyped forms, certain costumes and rituals which they have long associated with a particular ethnic group, and these are now being linked with a burgeoning folk culture industry.<sup>22</sup> Whether the commoditization of culture serves to strengthen tradition, or to water it down for mass-production is a dilemma now being faced by the minority

population in Yunnan, among whom the Dai are in the unique position of being heralded as a cultural and linguistic bridge to international trade.

#### D. Ethnicity and Trade

Official Chinese plans to open up the Lancang Corridor often cite the advantage of international cultural and linguistic ties of the ethnic minorities, such as the Dai people, in expanding border trade. This raises the question of the degree of commonalty that still exists between the people who have been separated by international borders and subjected to the exigencies of political change and upheaval ever since. Are we more likely to see unity or factionalism among the ethnic groups being labeled as sharing the same roots? In the words of Mr. Gehan Wijeyewardene:

"The boundaries we know are arbitrary and Thai (Tai) ethnicity is various and malleable.... Yet community of language and ethnic identification, and the ways in which these are thought of and written about, are potentially factors, as are the natural facts of topography in determining frontiers."<sup>23</sup>

Therefore we must also take into consideration the *idea* of a greater Dai - Tai ethnic unity, whether it is being developed as a model of existing phenomena, or whether it is a surface manipulation with ulterior motives. In either case, there might be a fundamental attractiveness, or a new form of self-identification for the Dai people, even if there is no historical justification for either.<sup>24</sup>

#### 1. Background of "Ethnic" Border Trade in XSBN

One way to examine cross-border ethnic relationships is to consider the volume and extent of border trade that existed before 1950, and how it has changed since then. According to a recent study of the development of ethnic trade:



"Before 1949, the economy of XSBN was completely backward, and the local peoples' commerce was extremely weak. There were only a few dozen small shops and stalls selling firewood, salt, kerosene, cloth and some thirty-odd commercial goods."<sup>25</sup>

This statement suggests that there was neither a flourishing ethnic trade, nor a strong commercial network to support its development. It does not take into account the traditional subsistence agriculture and self-sufficiency that makes many of the more familiar Chinese trade items unnecessary. Also, it fails to include as local commerce the flourishing cross-border trade. The same study goes on to state that, before 1950, the border people of XSBN, Laos, and Myanmar had long standing trade relations:

"...with an annual volume of more than 3 million *yuan*, it promoted the neighboring countries' production, and fulfilled all the daily needs of the people."<sup>26</sup>

Despite these contradictory statements, we can at least venture to say that there was *some* form of border trade going on when the Chinese first entered the region, and that the *set-up* of commercial outlets in XSBN was either concealed or quite unstructured from the Han Chinese point of view. Under the Han Chinese administration in the early 1950's:

"The Party paid great attention to ethnic trade, and used ethnic trade to check the links of advancing economic relations between the Party, the nation, and the minority nationalities."<sup>27</sup>

To carry out this mission, four Peoples' Trading Company branch offices were set up in XSBN, with 114 employees. Facing the complete lack of infrastructure:

"...they used caravans of horses and cattle to haul in Shanghai dried vegetables, Sichuan pickled mustard preserves, Guizhou peanuts, Dali salted meat and other goods."<sup>28</sup>

The strangest example of these prodigious efforts to unite the markets of central China with the remote tropical border region of XSBN is surely found in the importation of these items--in a lush rain forest full of bananas, mangoes, and aromatics, and in the towns that subsisted on their own rice paddies and vegetable plots, as well as fish from the rivers and streams, what use would the local people have for old dried vegetables dragged in on a caravan from distant Shanghai? As for the dried meats of Dali, it is hard to imagine them as a particularly desirable or unusual staple, since Tibetan and other merchant caravans had been bringing them along on their tea-trading missions for many centuries.<sup>29</sup> In fact, these trade goods sound more like the staples needed by the Han Chinese themselves, as they moved into areas where they had uncertain sources of grain or other sustenance, and completely lacked any traditional rights to land tenure.

The local commerce of XSBN was further developed by an official policy of government price subsidies, which sought to integrate XSBN into the provincial economy and to place the tropical resources of the area within the reach of buyers on the provincial and national levels. Prices were slashed in 1954, 1958, and 1963, with a total reduction of more than 30%. Goods were available in state-run stores at retail prices 15 to 40% below those found in private stores, and in this way:

"...the waves of foreign merchandise in the market were resisted, the exploitation of the masses by private merchants was reduced, prices were stabilized, and the peoples' lives were improved."<sup>30</sup>

Local commerce was drawn slowly into the Chinese state socialist sphere in a deliberate effort to cut off contact with external markets. In 1950, there were 21 cross-border market towns, but by 1990 there were only 10, a 52% reduction. Also, between the late 50's and early 80's, local officials who followed the "leftist" ideology were afraid of "making mistakes," and discouraged import /export, which resulted in a

reduction of trade in the open ports of some 25 to 60% of former years' totals.<sup>31</sup> In short, we can see that up until the introduction of economic liberalization in the 1990's, the sum result of building up ethnic trade in XSBN has been to wean it away from cross-border trade and make it dependent on the greater provincial economy of Yunnan and its industrial center in Kunming.

## 2. Ethnic Trade as a Key to Opening the Border

In the light of the "closed door" policies of the past, what are the implications of new international re-alignments for the prefecture of XSBN? Since the perimeter of XSBN lies directly along the borders of the countries in the "golden quadrangle", there is no doubt that it will become a major artery for trade and shipping. The question is, what percentage of this trade will directly involve local people, and what percentage will merely pass through on its way to somewhere else? In many Chinese analyses and projections for XSBN border trade, there is a recurrent theme of "ethnic trade," a rather loosely defined term which is supposed to arise from the shared linguistic and cultural ties of the residents in the adjacent areas of XSBN, Laos, Myanmar, and Northern Thailand.

The notion of a renaissance of cross-border cultural ties, based upon the persistence of small scale caravan trade and family visits across the permeable borderlines does not seem to have any concrete plan or policy behind it. However, based on the surge in activity at the border points being opening in XSBN, trade could very well take off and surpass all expectations.<sup>32</sup> With the backing of local officials in Jinghong, and the continued improvement of roads and river transport, the Dai people might find themselves in a unique position for entrepreneurship. Even so, they must first overcome very significant obstacles in terms of poverty, lack of education and job



training, and lack of capital for investment in their own businesses. At the same time, the Dai people will be subject to a host of secondary effects such as urbanization, dislocation, and pollution of the unique tropical ecology of XSBN. These social and environmental factors will be examined in the following chapter, which focuses on the current conditions of the people in XSBN and their imminent encounter with the world economy.

## E. Endnotes to Chapter III

1. 橄欖 "*ganlan*," in Modern Chinese means "olive." My inquiries into an alternate meaning for this word in the context of Dai society have yet to produce any results, but I believe that the word refers not to olives, but to a characteristic form of Dai architecture. This assumption is based on two phrases: (the Jinuo people) "live high in the mountains, occupying *ganlan* 干欄 style bamboo houses" [Wang, 1993: 321]. And, in *The History of the Dai People*, we find: "The residences of the Dai People are exactly *gan lan* 干欄 style architecture..." [Jiang, 1983: 579]. If we follow my suggestion, then a possible reading for the towns of Xiaoganlanba and Daganlanba, are the "small basin of bamboo thatch houses," and the "large basin of bamboo thatch houses," which seems to make sense in the context of small port towns at either extreme of the traditional XSBN Dai domain. I therefore maintain that *ganlan* is more likely a transcription of a native word, then a translation of the native word for "olive."

2. This and following quotes on the three early periods of Dai society are from GTJJ, 1990: 147.

3. The entry of Buddhism into Dai society is an intriguing problem. Since the vast majority of XSBN's books written in the Dai language were sought out and destroyed during the Cultural Revolution, there aren't any indigenous records to go on. An early contemporary account of the XSBN region is found in the record of Fan Chuo 樊綽, a Chinese official who described his escape from An Nan (Viet Nam) through Yunnan during the 9th century. Fan Chuo describes a land where water buffalo and elephants were used as draft animals, but doesn't make specific mention of Buddhism [Luce, 1961]. There are other accounts of the Kuan Yin cult in northern Yunnan, and speculations about the spread of Buddhism during the 8th century from India [Howard, 1990: 9]. Yunnan legends tell of wandering monks from India who performed strange rituals and magic acts, such as the dancing monk Luomin [Yang, 1881: 13514]. But the Theravada Buddhism practiced by the Dai people must have entered from the south, via Burma or Thailand, and should therefore be approached by studying the dissemin-ation of Theravadan Buddhism from Sri Lanka. Although there are many differing opinions about the time of dissemination of Buddhism into southwest China, it seems to me highly unlikely that the spread occurred during the lifetime of the historical Buddha, and for this reason alone, we should be extremely skeptical about accepting any dates without concrete evidence.

4. The term Dai-Lue is a compound of *Dai*, 傣 which is a word coined (in the 1950's) to describe the greater ethnic group of Tai people in Yunnan; and *Lue*, 潞 which is the word that XSBN Dai people previously used to refer to themselves. An earlier form of reference to the Dai people was *Meng Lue*. 孟潞 One interpretation for

*meng* is the 'tribe' or 'territory,' and for *lue*: 'native place' [GTJJ, 1990: 144]. *Meng* can also refer to the Dai nobility (see note 9, below), and in Thai the word *meng* means: 'town.' The overlord of the XSBN kingdom was called the *zhao pianling*, 召片領 which is also commonly transcribed according to the Dai pronunciation: *chao phaendin*. (To avoid confusion, Dai terms will be referred to with Mandarin transcriptions, and alternate Dai spellings will be provided in footnotes.) Hsieh offers a rendering of Dai-Lue as: "the people who call themselves Dai, live in Lue, and share equally in making their *chao phaendin* a satisfied king" [Hsieh, 1995: 307]. Although the term Dai was initially accepted by the Dai people as an improvement over, *Pai yi*, 百夷 (a pejorative Chinese term,) it lumped several different independent Dai groups together under one ambiguous label. More recently, the XSBN Dai began to refer to themselves as Xi Dai 西傣; while the Dehong Dai people began to call themselves De Dai 德傣 [Hsieh, 1995: 316-326]. Regarding the terms Dai and Tai, there has been some effort made to clear up the distinction between Thai, (the people of Thailand), Tai, (the inclusive term for those sharing Tai ethnicity, or the greater Thai), and Dai (a term concocted as a label for a "minority nationality" people by the Chinese). Further discussion of this difficult, but crucial subject is found in Wijeyewardene, 1990: 48-50. *Chao (zhao)*, was a "ruler" or "king." *Phaendin (pian ling)*, meant roughly "the broad land," or "the entire land." See also the "Role of the *chao phaendin*: Ethnic Identity as Subjecthood" in Hsieh, 1995: 303-307. The Kingdom of Jin Dian, or "Kingdom of the Golden Temple," was located at Jing Rung, the place variously known as: Kenghong, Chicngrung, Xieng Hong, Cheli, and Jingdong. See MZYJ, 1958: 254; Lebar, 1964: 210; and Zang, 1966: 417.

5. Hsieh, 1995: 308-309.

6. Sipsong Panna, or the "twelve *banna*," has been variously explained as referring to twelve regions, fiefdoms, or taxable lands. *Sipsong* is the Thai word for the number 'twelve.' It's unclear whether *ban* refers to the Thai word for 'house' (*ban*), or 'thousand' (*pan*). *Na* is generally accepted as referring to 'land, field.' As a geographic name, Sipsong Panna has a parallel in the Sip Song Chao Thai of Northern Viet Nam. A discussion of various interpretations of the name Sipsong Panna is found in Lebar, 1964: 210-211.

7. Zang, 1966: 417.

8. Hsieh, 1995: 313-314. The best overviews of the "tribal chieftanship" system, or *tu si*, 土司 can be found in Wiens, 1967: 213-228; Huang, 1968; Yu, 1968; and Lombard-Salmon, 1972. Descriptions of the Mongol and Ming conquests of Yunnan, and the general state of carnage and chaos that these entailed are found in Lightc, 1981:83-85.



9. Author's translation from MZYJ, 1958: 256. *Meng*, 孟 (or *muong*) being the name for the noble class, also referred to the areas under their dominion, which were ruled by *zhao meng* 召孟. The entire area of XSBN was, at one time, divided among more than thirty *zhao meng*, and under each *zhao meng* were smaller local administrations down to the level of villages. The lower ranking headmen of outlying and mountainous areas were called *huoxi* 火西 and *man* 曼. The titles *meng* and *man* are still the most common of place names in XSBN. See also: GTJJ, 1990: 148.

10. Below *meng*, the *weng* 翁 class included the extended family of the *zhao pianling*, their relatives and descendants. Both the *weng* and *meng* classes were supported by taxes collected from farmers, who lived on the hereditary taxable lands of the nobility, on rented plots, on sharecropped plots, or worked as slaves on the land of their designated masters.

The *lu lang dao ba*, 魯郎道叭 composing the third class, were originally descendants of the second class and often became headmen of *meng* or smaller local administrations. Most of the headmen had enfeoffments or taxable lands also, and were primarily responsible for supervising agricultural production and collecting taxes to be handed over to the nobility.

The fourth social class, the *Dai meng*, 傣孟 sometimes called *gun ben meng* 滾本孟, were the earliest residents of the XSBN territory, occupying a fairly large amount of the land. The fifth class were the *Dai ling nan*, 傣領囡 or *gun ling nan*, 滾領囡 which were divided into two major groups. The first group were those immediately subordinate to the *zhao pianling*, and were called *ling nan nai* 領囡乃 (*nai* meaning "internal"). The second group were those subordinate to other nobility and officials, and were called *ling nan nuo* 領囡諾 (*nuo* meaning "external").

The sixth class was that of *ka zhao*, 卡召 also called *hong hai long* 洪海龍. *Hong hai* referred to landless persons of any class who did not farm, while the *hong hai long* were those landless peasants of the lowest social class who served as slaves. The *ka hen* 卡行 were the household slaves of the *zhao pianling*, over whom was a supervisory class of slaves called *meng*. The *meng* were usually made slaves after being captured in battle, or as a punishment for a crime. If the *meng* slaves transgressed a second time they were sentenced to death. During the 40's three *meng* were beheaded according to this custom in Mengla. This description of the Dai social classes in XSBN is drawn from MZYJ, 1958: 254-60.

11. Descriptions of the violent absorption of neighboring Guizhou and subsequent Miao rebellions are fully documented in Lombard-Salmon, 1972.

12. Hsieh, 1995: 306.

13. On the French dream of opening the Mekong, see deCarne, 1872, and Hafner, et al, 1983. On the British / French rivalry in the Mekong region, see also Hirshfield, 1968. A detailed study of the British parliamentary debates on the Burma - Yunnan railroad is found in Chandran, 1971.

14. Details on the geography and demarcation of the Burmese border are found in Zhang, 1937. In 1897, the French took one of the *banna*, including the towns of Mengwu and Wude, incorporating them into Laos. These remain in present-day Laos (22°15'N by 101°50'E) [GTJJ, 1990: 144].

15. Tapp, 1990: 149.

16. Moseley, 1973: 66. After 1950 there was a flood of Han immigration into XSBN, and by 1956 there were some 18,000 Han residents; by 1982, the Han population had surged to 185,000 [GTJJ, 1990: 140]. Prof. E.C. Chapman noted that the expansion of rubber plantations along the border areas of Yunnan allowed the Han Chinese to strengthen their position in an area formerly dominated by a non-Han population. Though numbering only a few hundred in 1940, "...by 1988, after a rapid in-migration of Han Chinese from Kunming and beyond, the total population had grown to 700,000, of whom one-third were said to be Han Chinese....one-third comprised people from 12 other minorities, and one third were Dai" [Chapman, 1991: 41]. See also YNDZ, 1988: 5, 43.

17. Officially, there were four administrative districts in 1949: Cheli, Fohai, Nanjiao, and Zhenyue. In 1953 they were dissolved and the prefectural administration was set up with twelve *banna*: Banna Jinghong, Banna Menghai, Banna Mengwang, Banna Yiwu, Banna Mengpeng, Banna Menghun, Banna Mengzhe, Banna Mengyang, Banna Mengla, Banna Menglun, Banna Meng'a, Banna Mandun; and three districts: (1) Gelan and Hani People's Autonomous District, (2) Yiwu Yao People's Autonomous District, and (3) the Bulang Mountain Bulang People's Autonomous District [YNDZ, 1988: 4].

18. Zhao's acceptance speech reads like a tract from Communist propaganda office, demonstrating his ability to adapt to circumstances. The support of the preferred Chinese policy also conforms to the traditional pattern of Dai-Han political relations, as described by Prof. Hsieh. However, "...in jeopardy of losing their ethnic-state, the Tai were still following, at the time of the struggle between the Nationalists and Communists, their accustomed practice of supporting either of those two powerful Chinese regimes. They thought this was the only way for the Tai state to survive, not

realizing that their ability to decide their own ethnic-political fate had disappeared forever" [Hsieh, 1995: 325]. For a partial translation of Zhao's speech, see Moseley, 1973: 114. Zhao went on to serve as Prefect of XSBN for the next forty years! See also Zhao and Wu, 1991.

19. Moseley, 1973: 116-17.

20. GTJJ, 1990: 150.

21. From 1957 until the end of the Cultural Revolution, the Dai were involved in the same class struggles and re-education that held sway throughout China [Hsieh, 1995: 326-27].

22. See for example, the "ethnic" souvenir factories described in Swain, 1995.

23. Wijeyewardene, 1990: 71.

24. Take for example the metamorphosis of the Dai opinion of "brutal Siamese" to a new-found interest in Thailand as "a great and wealthy Buddhist country." Meanwhile the Lue people in Thailand, according to Hsieh, maintain a hostility to Thai-Siamese, while fondly picturing their relationship with the Lue "homeland" in Sipsong Panna [Hsieh, 1995: 328].

25. Author's translation of GTJJ, 1990: 231.

26. Author's translation of GTJJ, 1990: 236.

27. Author's translation of GTJJ, 1990: 232.

28. Author's translation of GTJJ, 1990: 232.

29. Hill, 1989.



30. Author's translation from GTJJ, 1990: 233. Despite the price subsidies, border trade seemed to account for the greater part of local commerce well into the 1950's. As reported in *Commerce in the Tai Autonomous Region of Sipsong Panna*. "Before Liberation, almost all of the Sipsong Panna market was taken up by foreign trade. At that time a relatively large amount of barter in tea, camphor, etc. was done with Thailand....Apart from trading in salt, tea and cigarettes, in the latter half of 1950, 90% of the remaining trade of the Fohai Branch Trading Corporation (which included...Cheli, Daluo, and Menglong) was made up of imported commodities..." See Narramore, 1988: 9-10.

31. "...owing to the influence of leftist ideology" 由與左的思想影響[GTJJ, 1990: 236]; "cadres in the commercial units were afraid of making mistakes" 商業部門的同志怕犯錯誤 [GTJJ, 1990: 237].

32. A brief description is found in "The Thriving Yunnan Border Trade." *China Pictorial*. 4 (1993): 8-11.

## CHAPTER IV

### SOCIAL AND ENVIRONMENTAL CONSEQUENCES OF DEVELOPMENT

Despite the tremendous changes that the opening of the Lancang (Mekong) corridor promises to bring to XSBN, surprisingly little has been said about the social and environmental impacts that the development will bring to the entire prefecture. Many of the articles published on the subject are written from a top-down point of view, examining the policies and loosely defined prospects for economic integration, without mentioning much, if anything, about the conditions on the ground. On the other hand, there are some articles which show a greater sensitivity to basic problems facing the local society of XSBN, and some comparison and contrast of these points of view will help to illustrate the basic situation of XSBN's residents.

#### A. Labor Issues in the Border Region

On the subject of skilled labor in XSBN, we find it characterized as unskilled and uneducated:

"Owing to the backward state of education in this region, the quality of human resources is rather low, there is a widespread lack of skilled labor and technical personnel, which poses a major obstacle to economic development."<sup>1</sup>

Therefore, from very the start, the local people remain largely unprepared for the increased pace of modernization, and their lack of technical training will tend to exclude them from new job opportunities.

Liu Zhi, who works in the Yunnan Academy of Social Sciences, expresses his sympathy, urging that the problem should be addressed by organizing and actively training the local people in science and technical skills. He advocates on-

the-job training and exchanging technical personnel with other agencies, as well as the establishment of a GMS network for consultation, technology transfer, and exchange of information.<sup>2</sup>

By contrast, Peng Yong'an, sees an economic comparative advantage in the backwardness of border residents.

"With the same cultural roots, and similar social customs, the people's standard of living and their levels of production are basically positioned at the same low level. Historically, the social and economic relations within and without the border region are close, and will be beneficial for developing border trade and foreign-directed processing industries."<sup>3</sup>

Thus, the local residents are supposed to be useful as cultural connections for business, and at the same time, cheap labor. It is precisely the search for economic advantage in opening XSBN that poses the most serious challenge to the local population. The fact that their labor is cheap and unskilled does not appear to promise any real economic growth, as far as they are concerned.

#### B. Poverty and Economic Development

The issue of real poverty, and its alleviation by means of "development," is a controversial subject. No less so in Yunnan, where inaccessible areas still have a very high percentage of people who are practicing subsistence agriculture. In the eyes of many economists, because subsistence farmers have no measurable GNP, they are said to be living in dire poverty. According to Liu Zhi, the border region accounts for some 50% of Yunnan's total land area, 50% of Yunnan's land under cultivation, and 40% of the province's population; and yet in 1989, the border region's income accounted for only 28% of the provincial total, and expenditures only 15%. Of the 41 most impoverished counties in Yunnan, 23 were in border prefectures. "In recent years, the gap between border ethnic areas and economic zones is continuing to widen."<sup>4</sup>



However, it should not be assumed that the problem has gone unnoticed by the Yunnan Provincial government. In fact, their continued efforts to address the urban / rural income gap, and huge investments in building up the transport infrastructure, have been instrumental in solidifying the economic relations between the industrial and financial hub of Kunming and the border regions. For example, when procurements of agricultural products dropped in the first half of 1990 (by 5.7% compared to the previous year), rural residents had no money to purchase consumer goods. In August 1990, the Provincial government enacted emergency measures to boost the sluggish economy. Limits were removed on the purchase of agricultural staples, warehouses were set up, and protective prices established for certain items such as rubber, pepper, and star anise. In addition, policies were enacted to market industrial goods in rural areas. A fixed proportion of goods that were in short supply would go to rural markets. These measures reportedly reversed the economic slowdown, and in any case, they demonstrate the attention that the Provincial government pays to the interdependence of rural and urban economic growth.<sup>6</sup>

### 1. Strategies for Economic Growth

In 1991, the Yunnan government held a Development Strategy Conference in order to address the uneven geographic distribution of economic growth in the province. The conference came up with four strategies, summarized roughly as follows:

#### 1. *Develop mountainous regions*

Goal: To bring the remote, backward, and poverty-stricken areas up to a higher standard of living.

Strategy Rejected: The mountains of 69 out of 128 counties are too inaccessible. Additionally, the variations in climate, soils, and agricultural conditions are too diverse to address without overly complex analysis.

## 2. *Develop minority regions and border regions*

Goal: By making use of existing ethnic cohesion, develop along community lines. In addition, take advantage of language and cultural connections to increase international exchange with bordering countries.

Strategy Rejected: The needs and interests of Yunnan's ethnic minorities are too diverse to reach a consensus on projects and funding.

## 3. *Develop western Yunnan*

Goal: To bring the very poor western counties up to the standard of living of the more prosperous eastern plateau region.

Strategy Rejected: Impassable mountains and no infrastructure.

## 4. *Partition Yunnan into Economic Zones*

Goal: Zones would be established, each based on an urban industrial and communications center. Materials and labor from the countryside would be absorbed by the industrial center, while money, jobs, and infrastructure would radiate outward.<sup>7</sup>

Though not formally agreed upon, the last strategy has been the model for economic development in Yunnan. It is simply another example of the growth-pole model that has been widely applied in underdeveloped regions in order to promote economic growth. This strategy reflects the tack being taken in China since the economic reforms of the 1980's, when the "open door" policy permitted regional disparities in trade, investment and technological innovation. As applied in China, the idea is to allow coastal areas to exploit their advantages and develop a highly skilled labor force, superior management, and to absorb advanced technology. According to a theory dubbed the "ladder step doctrine," the coastal cities would act as growth poles and then diffuse technology and skills throughout the mainland. There was, however, an "anti-ladder step doctrine," which argued that the interior regions must receive equal development investments in order to exploit energy and resources needed for industrial production in coastal areas. The "anti-ladder" advocates felt that interior regions would never achieve "take-off" by diffusion.<sup>8</sup>

The idea that economic growth will naturally diffuse across the region is especially problematic in the rugged mountain regions of Yunnan. Whether cut off by snowfall and avalanches, as the northwest region often is, or plagued with malaria and tropical fevers, as is the case in XSBN, Yunnan's border areas have forever been some of the most inaccessible spots on earth. Although traditional caravan trade, and shipping by pirogue linked XSBN with neighboring regions in Burma, Thailand, and Laos, these relations were seasonal and largely dependent weather conditions. The massive Chinese road-building projects of the last several decades, and more recently, the opening of regional airports, have reduced delays caused by rain and flooding, and consequently have greatly increased contacts between local people in Yunnan and the "outside" world.

## 2. The Transport Network as a Key to Growth

Provincial investments in transport and communications infrastructure have also increased dramatically in recent years. In 1992, investments were up 130% over the previous year,<sup>9</sup> and in 1993 the governor, He Zhiqiang, made public a plan to invest 10 billion RMB (US\$ 1.2 billion) in transport and communication networks.<sup>10</sup> The push to improve the province-wide transport network in Yunnan has been accelerating, and at the same time GMS plans call for linking up land, water, and air communications with surrounding nations. Though the effects of improved and expanded road networks, such as the Kunming/Daluo highway in XSBN, are just beginning to emerge, we can also compare the findings of research conducted in similar geographic and ethnically diverse contexts, such as those found in northern Thailand.



For example, when evaluating the numerous highland development projects conducted in Thailand during the 1960's and 1970's, Peter and Sally Kunstadter found:

"The most far-reaching change of this period has been the building of roads into and through the highlands. This has vastly increased the flow of lowlanders to the highlands, modifying the traditional patterns of population movement and altering the basis, scope and techniques of land use....Low-cost minibus transportation networks proliferated and greatly amplified the volume and range of daily population movements for marketing, education, and participation in the urban (and sometimes rural) labor force."<sup>11</sup>

Surely the same social forces are at work in XSBN, mobilising sections of the population which previously had no access to border markets or urban areas. Will this tend to alleviate rural poverty, or will it create new problems?

An example of the social impact caused by opening the Lancang River is found in a study by Liu Daqing, of Yunnan's Transport Bureau, Navigation Section:

"Living along both shores of the Lancang River is one third of Yunnan's population, of which one fourth are ethnic minorities. Owing to lack of adequate transport, today one fourth of these people still have not got enough food and clothing, and are living in extremely backward social and economic conditions. Within the river basin, average industrial and agricultural production per capita is only 386 *yuan*, which only amounts to 65% of the provincial average, and 43% of the national average. In the ethnic districts of higher elevations, transport is virtually nonexistent, the people survive on slash and burn agriculture, lack medicine, live in miserable and dire conditions, and they desperately need improved communications. In this respect, Lancang River traffic can be a very useful tool to alleviate poverty and bring prosperity to the people in the river basin region. For example, before opening up traffic on the Lancang, the people of Huitang Village in Menghai County could only live up in the mountains, it was extremely difficult to make contact with people elsewhere, and the average income was only 30 *yuan*. But since river traffic reached this village in 1980, the people have moved down to the shores of the river to cultivate cash crops, and their average income has jumped to 300 *yuan*."<sup>12</sup>

Although Liu's example purports to show the beneficial effects of opening river traffic to remote villages, it also begs several questions. First, is the shift from subsistence economy to cash economy always beneficial for the local people? And

second, assuming that there is a strong incentive to cash in on the river traffic, what about the communities more than 20 km from the river's edge? Will they also want to relocate? What about communities 50 km away, or even 100 km distant? It should be worth observing the distance that communities are willing to travel to get near the water's edge and grow cash crops to load onto passing boats. What springs to mind is not the convenience of an isolated community moving down the side of a mountain, but of a mad rush to colonize the river's edge, a competition for limited amounts of cultivable land among ten million people, and in short, a nightmare of agricultural runoff, erosion, and wastewater in areas that have no facilities. The picture really is beginning to look like an "Oriental Danube" after all, but not the sort of Danube the promoters are envisioning.

### C. The Trend Toward Urbanization

As the road network connects remote areas in southwest Yunnan with the Lancang River and other transport hubs, increased mobility will bring more and more people to regional markets, towns, and cities. The movement of population, as noted by the Kunstadters, will have concomitant effects on the local society. In the area around Pa Pae village, in northwest Thailand, where an all-weather road was completed along an ancient caravan route, there was a rapid substitution of plastic goods for traditional water-resistant materials. The local residents began to purchase manufactured goods in place of their own hand-made goods, and rapidly assimilated elements of consumer culture which they hadn't experienced before.

"By 1980, such modern fashions as electronic watches, sunglasses, jogging shoes, warm-up pants and be-sloganed T-Shirts ('Yamaha', 'Cambridge University', 'Snoopy', and 'Charlie Brown') had reached Pa Pae. These were not just a conspicuous sign of modernized consumption, but also signalled



deep-seated environmental and local economic changes (the loss of land traditionally used for cotton swiddens, the increased opportunity cost of home-made as opposed to purchased clothing, and increasing participation in modern world-wide consumption styles."<sup>13</sup>

The same phenomena are already evident in the cities of Yunnan. Increased opportunities for earnings only serve to quicken the pace of change, drawing more people into the city, and creating a local variation of the "floating population" problem, which has sent an estimated 100 million people in search of jobs throughout China.<sup>14</sup> Yunjinghong, being the main intersection of air, highway and river traffic, is becoming the hub of XSBN.

The Jinghong Airport opened in 1990, taking over the old Simao route. By mid-1995 the airport was handling 52 flights per week. During the same five-year period, the airport handled 600,000 passengers, 240,000 of them in 1994 alone.<sup>15</sup> To this booming domestic service, Jinghong Airport added an international route to Bangkok in April 1996, becoming the second airport in Yunnan open to foreign aircraft.<sup>16</sup>

For a city the size of Yunjinghong (with an estimated population of 50,000), the presence of an airport handling a quarter of a million arrivals and departures every year signals a huge impact on the urban environment. Needs are created for transportation to and from the airport, for lodging, and for restaurants, where previously they didn't exist. According to the *Omnibus of Economy and Trade in Yunnan's Border Region*, the first Dai restaurant in Yunjinghong did not open for business until 1986, and by 1993 there were 19 Dai cuisine restaurants crowded together along the same street, "creating a great ambiance for Yunjinghong."<sup>17</sup>

New arrivals, traffic, commerce, and affluence are transforming both social forms and architectural forms. Traditional Dai houses, which were built on raised platforms, had single rooms, tall thatched rooves, and stalls for livestock built on the



ground beneath them (See Fig. 22) are being replaced by new forms of housing. Some are built from heavier timber, instead of bamboo and thatch, with separate rooms and modern appliances upstairs, as well as divided grain storage areas and pens below. The most modern, "third generation" Dai houses, are made of brick, with separate bedrooms, kitchens and living rooms, and seem to have consigned the creaking bamboo platforms, with all their charms and hassles, to the realm of memory.<sup>18</sup> These architectural innovations are in stark contrast to local tradition in XSBN, where:

"In 1982, 60% of the entire prefecture's rural commercial network points consisted of grass huts, with woven bamboo walls. The remaining 40% were small salesrooms of the simplest construction."<sup>19</sup>

Today, some of these huts have been taken down and replaced with an international airport capable of landing Boeing 737's. The urban forms of Yunjinghong are facing sudden extinction, as investments pour in, seemingly from nowhere, and transform the landscape into something the local residents might have seen on television. Symbolic of these changes is the opening of a four-storey tall department store, now being renovated by a Thai oil company.<sup>20</sup> Presumably the people of Yunjinghong will no longer have to wait for policy decisions in Kunming to find manufactured goods, but it remains to be seen if a foreign joint venture store will stock merchandise that they can afford to buy.

These changes in Yunjinghong will radiate outward, impacting satellite towns. For example, Manjinglan, a 'tourism development zone' of 6.8 square km, has been set up on the outskirts of town,<sup>21</sup> and is reportedly a great success, both commercially and in preserving local architectural forms.<sup>22</sup> Nonetheless, the evidence suggests that the future of XSBN will see new styles and materials for construction, and new architectural forms that will alter the landscape. In addition, urbanization will produce conflicts over land for new construction, as well as generate noise, air, and water

pollution for populations unused to dealing with such problems. What we are seeing in XSBN, is not a "frontier" economy, as much as a self-contained region being thrown open to the forces of the world market, and forced to shape a new identity as it grapples with unfamiliar terms and conditions.

#### D. Meeting of the "Frontier" and the World Economy

Building up bases for extraction of gems and minerals, tropical forest products, and border trade, as well as building up secondary and tertiary industries for processing and manufacturing, all seem to indicate that the lush forests of XSBN will soon be competing for space with a formidable array of capital intensive projects. Instead of a "frontier," we should conceive of XSBN as a new "center," facing rapid urbanization from the start along with the pressures of the world market that will be sending ships and barges to Yunjinghong ever more frequently.

The situation is in some respects similar to the transformation of sparsely populated rainforests of the Amazon into gold rush towns. One hopes that rampant exploitation of the jungle will not occur in XSBN, and yet even Liu Zhi, who wrote with great concern about the plight of unskilled border residents, does not extend his sympathies to preserving natural forests. Liu Zhi goes on to illustrate the great natural resources available in impoverished border areas, and in the adjacent regions of northern Viet Nam, Laos, Thailand, and Burma, including a:

"green treasure house of more than 40% forest cover. It holds in store great quantities of high grade woods, such as teak, Phoebe nanmu, Mesua ferrea, ebony, sandalwood, sanderswood, etc..."<sup>23</sup>

Liu Zhi's litany of valuable woods, many of which stand in government protected forests, should serve as a warning of their vulnerability. Unscrupulous traders, corporations in search of timber inputs, and even local residents seduced by cash rewards might wreak havoc on the remaining forests.

A study of regional ecology in Yunnan found that:

"The major cause of degradation has been population growth, leading to excessive clearing for cultivation, and excessive exploitation of forests....the rate of destruction of forests far exceeds the rate of renewal....In 1985, timber exploitation reached 39 million cubic meters in Yunnan....Of the timber consumed, 57.2 percent was for domestic uses, of which 52 percent was burned as firewood. Hence, much of the forest is consumed as fuel."<sup>24</sup>

This distressing scenario is especially severe in XSBN, where the forest cover was estimated as higher than 70% in the 1950's, but was reduced to 34% by 1990, for a total loss of more than half of XSBN's forests.

There are ways to reduce the amount of forest consumed as fuel in Yunnan, for example:

"...fuelwood can be replaced by coal, electricity, or biogas. Also, high-efficiency stoves could be introduced. Use of high-efficiency stoves alone may reduce the total consumption by a third to a half, or as much as 6 million cubic meters of timber."<sup>25</sup>

The exploitation of forest for export (including export to central government agencies and other provinces) might be harder to trace and to counteract. A combination of new roads creating access to previously unexploited areas and economic incentives to trade in valuable raw materials might destroy even more of the dwindling old-growth forests.<sup>26</sup>

Another concern for XSBN's forests is found in the Simao Forestation and Sustainable Wood Utilization Project, primarily funded by the ADB. Although the project is designed around a "siviculturally-oriented forest management plan" and reforestation project, it also includes the operation of a 51,000 ton capacity pulp-mill at Simao, which is quite close to the second-largest operating port on the Lancang



River, Xiaoganlanba.<sup>27</sup> The mere proximity of the Simao pulp-mill to XSBN's forests, (the distance from Xiaoganlanba Harbor to Yunjinghong Harbor being only 85 km), ought to be somewhat alarming.<sup>28</sup>

Of course, wherever forests and rapidly developing transport networks occur together there is some potential for degradation and loss of forest cover, but the situation in XSBN is unusual. The historical isolation of XSBN, including the political sensitivity of its border right up to the present day, has kept it out of the loop of inland and coastal China, and off-limits to the economies of mainland Southeast Asia. The move to open XSBN places it at a crucial position, both geographically and temporally; transforms the region with pressures of the world market; and imposes a new identity on the Dai people, who are imagined as a sort of cultural bridge to the surrounding border populations and their nations.

Compare the situation in XSBN with the transformation of the Amazon region, where:

"The frontier at the end of the twentieth century has new aspects. It is now heterogenous, consisting of a superimposition of fronts involving various activities...settlement and production are relatively modest. It is now urban at the outset, involves a very rapid rate of urbanization, and the federal government has a fundamental role in planning and in the volume of investments in infrastructure. Thus the frontier is no longer the synonym of free lands to be appropriated by pioneers. It is a social and political space, not fully structured, and therefore a potential generator of new realities, which makes it a strategic space for the state."<sup>29</sup>

Similarly, for XSBN, we see a unique case of development in mainland China. Where domestic markets and services have been protected, and where many local markets are still housed in woven bamboo and grass salesrooms, we see a Thai oil company building the largest department store. The image of commercial progress is linked to the greater Tai sphere, (in former years political dynamite!), and the Chinese government actively promotes a synthetic consciousness of Dai and Thai unity.

This unprecedented experiment in reshaping the society of XSBN "autonomous" prefecture, is very much a case study in generating a new reality of the frontier, and though there are similarities in Xinjiang and its border trade with Kazakhstan, the Chinese central government has not promoted Uighur identification with their cultural and linguistic counterparts in neighboring countries. In fact, quite the opposite is taking place as the central authorities, fearing disunity in Xinjiang, are cracking down on expressions of unity between the Uighurs of Xinjiang and other Uighur groups across the Chinese border in Central Asia.<sup>30</sup>

#### E. Tourism and Opening XSBN

The largest growth industry in XSBN is tourism, based on the natural beauty of the landscape and the cultural diversity of the local people. Tourism brings in not only foreign exchange earnings, but also new ideas, new business opportunities, new styles, and new lifestyles. While the Dai people of XSBN have a reputation for carrying on their own lifestyles, uninhibited by visitors, the sheer number of arrivals and the incentive of cashing in on the tourist trade will certainly affect their social forms, creating new habits, new goals, and new expectations.

From 1956 to 1977, the average foreign tourist arrivals to the provincial capital, Kunming, amounted to some 270 per year. With the reforms of 1978, the number rose to 1299 the first year, and by 1993 had skyrocketed to 286,000 visitors. During the same period foreign exchange earnings rose from 83,000 *yuan* to 196 million *yuan*.<sup>31</sup> In XSBN, foreign tourist arrivals in 1992 had reached 13,609, while domestic visitors numbered 1.2 million.<sup>32</sup> In 1995, the total number of visitor arrivals had risen to 1.54 million, of which 23,600 were foreigners.<sup>33</sup> The visitors also generated US\$ 7.3 million in foreign exchange revenues from 1991 to 1995.<sup>34</sup>

The tourist boom in XSBN has fueled the infrastructure projects described earlier, drawn foreign investor's interest, and even resulted in the installation of 23,600 program-controlled telephones and lines for pagers and cellular phones.<sup>35</sup> The sleepy rainforest is blooming into a sort of techno-resort on the northern edge of Southeast Asia, with a tourist industry that can be expected to grow as fast, or even faster than the capacity of hotels and guesthouses.

The many concerns being raised by the tourism investment boom sweeping the GMS, such as building resorts in ecologically sensitive areas, the proliferation of golf courses in southern Laos (which consume huge volumes of water and spread great quantities of chemicals into the aquifer), the idea to build a laser light show at the Angkor Wat ruins in Cambodia, and the sex tourism industry (estimated to make US\$ 20 billion a year in Thailand)...should be of equal concern as XSBN is being promoted as its northern nexus, and its characteristic scenery becomes a part of high-investment, high-profit tourism schemes.<sup>36</sup>

With the Lancang (Mekong) being touted as an "Oriental Danube," it has also become the focus of plans to promote tourism for the GMS. Representatives of the GMS member countries met in Kunming in late 1994, and held a five day seminar on tourism. The seminar members agreed on a five point plan:

- "1) Promoting the subregion as a tourism destination
- 2) Holding a subregional tourism forum
- 3) Training instructors in basic tourism skills
- 4) Training resource managers in conservation and tourism
- 5) Implementing a Mekong River Tourism planning study"<sup>37</sup>

In the Spring of 1995, the Tourism Authority of Thailand (TAT) formed a Mekong Forum working committee in order to put the issue on the agenda at the



Pacific Asia Tourism Association Mart of April 1996.<sup>38</sup> At the GMS conference held in Kunming, October 1996, an idea for a North-South Tourism Corridor was agreed upon in principle. Pradech Phayakvichen, Deputy General of TAT, advocated the liberalization of air routes from Thailand to China. Coming on the heels of the new Bangkok-Jinghong route, opened in April 1996, this can only mean increased arrivals to XSBN and other destinations in Yunnan.<sup>39</sup>

The international efforts to organize and promote tourism in XSBN are not leading but following the region's explosive growth in tourism. Arrivals to Jinghong Airport reached 240,000 in 1994, which means the majority of visitors, more than a million per year, are still arriving overland. Pressure to increase the passenger volume has spilled over from one sector to another, and has pushed the objectives for Lancang River traffic higher and higher.

In 1985, the total passenger volume on the Lancang River in XSBN was reported to be 320,000 persons.<sup>40</sup> The Xiaoganlanba Wharf in Simao, opened in 1992, has a passenger capacity of 150,000 passengers a year. The Daganlanba Harbor (some 30 km south of Jinghong Harbor in XSBN) had a capacity of 100,000 passengers a year. The Jinghong Harbor has a 2,000 square meter multi-purpose service building, can land two to four ships at the same time, and has a capacity of 200,000 passengers a year. While the passenger volume on the river is still less than half of the overland service, objectives based on the stipulations of the Eighth Five Year Plan sought to increase the passenger capacity to 1.5 million per year in 1995, to 5.2 million per year in 2000, and to 18 million per year in 2015.<sup>41</sup> Let us hope that these objectives will not be met! Otherwise we will have a river that looks like the average metropolitan highway.

At even a modest rate of growth, the increase of river traffic can be expected to have a serious impact on the river ecology, on the river's shores, estuaries, and on the traditional uses of the river.

## F. River Ecology

The burden of increased population in the river basin will pose new problems with waste disposal. Increased use of mechanized shipping will raise the possibility of oil discharges and spills, as well as accidents. Docks for cargo, access roads, and warehouses, as well as new or enlarged passenger ferry ports with waiting areas and parking lots will all pose pollution problems and might result in the destruction of natural habitats.

In August 1996, ESCAP convened a meeting of marine transport experts to examine the impacts of the Mekong basin development scheme. Under consideration were criticisms aired by scientists who predicted the developments will:

"...endanger rare marine species, decrease soil fertility, and threaten the delta with a reduced flow of silt. Consequently the Bangkok discussions have led to calls for the establishment of an international legal framework to regulate navigation along the river to protect its environment ....Lack of regulation and the absence of an adequate institutional frame-work for navigation on the river hampers its development and creates acute risks of pollution. The development of navigation facilities could encourage illegal logging and may also lead to increased cross-frontier drug smuggling and clandestine labour movement. (The experts) fear that the river's environment is threatened by a sudden, substantial increase in human population, including mass tourism. Soil erosion, a decline of soil fertility, and the dredging of reservoirs a likely to follow intensive industrial development in a region still largely unspoilt."<sup>42</sup>

The problems contingent upon opening the river were spelled out at the ESCAP meeting, but the widespread interest in reaping tourism profits, boosting shipping capacity, and above all, generating electricity for power-hungry industries, are pushing the entire program forward. In the meantime, we can expect the shipping boom in XSBN to continue at full steam and the port at Jinghong Harbor to be busier than ever. Although the Xiaoganlanba Wharf was booming in 1993, by the summer of 1996:



"...it is on the way to being derelict now, because Jinghong Harbour has captured most of the rapidly developing river trade."<sup>43</sup>

Therefore, the highest concentration of river traffic will center on the port at Jinghong and the immediate vicinity in XSBN. Whatever changes are in store will directly impact the Dai residents of the same area and their traditionally intimate use of the river.

#### G. Use of the Lancang River in Dai Society.

##### 1. Shipping

The continuing expansion of shipping traffic in XSBN will certainly interfere or push out whatever small scale shipping and transport that still exists in Dai society. That the Dai people did have their own practice of navigating the river is beyond question. Take, for example, the following account of a trip on a hired boat, which was written by Yao Hesheng during the 1940's:

"The Lancang is also an infamous river in Yunnan, not only because it's shores are places full of malaria, but because the river itself is extremely treacherous. The river's surface is very wide and its water is deep, but except for a few very narrow sections, it is completely un-navigable. On the one hand it's true that this is because the current is too swift, but the main reason is that there are perilous rapids everywhere, some of them standing out of the water like giants, and should a boat strike them, it will be immediately pounded to bits by their cruel fists. Some boats are pulled below into the shadowy depths, and though the water's surface looks placid, below the surface there is a fearsome vortex. Once a boat comes to this place, it's as if a thousand water demons are rocking the hull to capsize it, or else pulling it under, and there is simply no way to resist.

Nonetheless it is still possible to navigate a small boat on the section between Cheli and Ganlanba. Once I hired a small wooden boat to go to Ganlanba. After breakfast, we boarded the boat, which was about four or five feet wide and fifty to sixty feet long. It was very pointy on both ends like a



spindle. There wasn't a single metal fastener on the entire boat. The planks were woven together with bamboo strips and the gaps between them were not caulked with lime and putty, so that water was bubbling up from the cracks. It was a disheartening sight. (See Fig. 23) On board were only three or four of us travellers and four boatmen. The boatmen had substantial builds and were full of spit and vinegar, shouting and laughing for the whole journey.

It was just at the end of the dry season, the water level was especially low, and the river surface was only half of its width during the rainy season. Still, the current was swift, carrying a great quantity of silt, so that it seemed just like the turbid Yellow River. The boatmen did not pole the craft, but just sat astern talking and laughing, allowing the boat to follow the current by itself. In a trice we had passed below the Prefect's market and could just barely distinguish the Damian Temple and the Prefect's offices amidst the density of green.

After passing out of town the river became narrower, with many rocks and rapids scattered here and there. As the water struck the big rocks, it sent up garlands of white spray and a fine mist that soaked our hair and faces. Meanwhile, a sort of roaring sound filled our ears. Some of the biggest rocks had names and had strange stories recounting their history. The biggest rock in those parts was called "Bamalong" and was thrown all the way from Beijing by a Chinese Emperor. What a pity these boatmen weren't sure about this story, and I myself can't remember which dynasty's Emperor was so strong. There were two or three really treacherous places that looked quite peaceful on the surface. One could see but a few trails of leaves roiling from one side to the other.

The passengers of another boat had given up on their journey, and their boatmen tried to advise us to disembark, but we couldn't see anything to fear, and unwilling to show weakness in front of the strangers, we resolutely refused to stop. Nor were our own boatmen reluctant to go on, they twisted their boat poles and marshalled all their strength. After a short time the boat was already flying, as if slipping across the surface of the rapids. Then suddenly the whole boat began to shake...it was shaking like mad and the spray drenched us from head to toe, missing only one or two spots. Water was pouring into the boat and it was quite a while before it gradually began to calm down.

My heart was jumping wildly around in my chest, as if it was going to jump out of my mouth, but my face managed to maintain its composure and held out straight through to our destination. Afterwards, I did feel a little regret over taking such risk."<sup>44</sup>

Mr. Yao might have been over-dramatizing somewhat, but earlier accounts, such as those of deCarne and Smythe, indicate that the river passage was much the same during the mid to late nineteenth century.

"At Chieng Hung the Me Kawng first becomes navigable to the natives. Bamboo rafts are used for taking salt down as far as Chieng Lap, their crews returning overland. It was here that deLagree's expedition finally left the Mekong and struck north and eastward into China. Though they had been obliged to leave their dug-outs at Muang Len or Tan Aw, Garnier returned to the river again and again, as they advanced to Chieng Hung, to see if it were practicable for boats, and always with the same result. For Tang Aw is the highest point at which the people can force their boats against the current."<sup>45</sup>

Modern motorized vessels have extended the range of navigation northward, at least as far as Xiaoganlanba. Gradual improvements to the shipping channel, including dredging and dynamiting of rapids, have opened up the Lancang to larger and larger ships, and these practices are being extended southward to Chiang Khong, Thailand, and Huay Xai, Laos. The reported international shipping volume has already increased from 500 tons to 50,000 tons a year. With continuing efforts to blast rapids and to develop shallow draft ships,<sup>46</sup> the Lancang (Mekong) traffic can only continue to surge over the next few years, and this will surely be complicated by the local use of the river, as in the case of farmers who take the weekly passenger ferry upriver to find work, then float back downstream on inner tubes.<sup>47</sup> Under these circumstances, the chances of accidents and collisions are enormous.

## 2. Bathing, Washing and Fishing

Although changes in river transport are potentially threatening, they only affect a minority of the local population. On the other hand, the traditional Dai use of the river for bathing, washing, and fishing poses a much more serious danger to the people living along the Lancang and its feeder streams. According to the 19th century visitor, Archibald Colquhoun:

"Some of the hamlets near the river-bank are exclusively inhabited by fisherman; and every man, woman, and child, from October to June, is at work



with net, rod, line, or the baskets which are worked at every wier, situated next the fisher hamlets."<sup>48</sup>

If Colquhoun's observations are correct, then fishing is a year-round activity, stopping only for the heaviest rains and flood season. A more recent study (1960) of village life in Northern Thailand found that villagers fished nearly every day, regardless of the weather, after the rice seedlings had been transplanted into the paddy fields. The villagers used weighted throw nets, bamboo dams, nets attached to bamboo poles, spear fishing, traps, hook and line, dip nets and occasional damming of canals to fish--methods strikingly similar to those described and illustrated by visitors to the Shan states along the Mekong.<sup>49</sup> Similar fishing methods are used by the Dai people in Yunnan (See Fig. 26), and will expose them to potential hazards as the volume of shipping increases on the Lancang (Mekong).

Even greater risks are involved when one considers characteristic Dai practice of bathing in the river. In the early evening Dai women and children are seen relaxing and bathing in the rivers and streams of XSBN. (See Fig. 24) The Han Chinese have found this practice to be unchaste and immodest, and yet have also created a whole form of eroticism on the subject, so that no story of a trip to XSBN is complete without some romanticised voyeurism thrown in. The sad fact for the average person of Dai heritage is that it must be increasingly difficult to bathe, with a million tourists creeping around in the underbrush all year long.

Even in years past, the bathing practice was never a sort of exhibitionism, as it has often been portrayed. Yao Hesheng, visiting XSBN during the 1940's, described the basic Dai bathing habits in this way:

"They don't bathe at home using hot water, they all run down into the rivers or the streams to take a cold dip. While they are bathing, men, women, old and young are all jumbled together in one place. Women bathing together with men in the open air will naturally attract people's attention (how much more so for the people of ceremonies, Han Chinese!) But of course, in front of men, the women are not willing to show themselves naked. They have always first



undressed in the shadows beneath the trees and put on tube skirts, first raising them up to cover their breasts, then walking down into the water before removing them. As they proceed to enter the river, they slowly pull their skirts upwards with both hands as the water gets deeper. The skirts are gradually drawn higher until the women are fully submerged in the water, and then the skirts are slipped off over the tops of their heads. The women then fold up their skirts into narrow strips and wrap them around their heads. Finally they take a refreshing bath and sometimes the young women will go for a swim.

After bathing, their tube skirts are opened up again and unwrapped from their heads to cover their bodies. As they walk toward the shore, they gradually emerge from the water's surface while their tube skirts are gradually lowered. By the time they have gotten out of the water, they are completely clothed."<sup>50</sup>

From this account, it seems that Dai women have a chaste, graceful, and delightful custom for bathing in the river. On the other hand, the same author also relates the following experience:

"Once I saw a group of young women bathing, which was, simply speaking, and exquisite picture. That was at a peaceful spot on the upper reaches of the Liu Sha River. The water was so clear, even the pebbles on the bottom were fairly visible, and both shores were crowded with lush tropical plants. The sun was about to set and the sky was full of pink clouds, which were reflected in the water...very beautiful. Suddenly a group of young women appeared at the water's edge, and without noticing me among the trees on the other side, one by one they removed every stitch of clothing, until they seemed like statues carved out of marble. They walked back and forth in the water, a few of them swam laps across the river, while others sat on top of a big rock in the water and sang songs. Still others cried out '*sui sui*,' or splashed themselves with water. Occasionally, I caught a glimpse of their jade-smooth flesh, and other times I only saw their gorgeous heads, with long hair spread out in disorder, floating this way and that upon the water. I felt that they must be a bunch of Sirens or Nymphs."<sup>51</sup>

As picturesque as the scene may be, it is hard to imagine in combination with a train of 200-ton barges and passenger boats buzzing along. Should the Dai people continue to bathe in their customary way, they run not only the risk of collisions and

fatal accidents, but long-term exposure to diesel fuel, oil, bilge water, and other effluents.

Bathing and fishing aside, the Dai people are also dependent on the river and its immediate estuaries for washing clothes and washing food. (See Fig. 25) In former years, when XSBN enjoyed lower population densities and virtual isolation, this might not have presented any serious risk, but with the growth river traffic the possibilities of contamination will be sharply increased.

Unfortunately, there has been no mention of addressing these issues, even by the panel of marine experts assembled by ESCAP. As for the GMS projects being advanced, the Proposed Environmental Projects include a "Subregional Environmental Monitoring and Information System," and support of Environmental NGO's, as well as support for minimum regional environmental standards.<sup>52</sup> While these initiatives sound promising, they have yet to receive funding or to be established in practice, and still the pace of shipping is advancing unabated. Under the circumstances, there is an urgent need for field research, both to establish monitoring points and data collection agencies, and to identify the areas where the traditional use of the river by local residents is in greatest peril from new sources of pollution.

#### H. Eco-tourism and Alternative Views on Development

Of the many sources examined in this study, several of their authors remained skeptical about the benefits of opening and developing Yunnan. Five members of the Environmental Research Center, have examined the cause and extent of environmental degradation in Yunnan, and have amply demonstrated the province's vulnerability to deforestation, erosion, and landslides. They point out that the high degree of slope in many areas of Yunnan, and the encroachment of tough, invasive grasses, inhibits forest renewal, and the combination of these conditions only aggravates the situation.



The authors also clearly indicate the extent of pollution caused by industry and mining operations in Yunnan, such as the 0.4 to 0.5 billion cubic meters of industrial wastewater discharged every year. They estimated 150,000 hectares of land were being irrigated with polluted water, resulting in high levels of toxic substances both in the soil and in the crops. The severity of environmental damage being done in Yunnan, led the authors to conclude:

"If, and only if the ecological environment in Yunnan is improved and the ecological balance maintained can the advantages of the abundant natural resources be exploited and can the economy steadily grow. The approach of "mining" natural resources and developing industry and mining by severely polluting the environment results in disaster, not wealth for the people of Yunnan."<sup>53</sup>

Although the members of the Environmental Research Center made the severity of the situation clear in their 1990 article, the situation worsened to such an extent that the famous lake Dianchi was being contaminated with 200 million tons of raw sewage every year.<sup>54</sup> With ongoing construction of new roads and new rural industry, there is every indication that Yunnan is heading for an environmental disaster. How can the disaster be avoided? How can the ecological balance be restored?

One author, Yang Fuquan, of the Yunnan Academy of Social Sciences, stands out as the leading advocate of an alternative to development as directed by industrial and market forces. Yang sees tourism as a driving force for revenue and a source of foreign exchange. As more and more areas in Yunnan have been opened to tourism, revenues have soared. Yang sees the greatest potential in using eco-tourism as a means for both economic development and conservation of the environment. Not only will the rapid expansion of eco-tourism serve to preserve the still unspoiled parts of the province, but it fosters a renewable resource--a beautiful landscape.



Yang's advocacy of eco-tourism is especially relevant to the opening of the Lancang (Mekong) corridor. He painstakingly describes the existing biodiversity of Yunnan, including the rainforests of XSBN, and the degree to which it is already being destroyed. He points out the obvious advantages that such environments have for various eco-tourism activities: forest tours, river trekking, and tours that integrate research and surveying of physical geography, botany, wildlife, and anthropology. Equal attention is given to the preservation of cultural diversity and ethnic tradition in Yang's eco-tourism plan, which he says is necessary before it is too late.

"We can no longer delude ourselves with the fame of bygone days by saying: 'Yunnan has a rich, diverse culture.' After a long period of historical transformation, all the ethnic groups of Yunnan have experienced profound change in lifestyles and culture. Because we didn't attach enough importance to the minorities' traditional cultures in the past, those aspects which are the most characteristic and endearing to tourists are now vanishing and changing."<sup>55</sup>

Yang's assessment of the changes in the local cultures of Yunnan are frank and unflinching, as are his criticisms of commercializing watered down versions of "traditional culture" for mass-consumption, which he calls a form of "vulgarization." On the other hand, Yang also offers an interesting suggestion about adopting folk tradition as a way of strengthening ecological awareness. He cites the sacred mountains of the Tibetans, where chopping trees or polluting were strictly taboo. Similarly, the sacred mountains and sacred trees of the Dai people, a subject rarely studied, if at all, could provide the foundation for an ecological awareness program.<sup>56</sup>

The great Lancang River, and the thousands of kilometers of the Mekong, also have their share of gods and spirits in the traditions of the Dai and Thai people. In the festival known as *loy gating*, which takes place on the full moon of the 12th month, the people:

"...set afloat elaborate little boats made of banana leaf, each with incense sticks, flowers, and a lighted candle. One popular belief is that this asks pardon for the bad done to the waters by washing and even worse use of the rivers and canals."<sup>57</sup>

Will these small offerings, bobbing and flickering on the moonlit water be scattered in the wake of powerboats and barges, or is there some way to take advantage of the attractiveness of the original cultures that still survive in the rainforests of the upper Mekong?

The question is perhaps best answered in the caveat of Yang Fuquan:

"If one day it dawns on us that all of our resources have been wasted, then our tourism industry will turn into a tree without any roots. We can no longer be blind or complacent toward Yunnan's present ecological situation...we must look instead at the various crises hidden within development."<sup>58</sup>

In short, the opening of the Lancang River will bring several crises to the Dai people of Xishuangbanna: (1) the incidence of water pollution will impact them severely unless they suddenly abandon their traditional uses of the river; (2) their new position at the center of a major international crossroads will introduce overwhelming transformative pressures on the local economy, demography, politics and social norms; (3) the general lack of education, skilled labor, and investment capital will place serious limitations on the ability of the Dai people to adapt to their new circumstances.

Although we are unable to examine the extent to which these problems have already matured, the picture we have been able to delineate from various sources suggests some vital areas for further research. A survey of the number of people bathing and washing food in the river and immediate estuaries should be taken, and the resulting population estimates and locations should be mapped. Alternative means of bathing and washing, and a reliable warning system should be developed and introduced immediately to prevent a catastrophic public health emergency in the case of a shipping accident. An independent assessment of goods being transported should



be undertaken, with special attention to transport, packaging, and handling of toxic and dangerous substances.<sup>59</sup> Monitoring stations should be set up for continuous readings of the river's basic data, especially at points of confluence with inlets, and at points accessible enough to take regular sediment and water samples.

How the opening of the Lancang (Mekong) corridor will impact the culture, economy and society of XSBN remains to be seen. The local economy will see the most immediate and the most serious impacts of internationalization. New businesses and industries will attract laborers, causing, on the one hand, relocation problems and increased urbanization, and on the other hand a depletion of the rural labor force. The development of surface and water transport will offer greater mobility for temporary, seasonal, and even permanent employment, as well as open up previously inaccessible areas to resource exploitation. The long term effects of population movements will force changes in rural modes of production, and once removed from their traditional livelihoods, the culture of the Dai people, as well as other local cultures, will be under even greater pressure to adapt to new conditions.

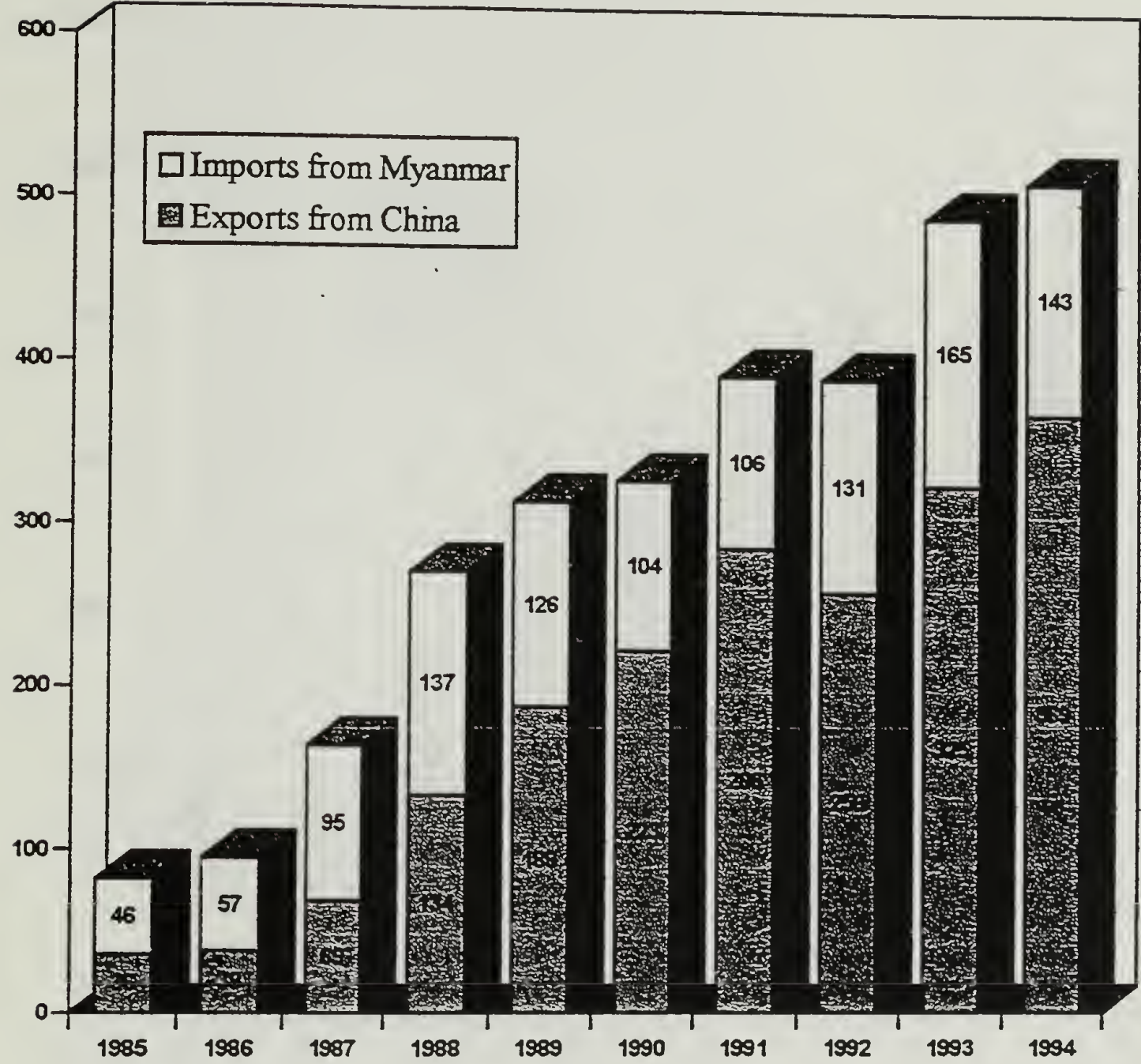
In an area that was never completely acculturated to the Han Chinese way of life, the Dai people are now being encouraged to make use of their Dai 'roots' to open up border trade. Will they be more influenced by the culture of Thailand, or by the influence of more generalized forms of modernization via Thailand? For example, if the Dai are attracted to Thai language television broadcasts, they might receive a bigger dose of Western-influenced commercial culture than cultural forms that are traditionally Thai. In this way, the Dai people might find themselves absorbing the customs, styles, and even language of the global media culture, with its arbiters in distant Hollywood and New York, rather than adapting to the cultural mores of Bangkok or Beijing.

More immediately, the Dai people will be responding to their contacts with affluent neighbors in Thailand. The Lancang (Mekong) open navigation agreement



will allow Dai - Thai relations to grow, regardless of the political situation in Myanmar. Even so, the push to open new surface roads through the eastern Shan States, such as the road south from Damenglong to Mong Yawng, Mong Hpayak, Tachilek and Mae Sai, might also inspire a new regional Dai identity. The relations between XSBN Dai and the Shan peoples of Myanmar, as well as the Dai Lue of Northern Thailand and Laos may be rekindled as the area is united by year-round transport for the first time in history. How the Chinese administrations in Yunnan and Beijing would respond to the emergence of a regional Dai society is quite another subject of speculation, but being almost powerless themselves, the Dai people are going to remain subject to greater geopolitical forces, just as they are caught in the center of the Lancang (Mekong) corridor and all of the interests that seek to develop their homeland as the last great frontier in Asia.

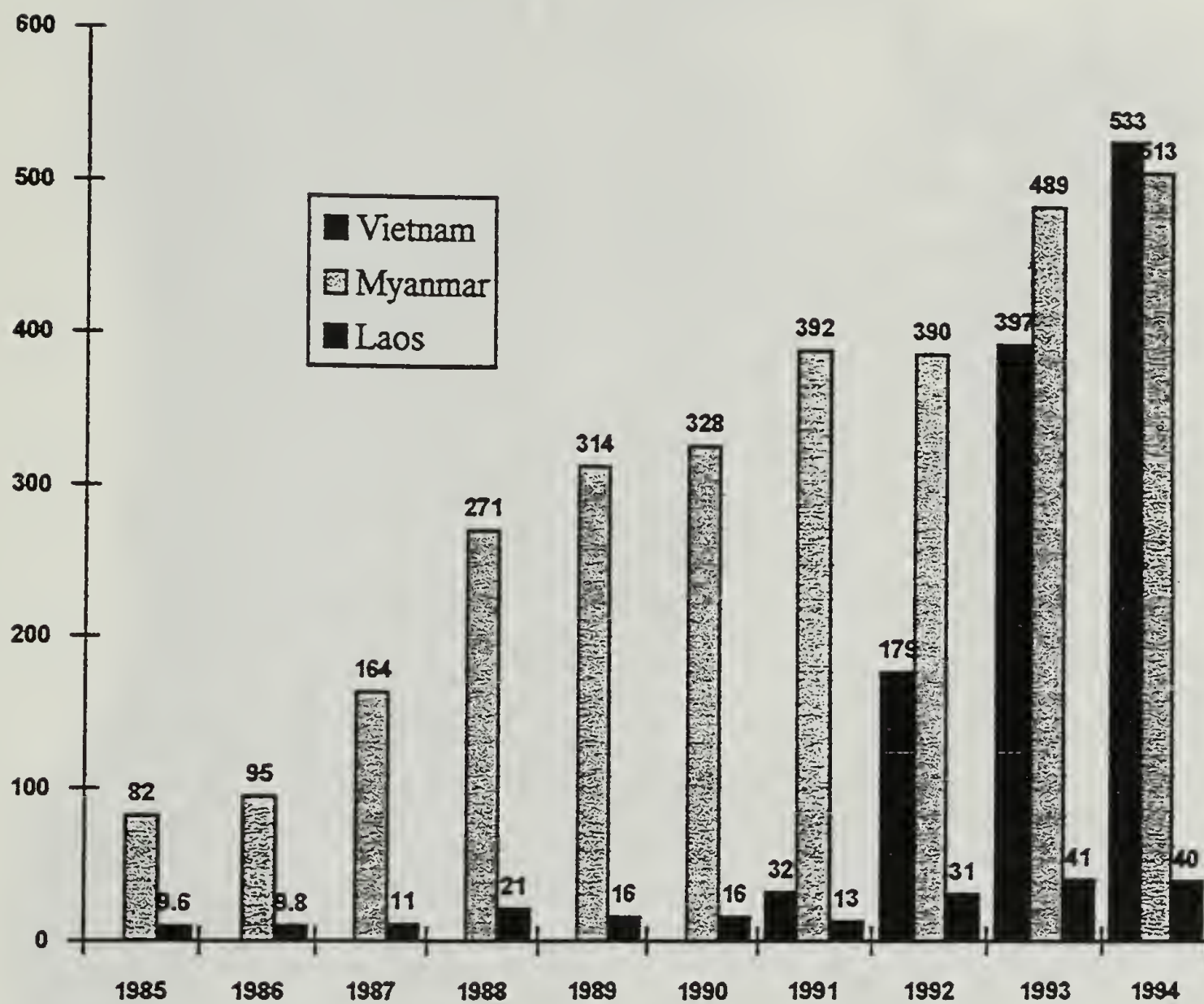
China - Myanmar Trade (in US\$ millions)



(Statistics from *Zhongguo tongji nianjian* 1987, 1989, 1991, 1993, 1995.)

Figure 1. China - Myanmar Trade

# Combined Imports and Exports (in US \$ millions)



(Statistics from *Zhongguo tongji nianjian* 1987, 1989, 1991, 1993, 1995.)

Figure 2. China Trade With GMS Countries



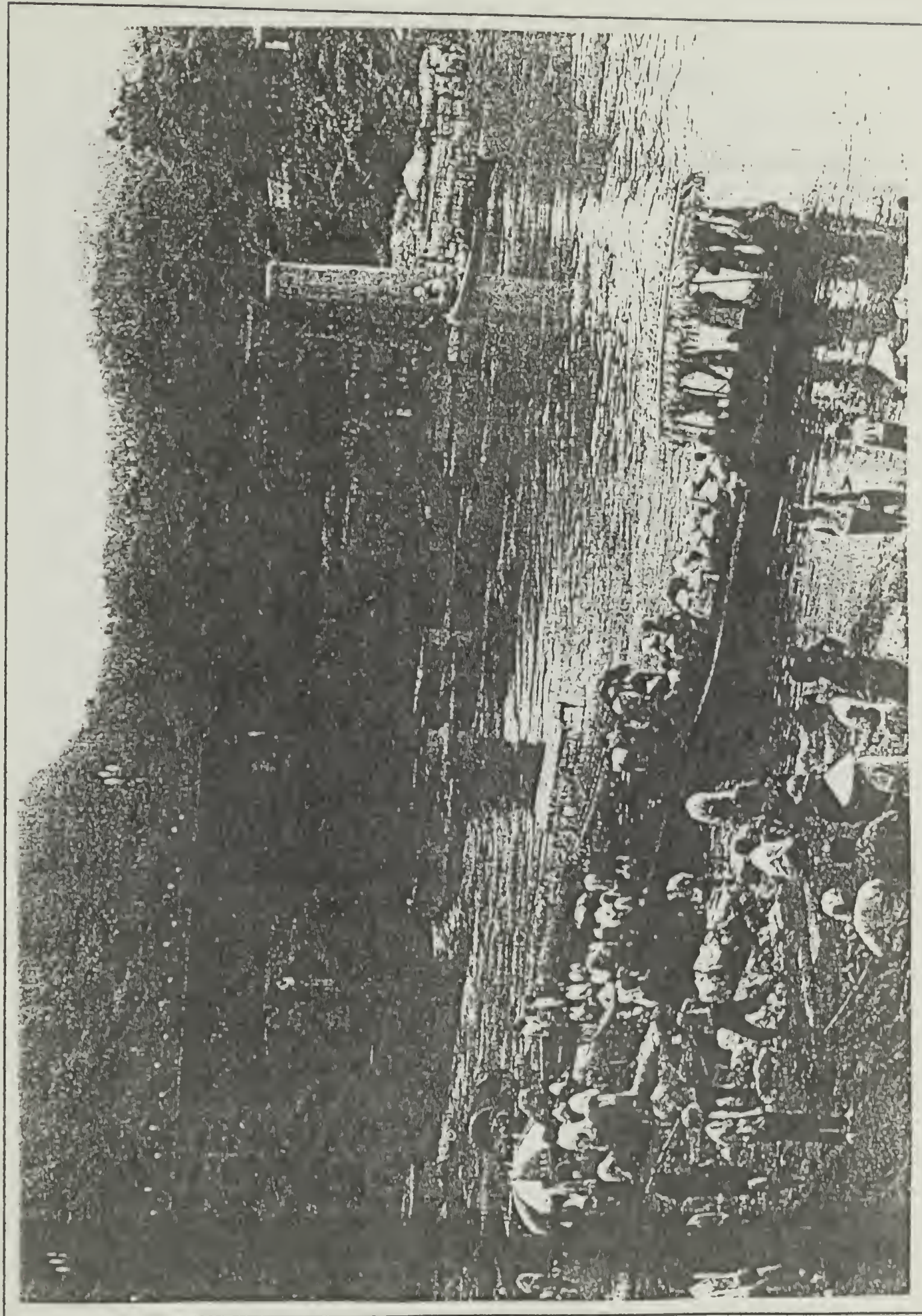
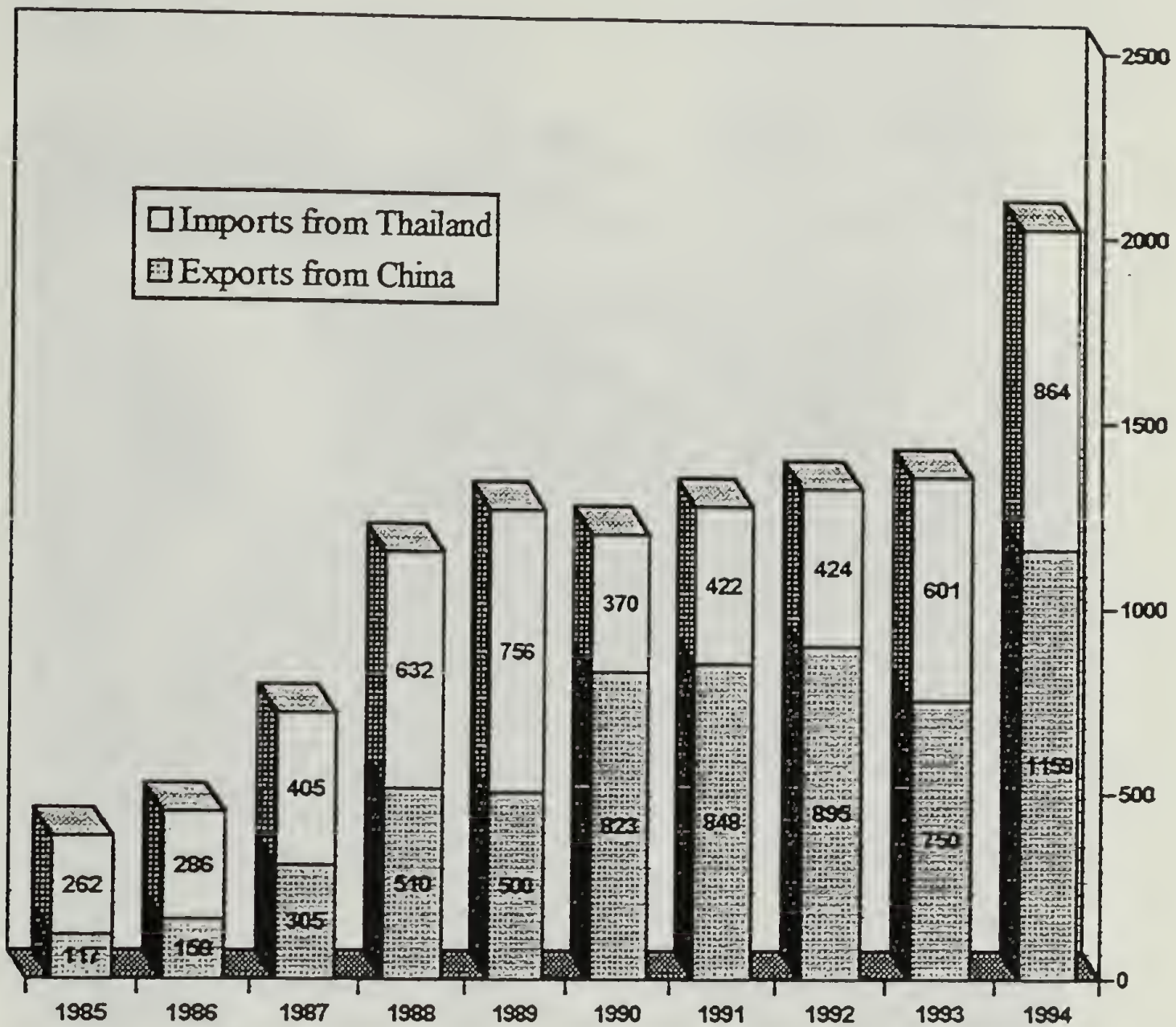


Figure 3. River Crossing at China - Viet Nam Border

(from China Pictorial, 4 (1993): 10-11)



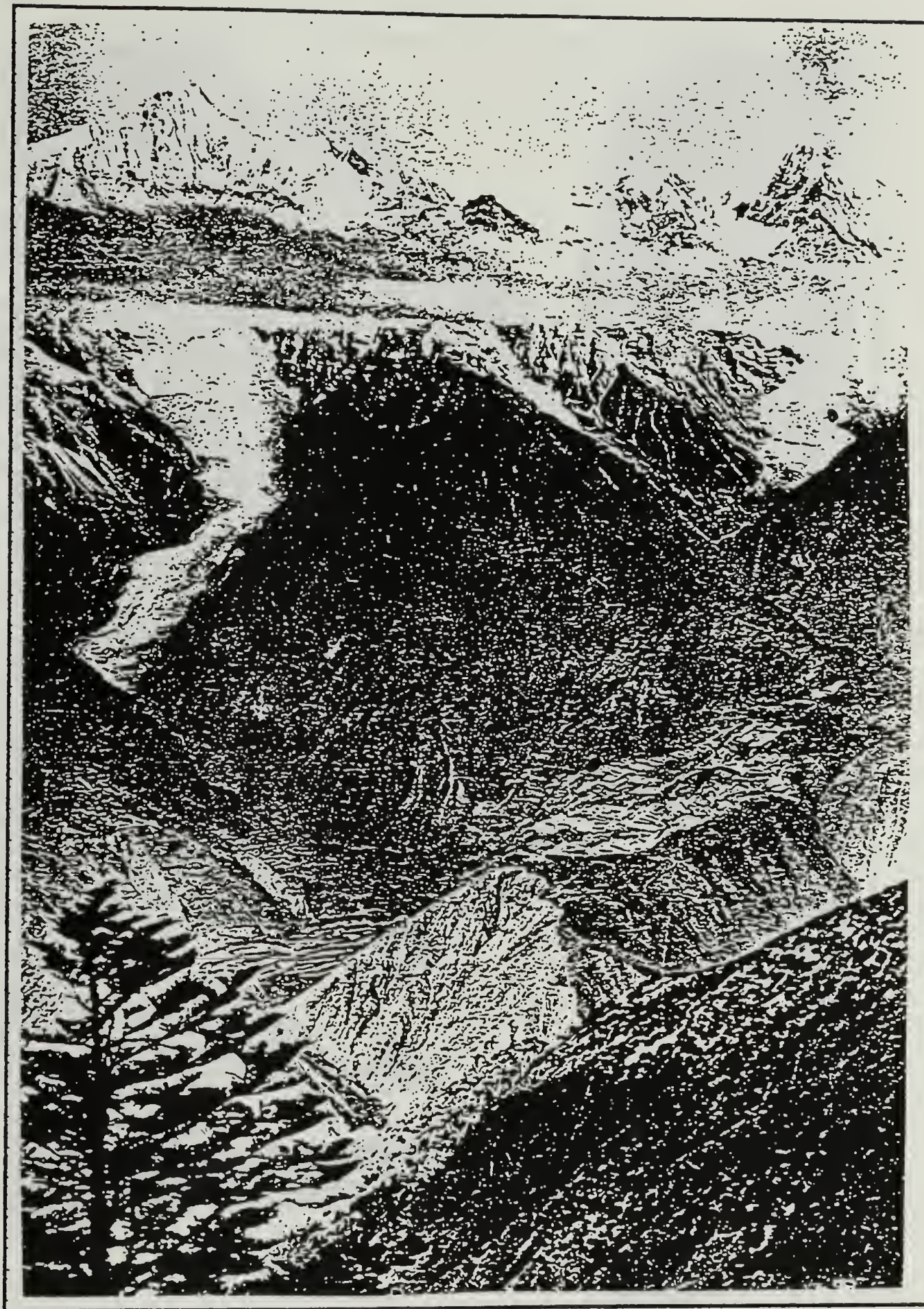
# China - Thailand Trade (in US\$ millions)



(Statistics from *Zhongguo tongji nianjian* 1987, 1989, 1991, 1993, 1995.)

Figure 4. China - Thailand Trade

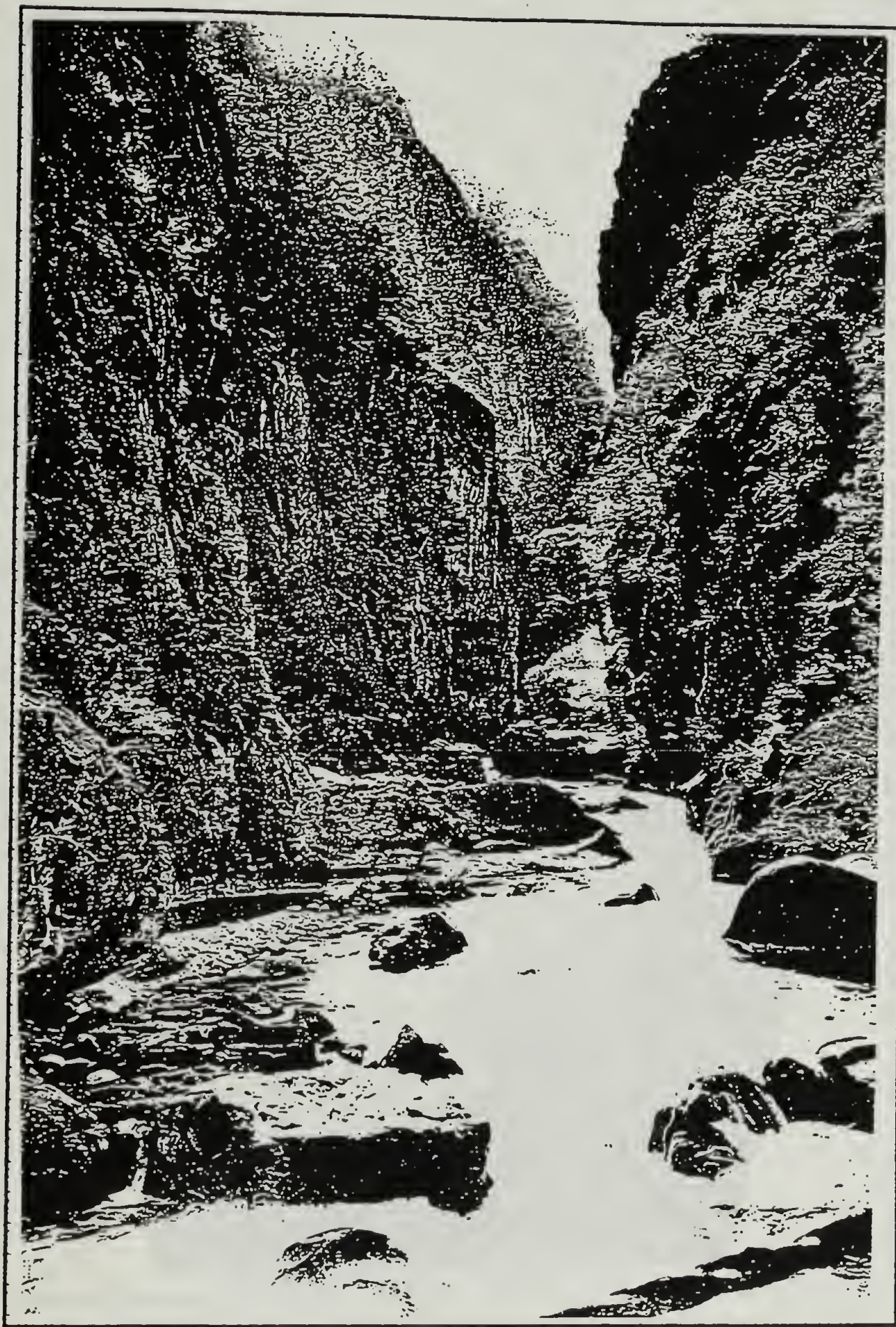




(Source: Rock, 1947: plate 174.)

**Figure 5. Kawagarbo Mountain Towers Over  
the Upper Lancang**

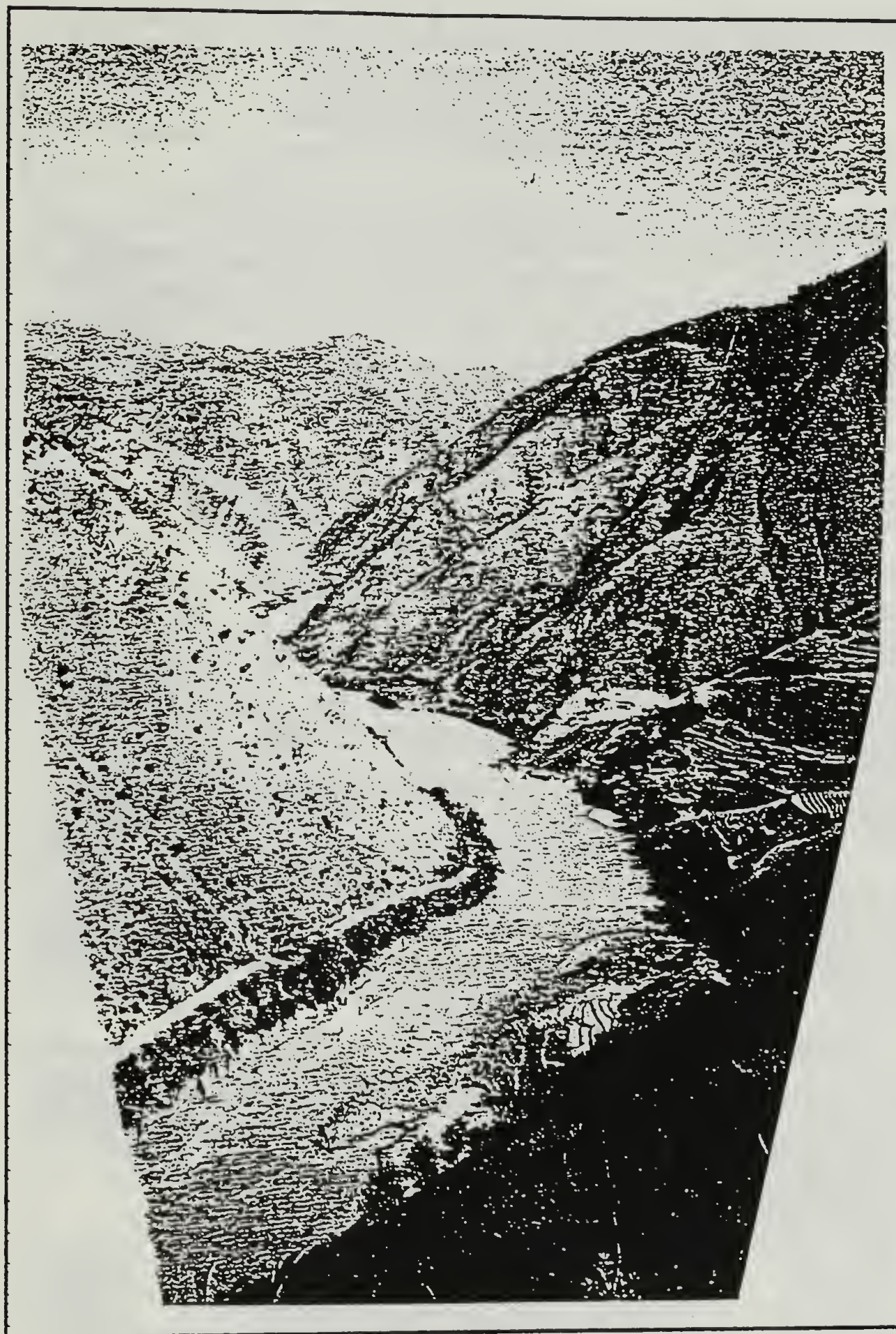




(from Rock, 1947: plate 200)

**Figure 6. Cliffs Along the Upper Lancang and  
Its Tributary Streams**

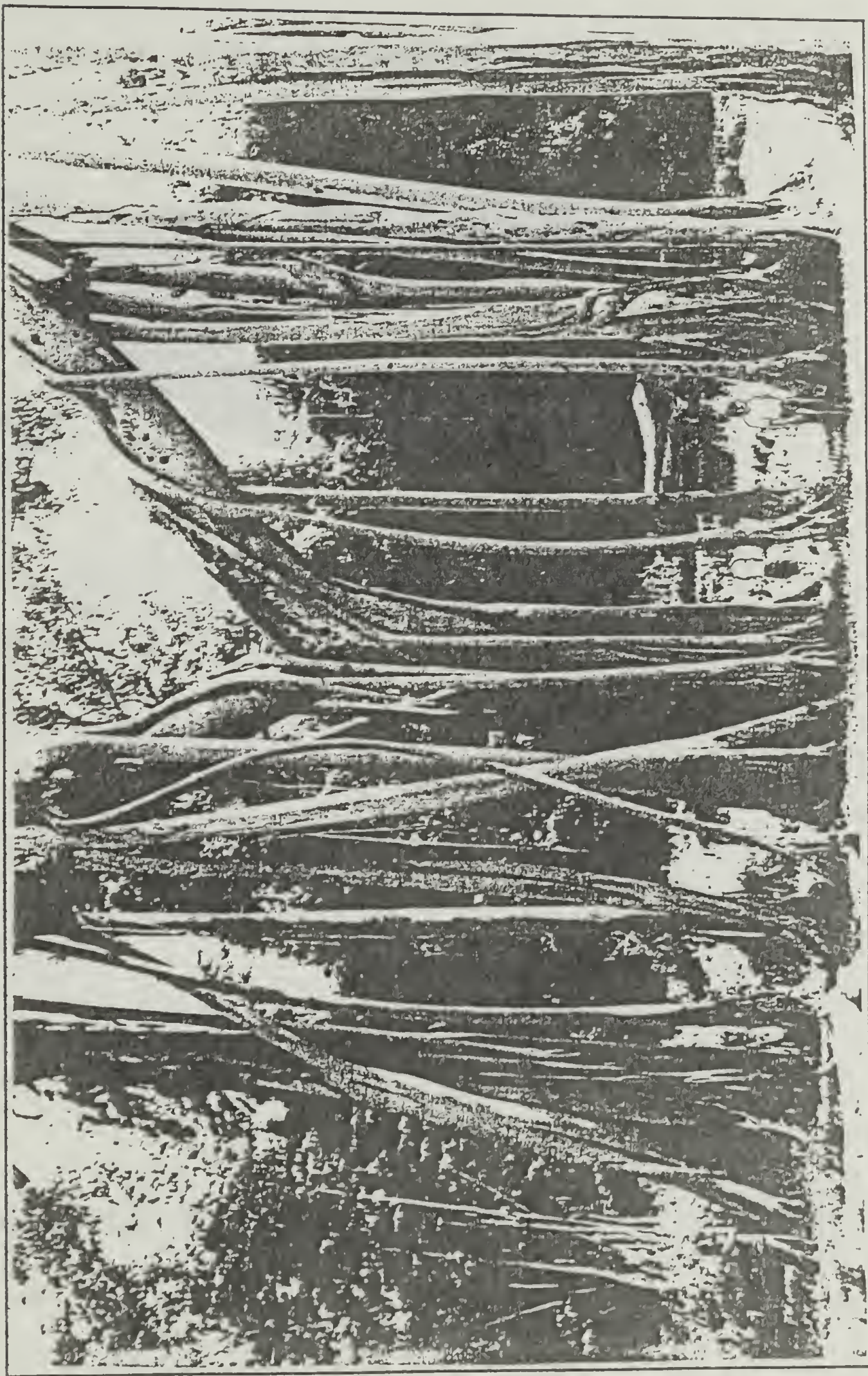




(from *China Pictorial* 2 (1990): 14)

**Figure 7. The Lancang Valley South of Yongping**



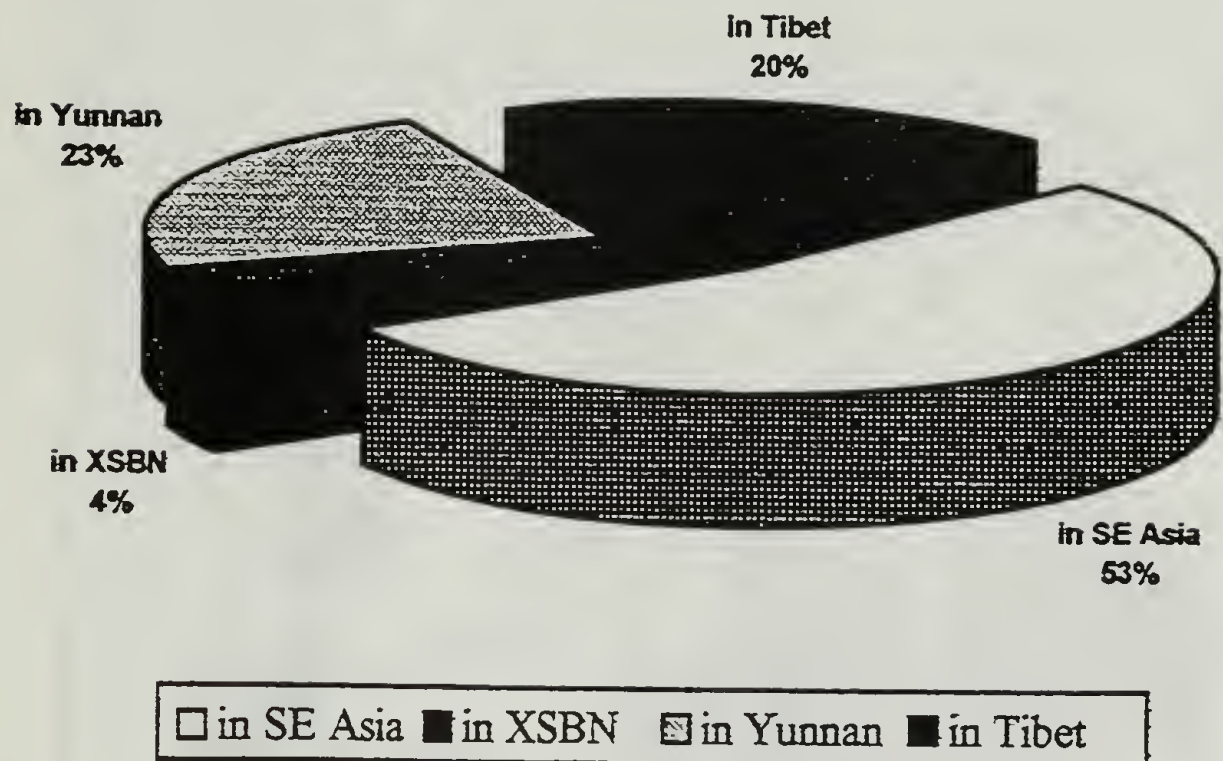


(from China Pictorial 2 (1990): 15)

Figure 8. Giant Banyan in XSNB's Forest Near Daluo



### Length of Lancang / Mekong River



Total Length:	4661 km
In Southeast Asia:	2500 km
In China:	2161 km
In Yunnan (w/o XSBN)	1059 km
In Tibet and Qinghai	914 km
In Xishuangbanna	188 km

Total Drainage Area:	630,000 km <sup>2</sup>
In China:	161,000 km <sup>2</sup>
In Yunnan:	91,000 km <sup>2</sup>

(Data from Liu, 1991: 506; Peng, 1995b: 21; Li, 1991: 498; Lin, 1991: 421.)

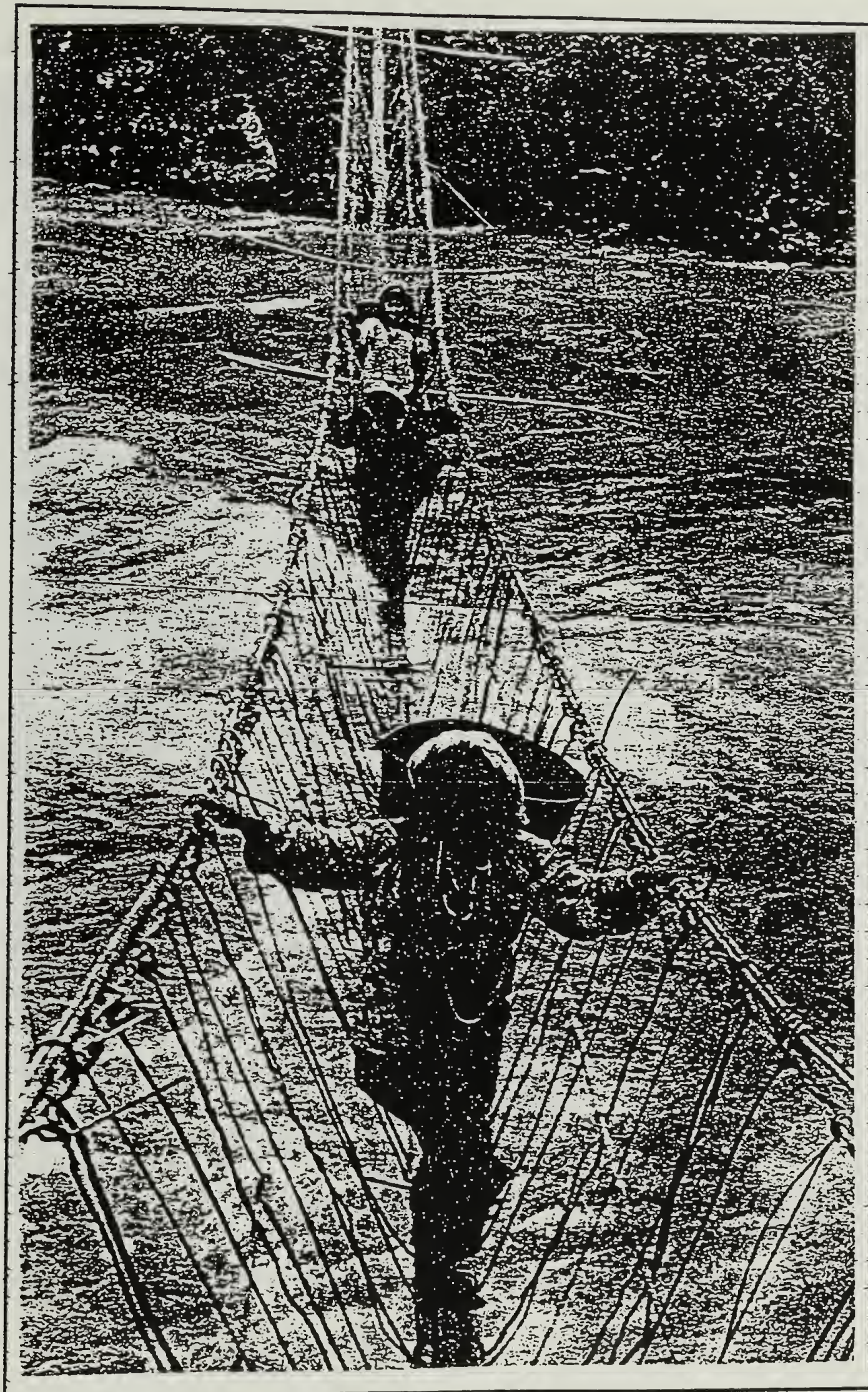
Figure 9. Length and Drainage of Lancang / Mekong



(from Rock, 1947: plate 143)

**Figure 10. Goatskin Rafts For Crossing the Yangzi  
In Northern Yunnan**

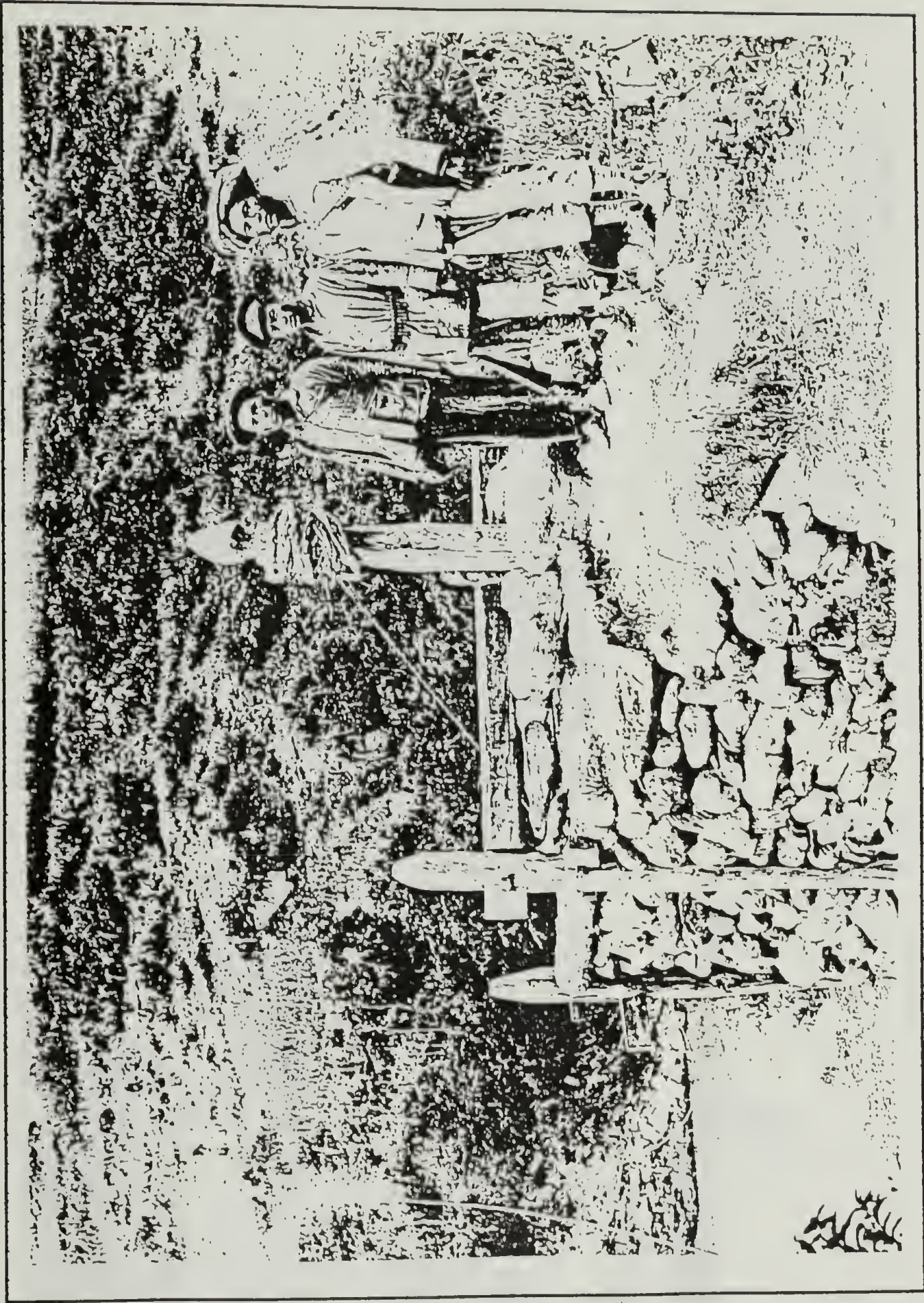




(from *Zhongguo shaoshu minzu*, 1987: 435)

**Figure 11. Woven Bridge Over the Dulong River  
In Yunnan**





(from Rock, 1947: plate 162)

Figure 12. Rope Bridge Across the Upper Mekong

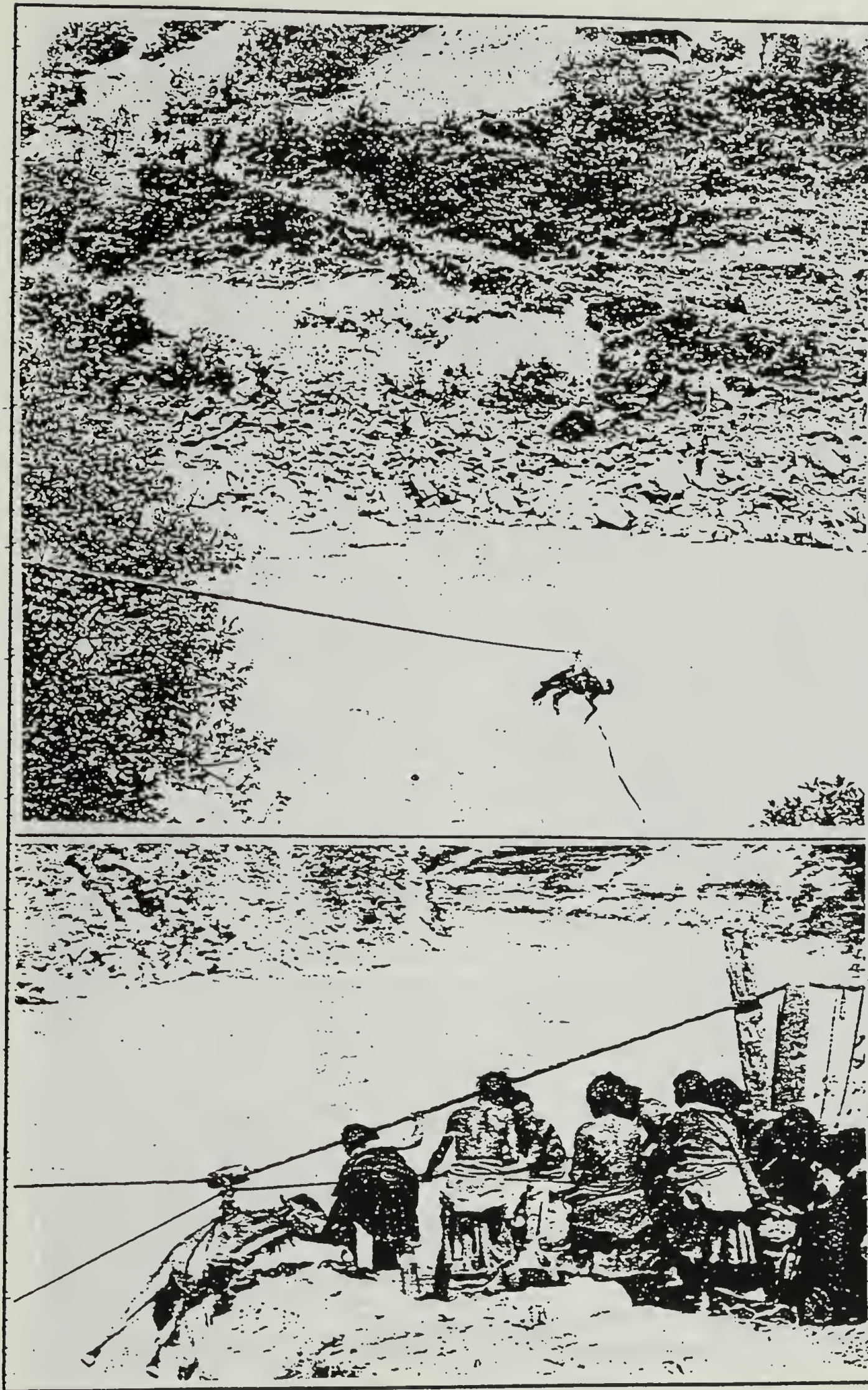




(from Rock, 1947: plate 166)

Figure 13. Greasing a Rope Bridge with Yak Butter  
On the Way Across

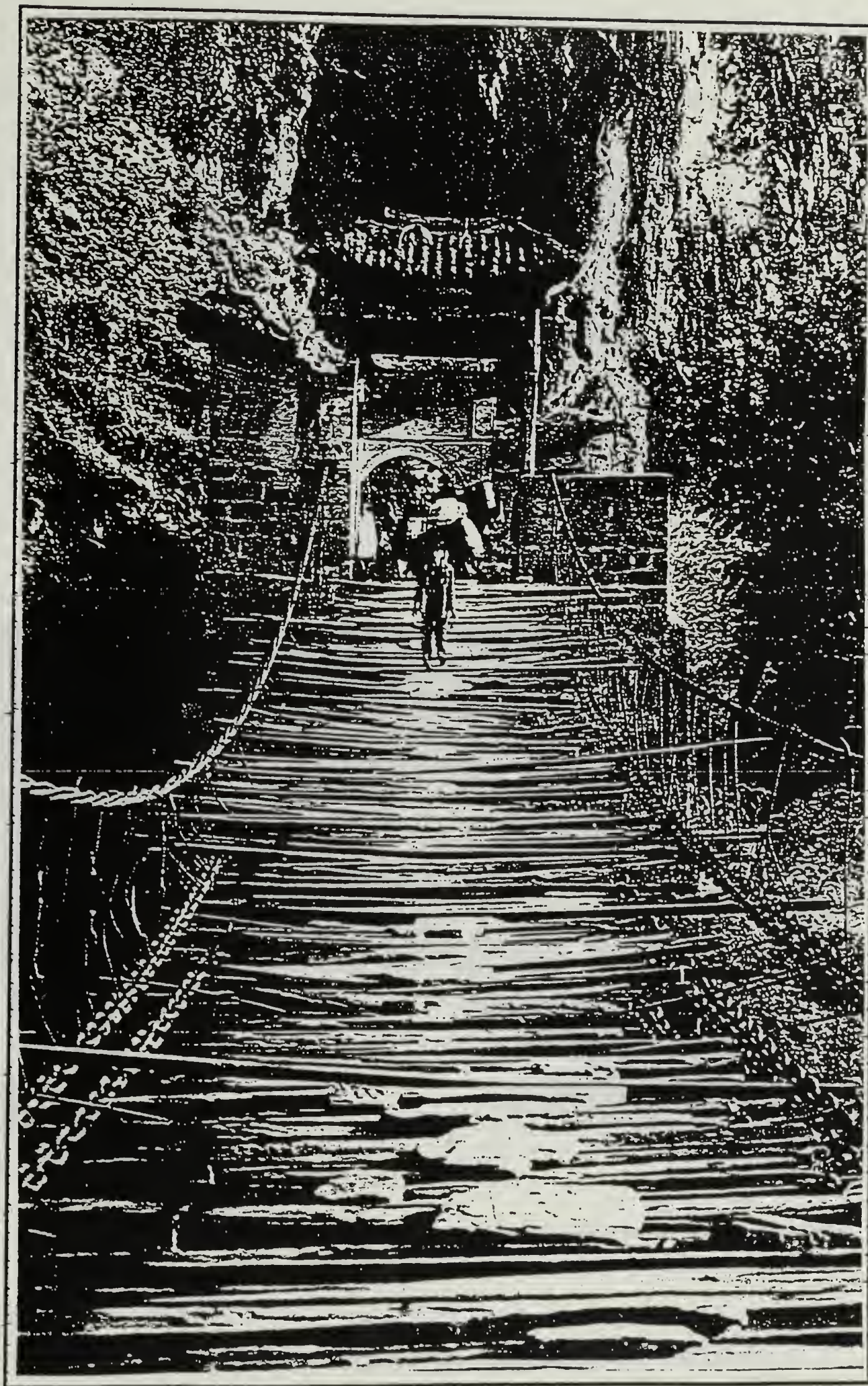




(top: from Rock, 1947: plate 174; bottom: Kaulbeck, 1938: 257)

**Figure 14. Horses Being Slung Across the Mekong  
& Salween Rivers**

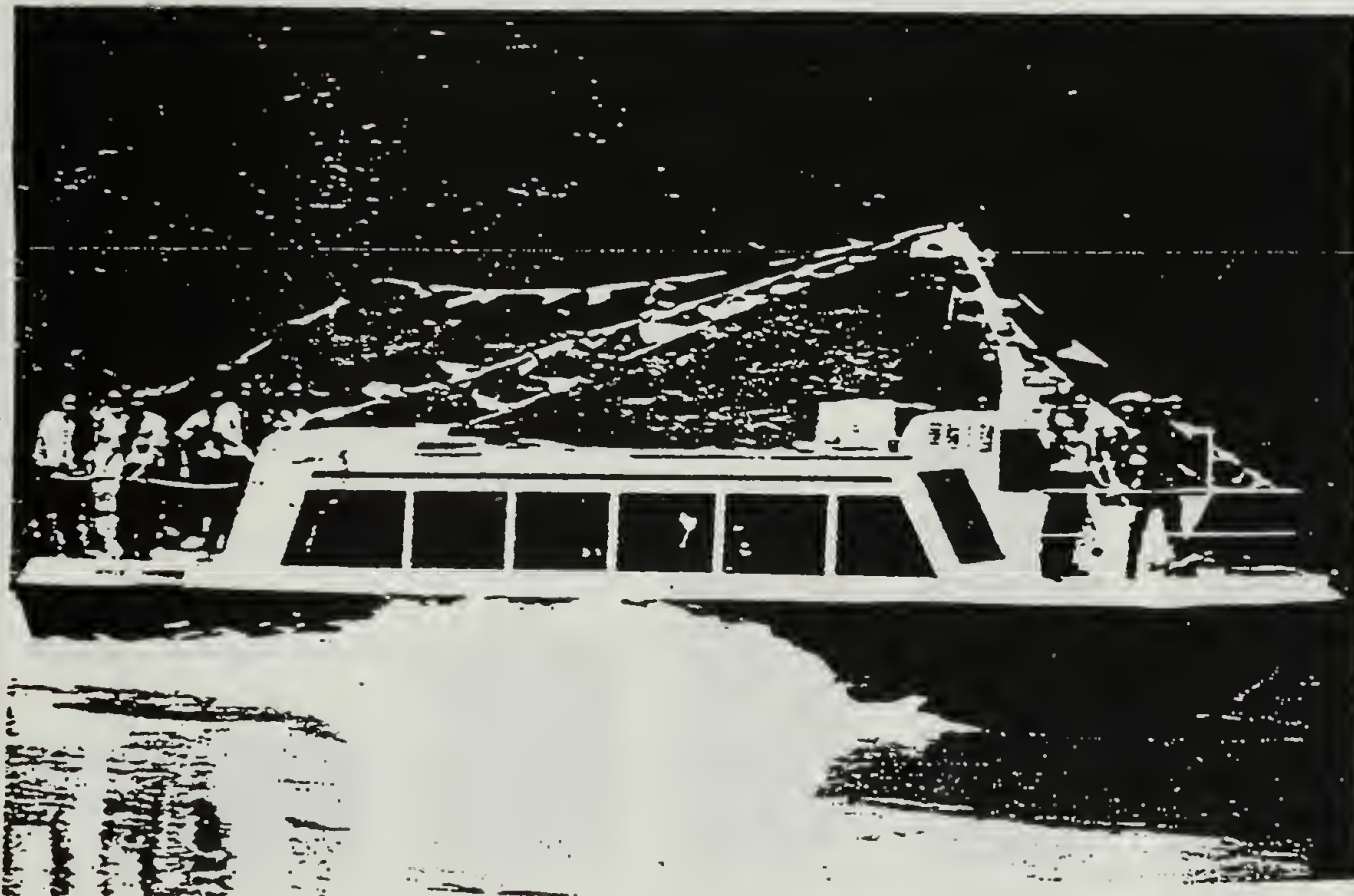




(from Bai, 1994: 4)

**Figure 15. Iron Bridge Across the Yangpi River**



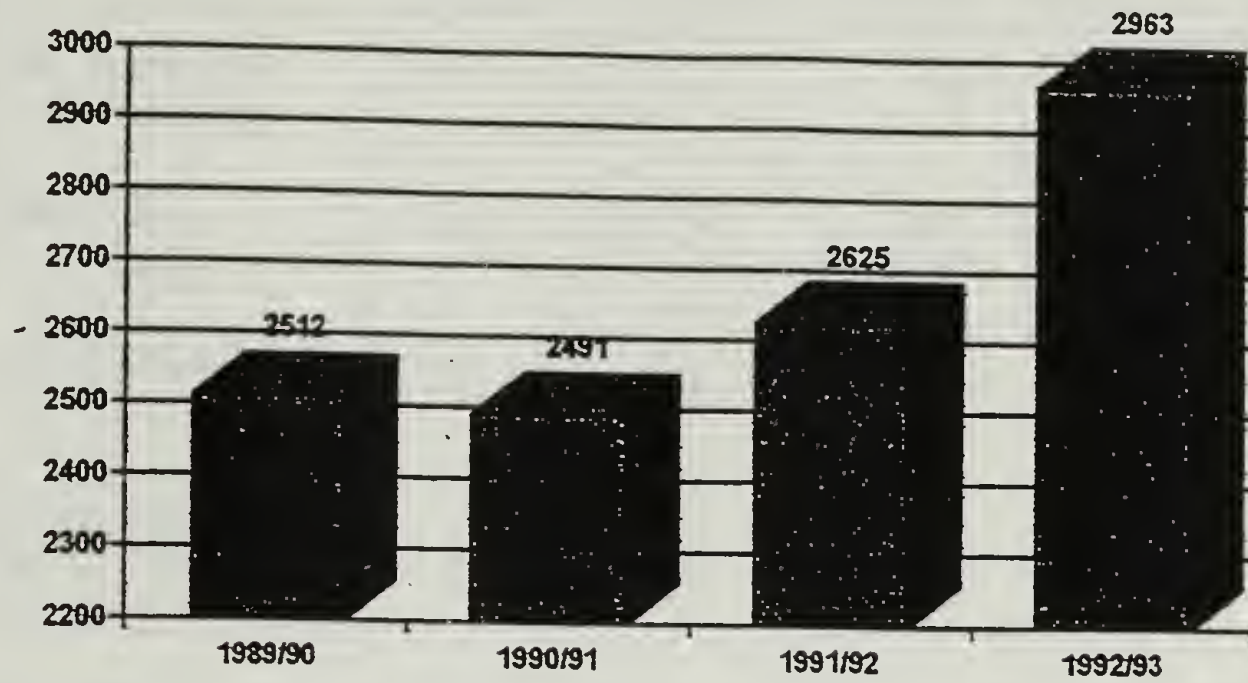


(top: from Xu, 1990: 34; bottom: from Ding and Sun, 1995: 32)

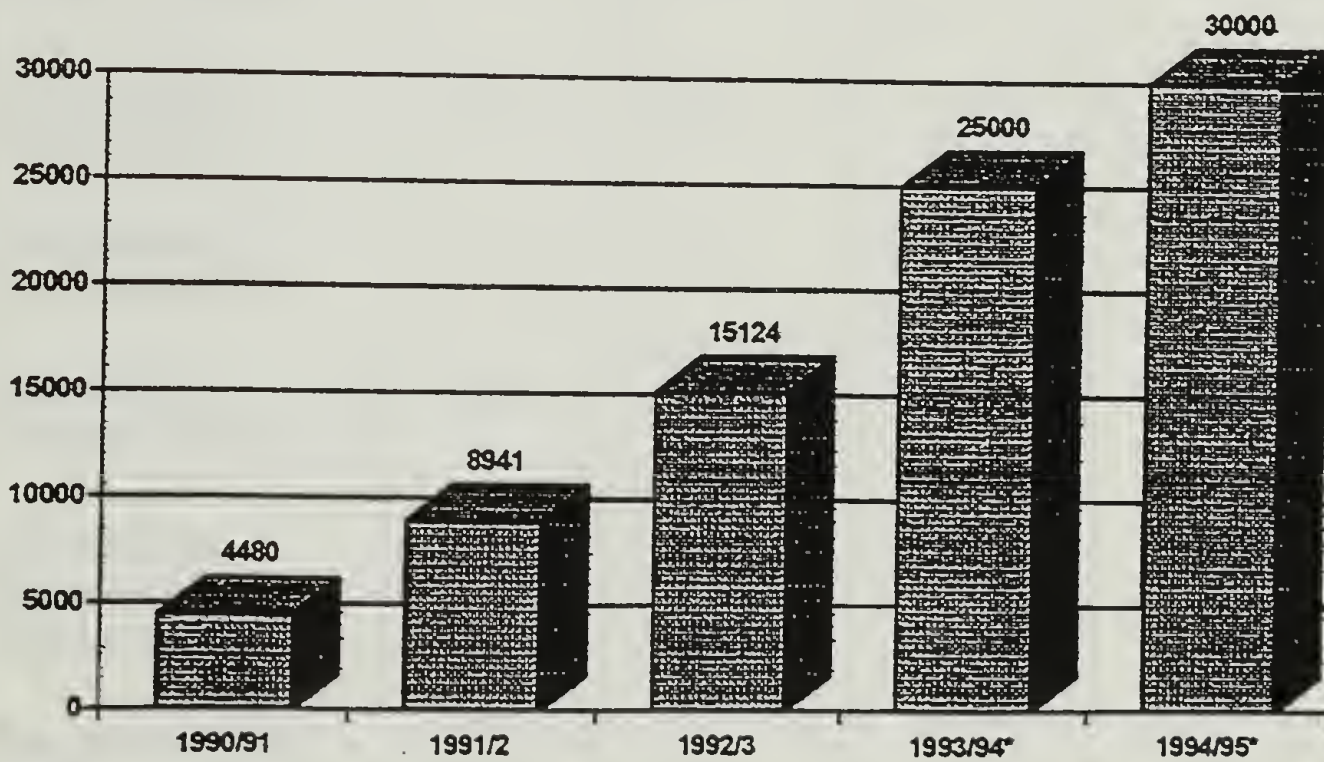
**Figure 16. Ship Service at Guanlei, XSBN**



Myanmar Inland Water Transport Co.  
Freight Volume ('000 tons)



Myanmar Volume of Containers Handled  
(20-ft equivalent)



\* Forecast.

(from EIU Country Profile: Cambodia, Laos, Myanmar, 1995-6: 84)

Figure 17. Myanmar Inland Water Freight Volume  
and Containers Handled

	Nan'ah Kou	Ganlanba	Jinghong	Nuozhadu	Sijiacun
Dist. (km) from Border Mark #63	31.3	74.6	105	209.4	357.3
Basin Area (1,000 km <sup>2</sup> )	160	151.8	149.1	144.7	123
Annual Flow Rate (m <sup>3</sup> / sec)	2020	1880	1840	1750	1380
Regular Stored Water Level (m) (elevation)	523	536	607	751	830
Dead Water Level (m, elev.)	522	535	602	738	807
Total Storage Cap. (100mil m <sup>3</sup> )	1.4	0.6	12.9	121	11.8
Effective Stor. Cap. (100mil m <sup>3</sup> )	0.09	0.07	2.5	26	5.4
Installed Gen. Cap. (10,000 Kw)	60	25	135	290	120
Guaranteed Output (10,000 Kw)	34.7	14.2	76.1	147	60.5
Annual Elec. Generated (100mil KwH)	34.18	13.33	76.75	418.14	61.19
Maximum Height of Water Rise (m)	31.7	13	74.8	152.8	94.8
Total Investment (100mil yuan)	31.7	2.35	15.3	33.58	12.84

(adapted from Liu Daqing, 1991: 513)

**Figure 18. Hydropower Stations on the Lancang River,  
Existing and Proposed Development**

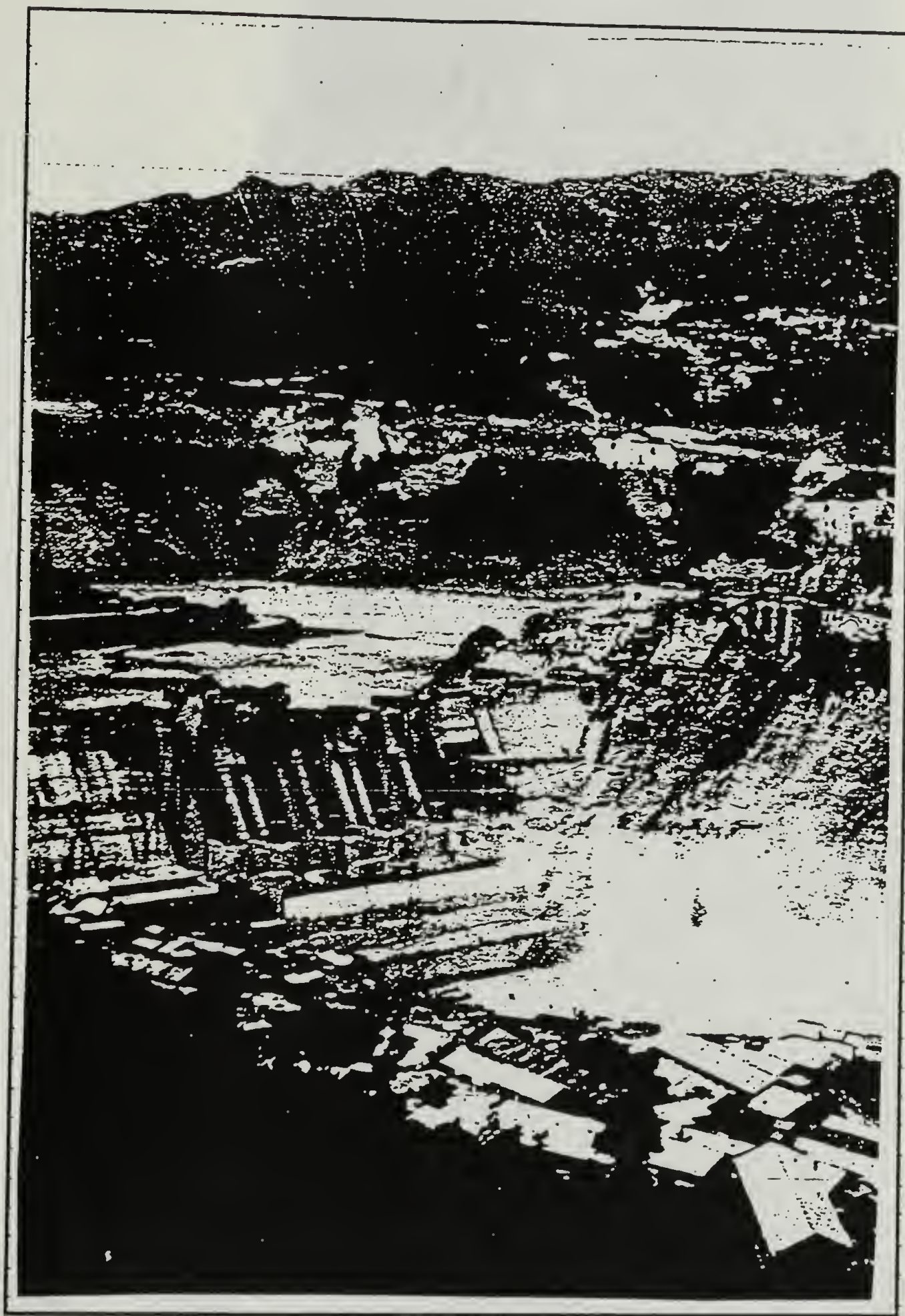
Continued Next Page



	Dachaoshan	Manwan	Xiaowan	Gongguoqiao	Tiemenkan
Dist. (km) from Border Mark #63	424.3	521.8	583.8	753.8	810.8
Basin Area (1,000 km <sup>2</sup> )	121	114.5	113.3	97.2	93.5
Annual Flow Rate (m <sup>3</sup> / sec)	1340	1230	1220	985	930
Regular Stored Water Level (m) (elevation)	903	994	1269	1325	1440
Dead Water Level (m, elev.)	895	998	1242	1319	1472
Total Storage Cap. (100mil m <sup>3</sup> )	13.6	9.2	225.8	6.1	31.5
Effective Stor. Cap. (100mil m <sup>3</sup> )	4	1.5	68.3	1	10
Installed Gen. Cap. (10,000 Kw)	125	150	360	75	150
Guaranteed Output (10,000 Kw)	64	66.7	189.1	36	82.8
Annual Elec. Generated (100mil Kwh)	63.64	74.42	178.86	39.57	81.51
Maximum Height of Water Rise (m)	98.8	103.8	314.8	85.8	173.8
Total Investment (100mil yuan)	13.87	10.84	55.3	11.4	21.6

(adapted from Liu Daqing, 1991: 513)

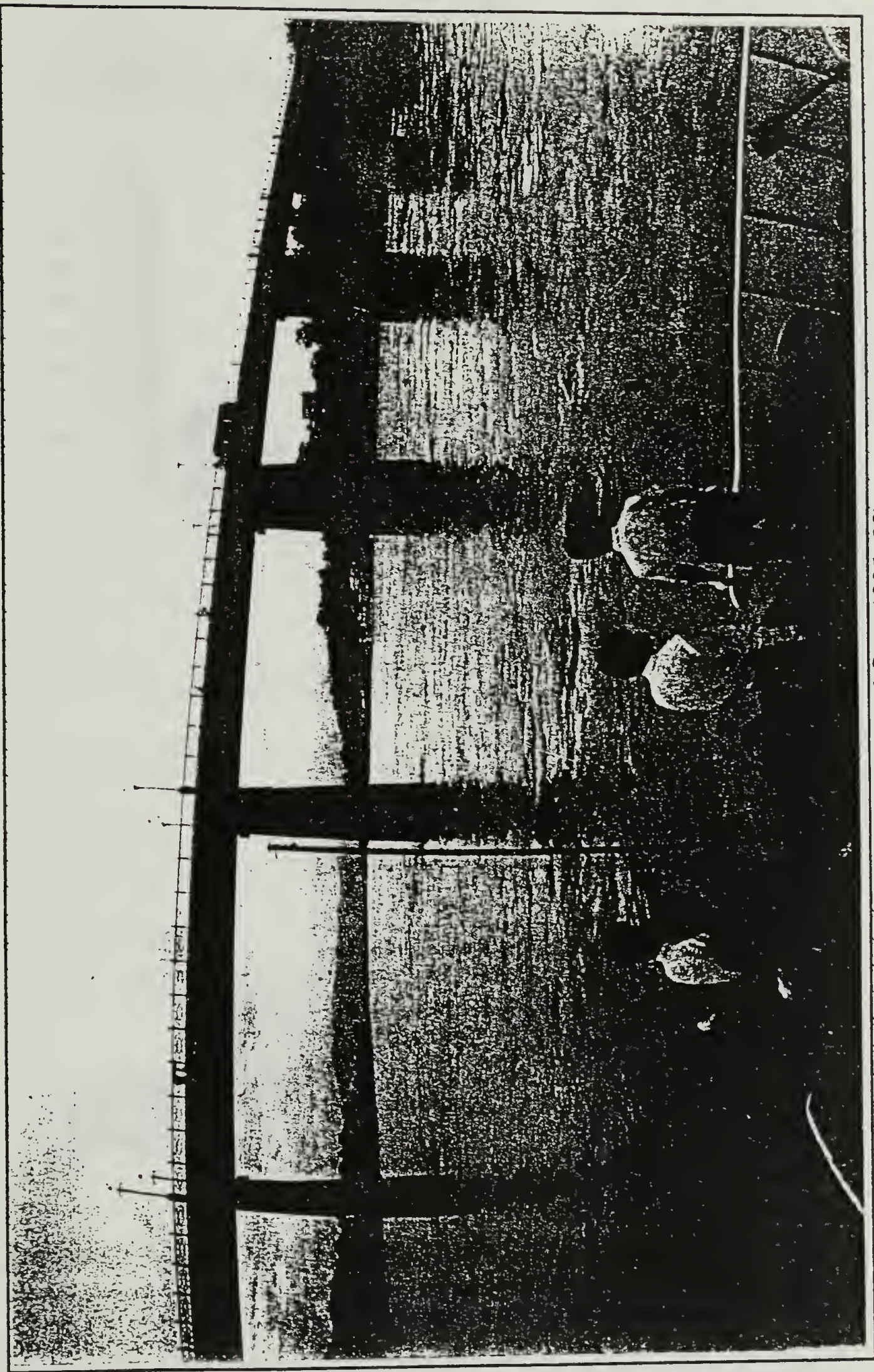
Figure 18. Continued



(from *China Today*, Jan 1995: 53)

**Figure 19. Manwan Hydropower Station**



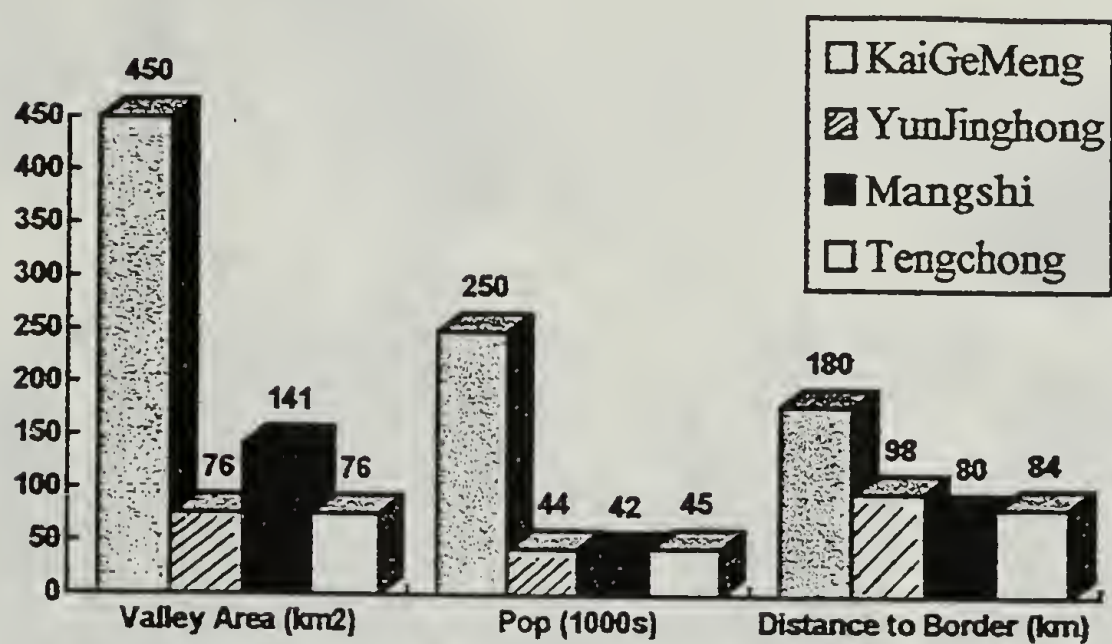


(from Ding and Sun, 1995: 32)

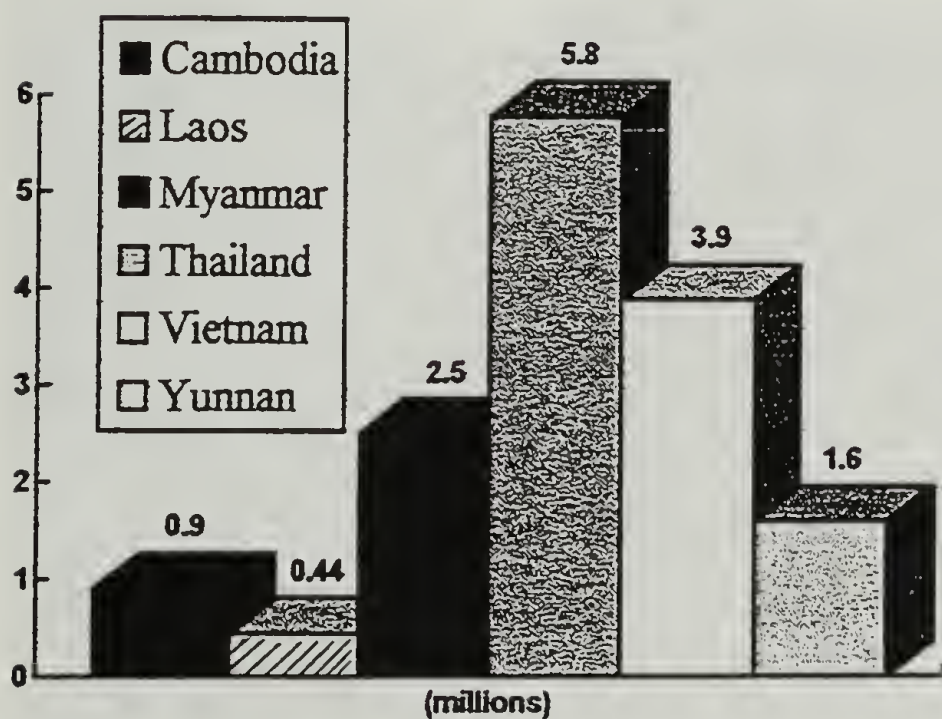
Figure 20. The Jinghong Bridge Over the Lancang



### Yunnan Forward Position Border Processing Bases



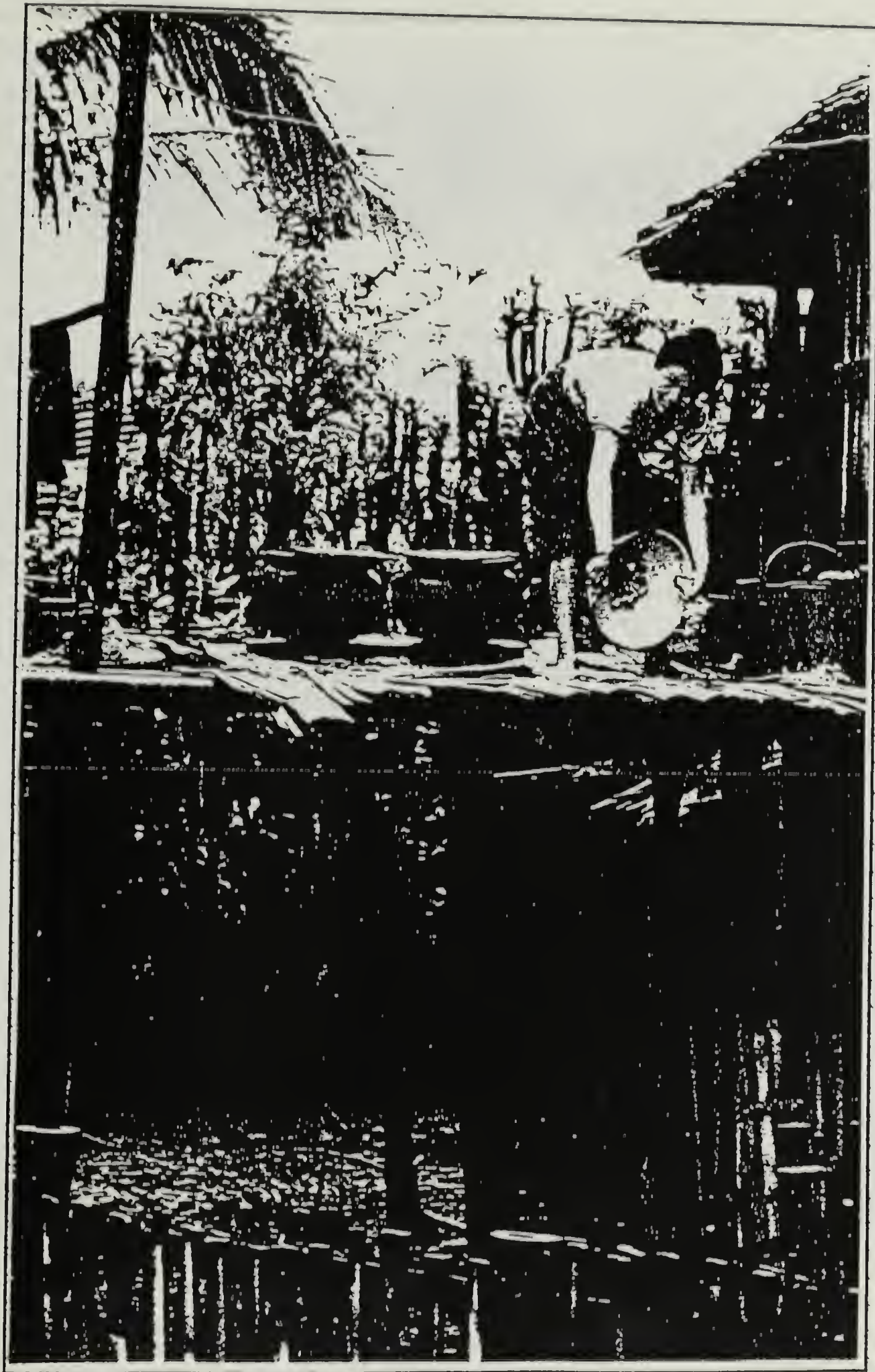
### Population of Largest Cities in GMS



(top: adapted from Peng, 1995: 25; bottom: compiled from FEA, 1996)

Figure 21. Yunnan Forward Position Border Processing Bases and Mekong Subregion Urban Populations

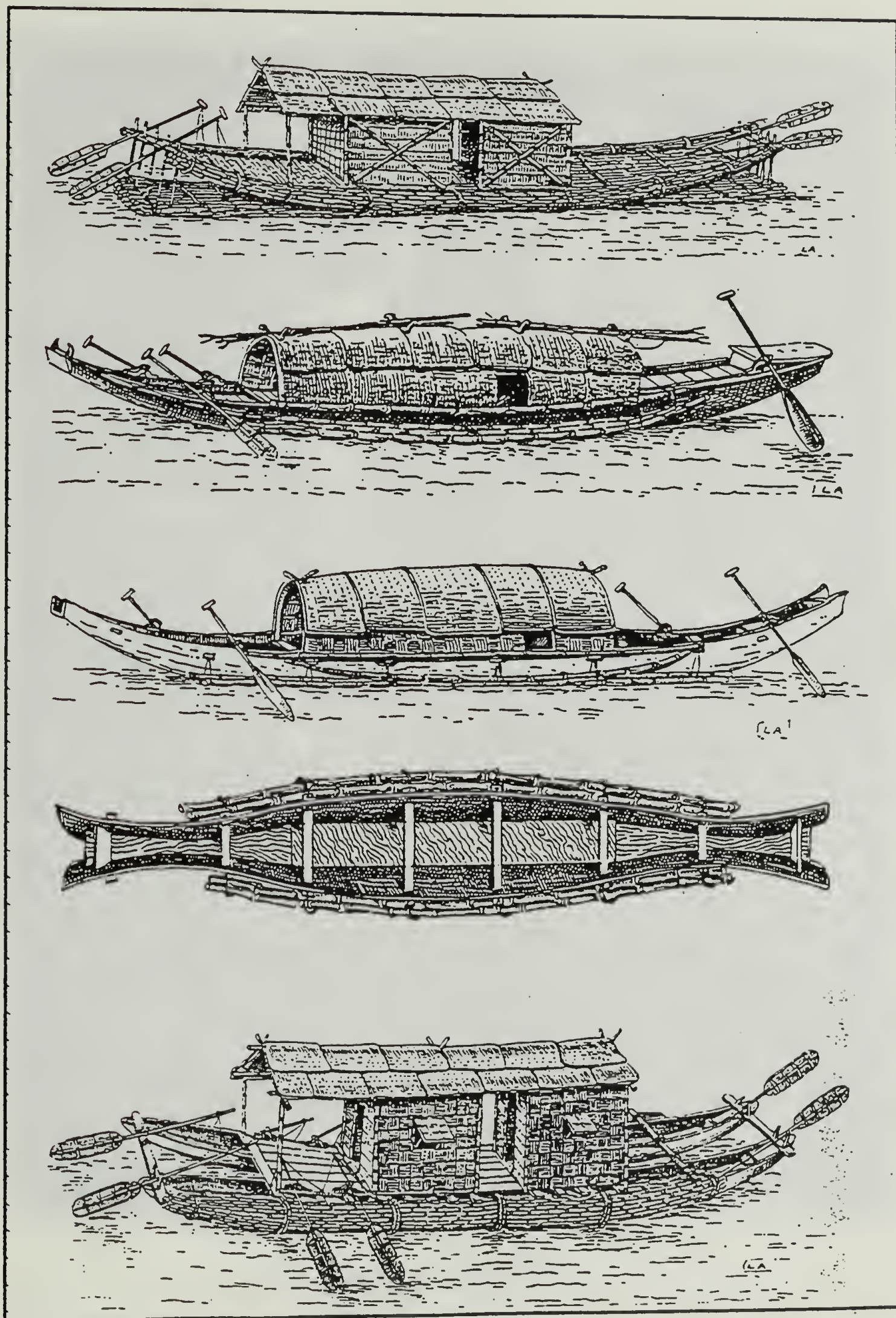




(from Sun, 1982: 357)

Figure 22. Traditional Dai Architecture





(from Audemard, 1971: 57)

Figure 23. Traditional Mekong Rafts

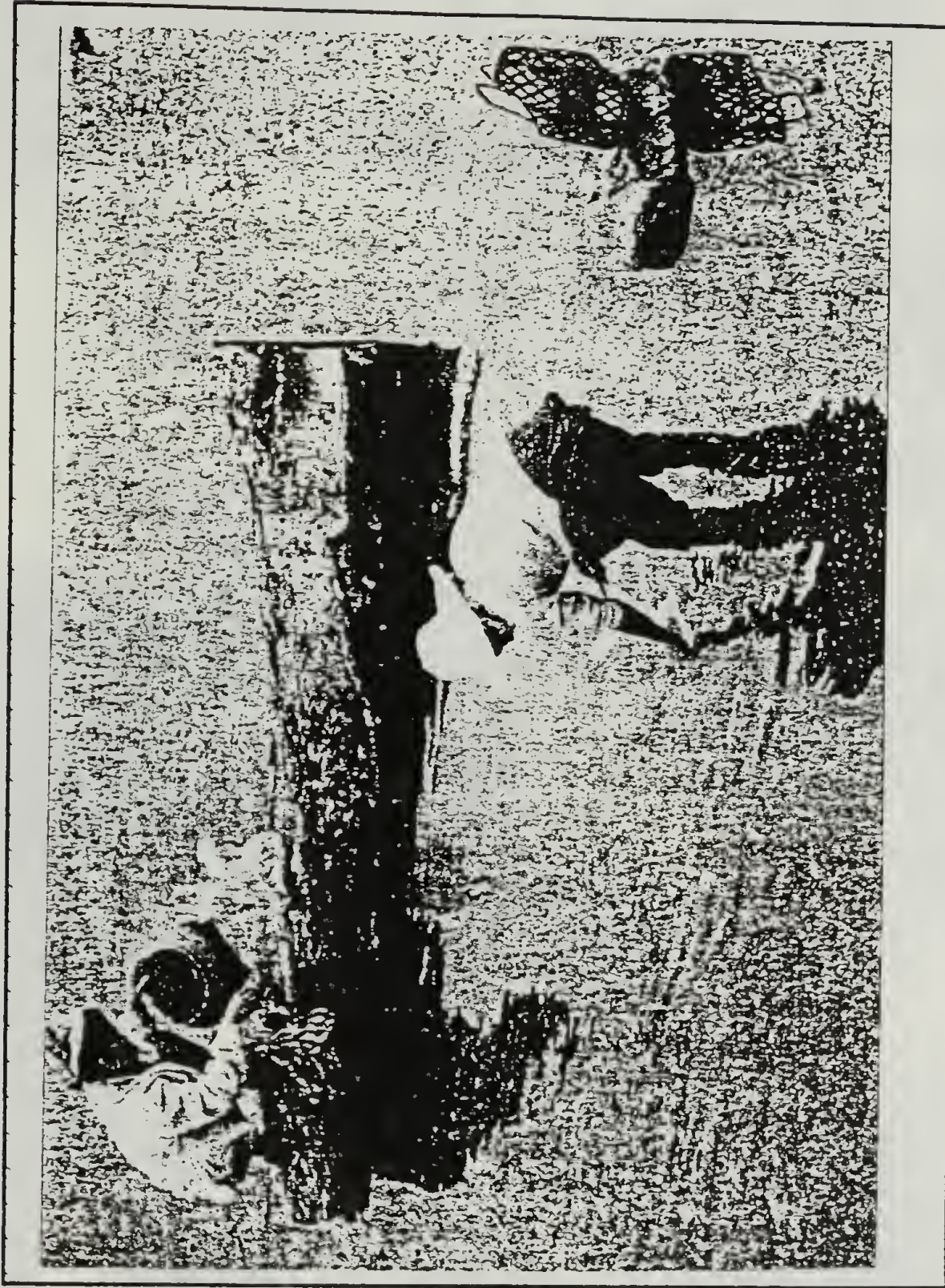




(from Sun, 1982: 356)

Figure 24. Bathing in the Lancang River





(from *Qiao Bao*, 25 Oct 1996: 28)

**Figure 25.** Washing Vegetables in the Lancang River





(from *China Pictorial* 5 (1988): 42)

**Figure 26.     Huayao Dai Women Dragging For Fish**

## I. Endnotes to Chapter IV

1. Author's translation of Liu, 1995: 33.
2. Liu, 1995: 33.
3. Author's translation of Peng, 1995b: 23.
4. Author's translation of Liu, 1995: 26.
6. FBIS CHI-91-014 (January 22, 1991): 36.
7. Adapted from translated material in CFFA #14, 1991: 323.
8. Yang, 1990: 240-250.
9. FBIS CHI-03-023 (February 5, 1993).
10. FBIS CHI-93-038 (March 1, 1993): 63.
11. Kunstadter, 1993: 19.
12. Author's translation of Liu, 1991: 508.
13. Kunstadter, 1993: 35-36.
14. BEIJING, Dec 23 - "China's floating population of migrant workers may have grown to 100 million people, far more than the official total, the China News Service on Monday quoted the Ministry of Civil Affairs as saying. Under-reporting and other factors had led to the miscounting of the huge army of rural Chinese who have flooded cities and towns in search of work, the agency said. While official statistics have long put the number of migrants at around 80 million, population experts believed another 20 million could be going unrecorded, it said."  
[*Reuter News Service* (December 23, 1996) via Clarinet].
15. FBIS CHI-95-104 (May 31, 1995).
16. The China State Council approved the opening in time for the Dai water-splashing festival. [*Xinhua News* (April 9, 1996) via LexisNexis].
17. Author's translation of Wang, 1993: 319.
18. "China's Ethnic Bamboo Houses Undergo Revolution." [*Xinhua News* (April 29, 1996) via LexisNexis].



19. Author's translation of GTJJ, 1990: 236.
20. For example: "Thailand's oil supplier, Tawan E San, plans to open a department store in Jinghong...the store will be housed in a four-story building now being restored. Tawan E San will be responsible for the renovations costing 80 million baht (US\$ 3.2 million)...customers are expected to come from the increasing number of tourist and local people whose purchasing power is on the rise." [*Xinhua News* (December 20, 1996) via LexisNexis].
21. 曼景藍 Wang, 1993: 319.
22. Yang, 1995: 58.
23. Author's translation of Liu, 1995: 26. Relying on Schafer, 1963: 133-38 for translations of wood types.
24. Pu, et al, 1990: 55.
25. Pu, et al, 1990: 65.
26. The construction of roads in the Pa Pae area of Thailand, opened up the natural resources of the highland forests to new forms of exploitation. "For example, with the opening of the road to Pa Pae in 1979 a buyer arrived for aromatic *Cinnamomum* tree bark which is used in the manufacture of joss sticks....The result was that Pa Pae villagers and Karen from nearby villages stripped the bark from trees of the appropriate species within a kilometre or so from the road head..." [Kunstadter, 1993: 36]. Similar economic incentives are having a severe impact on the rare plant and animal species of the Yulong Mountain Nature Conservation District in Yunnan. (See Appendix, Yang Fuquan, paragraph 56.34)
27. The Xiaoganlanba port began construction in 1989, was completed in 1992. According to one source, the port has an annual handling capacity of 80,000 tons of goods and 50,000 passengers [Ding and Sun, 1995: 32]. A second source reports the capacity as 100,000 tons of goods and 150,000 passengers. This source also reports that the Wharf put three ships capable of hauling 80 tons and 150 passengers into service in 1992. If the ships made only one trip a day at full capacity, it would amount to 164,250 passengers, which seems to support the 150,000 passenger a year figure [Wang, 1993: 364].
28. The ADB press release on the project was dated 19 May 1994, reported in *Market Reports* (March 21, 1995) via *LexisNexis*.

29. Becker, 1995: 61.
30. Unfortunately, the situation in Xinjiang has only deteriorated during late 1996 and early 1997. A series of events, including riots in Yining (43 30N by 81 05E) and bus bombings in the capital, Urumqi (43 30N by 87 10N) have resulted in a ban on foreign journalists visiting the area.
31. Luo, 1995: 14.
32. Ouyang, 1993: 358.
33. *China Daily*, Business Week Section (August 25, 1996) via LexisNexis.
34. *China Daily*, Business Week Section (August 25, 1996) via LexisNexis.
35. *China Daily*, Business Week Section (August 25, 1996) via LexisNexis.
36. Some US\$ 3 billion have gone into tourism ventures in the GMS region, with most of the investments coming from Singapore, Malaysia, Thailand, Taiwan, and Hong Kong [Gill, 1996].
37. "Mekong Countries Endorse Five Tourism Development Projects." in *Bangkok Post* (December 15, 1994) via LexisNexis.
38. "Committee Strengthens Mekong Tourism Ties." in *Bangkok Post* (April 4, 1995) via LexisNexis.
39. *Xinhua News* (September 17, 1996) via LexisNexis.
40. YNDZ, 1988: 53.
41. Liu, 1991: 509. A revised objective was announced in a Xinhua dispatch, placing the target at 1.05 million passengers by the year 2000. The freight volume target is 700,000 tons by 2000, almost 12 times the estimated volume of 1996 (60,000 tons) [FBIS CHI-96-023 (February 2, 1996): 49].
42. Land, 1996.
43. Email correspondence from E.C. Chapman, 19 Nov 1996.



44. Author's translation of Yao, 1948: 245-46. Compare the following description of boats in Keng Tung (Burma): "The boats are formed of single trees, opened out by means of fire until they are nearly flat; a broad plank is then added to each side. Nails are nowhere used in their construction, the fastenings being pegs and rattan. When complete, the boat is coated with *thitsee* (wood-oil), which is equal to any caulking. The bottom is generally *thingan*, a wood heavier than water, and the sides of teak. The boats are usually sixty feet long and six feet abroad" [Colquhoun, 1885: 98].
45. Smyth, 1898: 144. Chieng Hung is Jinghong. The towns of Muang Len and Tang Aw, (also written Mong Lin and Tang Ho), are on the west and east banks of the Mekong, respectively, at 20°40' North, about 30 km north of the "Golden Triangle," the point where Laos, Burma, and Thailand meet. See also the description of shipping in northern Thailand found in Campbell, 1935: 85-87.
46. The success of new 100-ton shallow draft ships has led to a push to develop 200-ton versions of the same design. See: "Shoal Draft Ships Navigate Mekong River Year Round," *Xinhua News*, 15 Nov 1996 (via LexisNexis).
47. Xu, 1990: 34.
48. Colquhoun, 1885: 110.
49. Kingshill, 1960: 30-33. See also illustrations of fishing devices of the Shan people (as the Tai are called in Burma) in Colquhoun, 1885: 111, 115.
50. Author's translation of Yao, 1948: 242.
51. Author's translation of Yao, 1948: 243.
52. Asian Development Bank, 1994: 229.
53. The authors are Pu Hanqin, Chen Dingmao, Yang Minghua, Gao Lin, and Liu Zhaorui. See Pu, et al, 1990: 54, 58, 60, 63.
54. See "Pearl of Southwest China Swamped With 200 Million Tons of Sewage" in *Agence France Presse* (April 24, 1996) via LexisNexis.
55. Author's translation of Yang, 1995: 55. (See paragraph 55.12 in Appendix.)

56. A study of the mountain and forest spirits of the Dai people can be found in Anderson, 1993; and Shigeharu, 1988. See also Appendix, Yang Fuquan, paragraph 58.8.
57. Burleigh, 1971: 2. In northern Thailand we also find propitiation of dam spirits (*phi fai*). See Cohen, 1993: 58-59.
58. Author's translation of Yang, 1995: 54. (See paragraph 54.27 in Appendix A.)
59. A recent spill of cyanide on a tributary of the Pearl River is a good example of the sort of accidents that might occur. *Reuters* (March 19, 1997) via Clarinet.



## APPENDIX

### "ECO-TOURISM AND THE PROTECTION OF YUNNAN'S TOURISM RESOURCES"

by Yang Fuquan

Translated by Merrick Lex Berman

Originally appeared in *Yunnan shehui kexue* [Yunnan Social Science] 1995(1): 52-58. Paragraphs are numbered according to page and line numbers in original Chinese text (i.e. 52.1 = page 52, line 1).

52.1 Yunnan, located at the forefront of the Chinese region opening up to Southeast Asia and South Asia, is one of the world's fairly large areas with such a pleasant climate. For some 300 days of each year, most places in the province have temperatures between 10° - 30° C, so it has always been fondly said that Yunnan has "four seasons of Spring." Yunnan's unique and spectacular natural ecology and human environment form a rich resource for tourism. The province has six national scenic districts; ten provincial scenic districts; the so-called "first wonder of the world," the Stone Forest; and the renowned "first great gorge of the world," the Tiger Leaping Gorge. Among Yunnan's famous mountains and rivers there are the Yulong Shan, the Meilixue Shan, the Jinsha River, the Lancang River, and others; as well as several dozen beautiful high plains lakes such as Dianchi Lake, Lugu Lake, Fuxian Lake, and Erh Hai. Yunnan has also been called an animal kingdom, a plant kingdom, and a treasure house of ethnic cultures. China has fifty-six ethnic groups, twenty-five of which are distributed throughout Yunnan, the highest share of any single province in the entire nation.

52.8 Yunnan society's rich diversity in human environment and in natural environment augment one another, they attract increasing numbers of foreign tourists,

and in recent years Yunnan's tourism industry has continued to develop unabated. By 1992, the income generated by the tourism industry of Yunnan had entered the ranks of the top ten among Chinese provinces. When the Yunnan provincial government set up the province-wide development plan, the decision to establish Yunnan as a major tourism destination was promulgated.

52.11 A tourism industry that continues to grow day after day promotes Yunnan's economic development, improves the livelihood of the various peoples living in the tourism districts, and increases the recognition value for Yunnan both in China and abroad. For this reason, promoting Yunnan's tourism industry is an important matter for the natural economy and the people's livelihood. As the industry flourishes, protecting its fundamental points of durability will depend upon how much priority is given to long-term protection of Yunnan's tourism resources, by conserving and enhancing their lure and fascination. As stated above, the power of Yunnan's tourism industry lies in its spectacular natural beauty and its human environment, therefore I believe that the vigorous development of eco-tourism is the most important factor in promoting our province's growing tourism industry and safeguarding its strength for the long-term.

## ONE

52.16 One of the greatest challenges demanding the world's attention today is the very survival of the human race, which must rely on the improvement and protection of the eco-environment. Without a decent natural environment, humankind will face crisis on all sides. The concept and form of travel called "eco-tourism," although created within the international context of ecological problems demanding our attention, is (as the name suggests) a tourism movement that is closely integrated with



the protection of the eco-environment. This kind of tourism, for a place that is mainly dependent on the strength of its natural environment to build up tourism, such as Yunnan, has all the more vital significance.

52.20 In Western countries, eco-tourism, is a sort of tourism that has been developed for some time already. The appearance of the standard name eco-tourism took place at the First International Environmental Protection Conference, held in Mexico in 1986. After this concept appeared, it had an immediate catalytic effect in many countries around the world. All sort of organizations such as Greenpeace, travel groups, research institutes, etc., adopted various means of promoting and organizing eco-tourism, and at the same time many universities created courses and opened research centers related to eco-tourism. As more and more people became practitioners and organizers of "eco-tourism," international academic conferences on the subject also multiplied.

53.5 Put simply, eco-tourism is a form of tourism with a primary purpose of protecting the eco-environment of tourist areas. Relying on the traveler's actions, the local government, and the local residents, the organized work of eco-tourism combines their efforts so that they form into a single purpose. It strongly emphasizes closely coordinating the tourists with the local residents of tourist areas; and only under the precondition of a unified effort to protect the local natural and human environments would tourism be developed. It would not take up any artificial means of spoiling the natural characteristics of the district, such as blindly building up the district with big restaurants, amusement parks, tourist buses, and so on, which are unsuitable for the local environment and culture.

53.9 From the very start, those advancing local tourism must produce a detailed plan and also produce results which will fully protect the local tourism resources according to the local conditions. The tourists, in the process of traveling, must

contribute their share by acting in the dual role of admirers and protectors, and not merely as consumers from far away places. Travelers should both visit scenic spots and at the same time learn something from the local culture. They should be familiar with, and respectful of, local customs. (By way of example,) the author, when attending a lecture at the Eco-tourism Research Institute of Canada's Simon Frazier University, saw photographs of sea-turtles laying their eggs under cover of darkness. They were undisturbed by the (conscientious) eco-tourists taking their picture.

53.15 Since eco-tourism includes both protection of natural and human environments, a crucial point in building the eco-tourism industry is how the tourists and local residents can cooperate in the preservation and enhancement of tourism resources, making them attractive to others over the long-term. In the "Manila Declaration," presented at the World Tourism Conference (Manila, Sep. 1980), it was emphasized that: "The basic strength to attract tourists lies in the resources of Nature." The most popular slogan in the international tourism industry today is "back to nature;" and this makes it clear that preservation of a fine eco-environment is a vital foundation for any expanding tourism industry.

53.20 Looking at the present state of affairs in Yunnan, it's clear that the big push to publicize and develop tourism is already a matter of great urgency because Yunnan's tourism resources are already in a grave situation, facing a crisis of degradation that cannot be viewed with much optimism.

53.21 In terms of the natural environment, Yunnan can open up forest tours; mountain and river trekking; tours that integrate research and surveying of physical geography, botany, wildlife, and blossom viewing...all of these being important elements of eco-tourism. But currently in many places throughout Yunnan the environment has already been seriously depleted, imperiling our aspirations to make Yunnan a major destination for tourism. During the period since the 1950's, a series



of policy mistakes (which flew in the face of common sense) were made. For example: "Everyone Struggle to Produce Iron"<sup>1</sup> during the Great Leap Forward period;<sup>2</sup> "Organize Dining Commons"<sup>3</sup> in the early communization period; "Reclaim Land to Make Fields"<sup>4</sup> during the Great Proletarian Cultural Revolution;<sup>5</sup> and also long periods of excessive logging, clearing forests and grasslands, all of which have very critically damaged Yunnan's ecological balance.

53.27 Since the reforms (of the 1980's), the system of industrial production has expanded rapidly, bringing visible economic benefits to our province, while at the same time creating discharges of the "three wastes,"<sup>6</sup> which have been causing serious pollution of our air, soil, and waters. The first problem to crop up in Yunnan was the acute tendency for pollution of rivers and lakes near cities, and the gradual worsening of air quality in cities and some townships. Then, with the speeding up of rural industrial development, environmental pollution spilled over into our rural villages. Since then, consequently, large areas of Yunnan's tourism resources seem fated to pollution and degradation.

53.31 Take Kunming, for example. A famous city even outside of China, with a national-level tourist area built upon the bank of Dianchi Lake...but in recent years this city, which is the hub of Yunnan tourism, has been suffering air and water pollution that worsens every day. The once beautiful Dianchi Lake has practically become a municipal garbage dump,<sup>7</sup> which has negatively impacted the character of Kunming as a superb place to travel. Other famous mountains and waters are in the same predicament, having been injured and scarred time and again by eco-degradation.

53.34 According to studies conducted by the Yunnan Environmental Science Institute, the area in Yunnan where the least destruction of the ecology has occurred is in the northwest, the zone around Dêqên Prefecture and Lijiang.<sup>8</sup> These district's

resources are both rich and vitally important as tourism areas, and yet even in these districts environmental degradation has been unceasingly on the rise. For example, Dêqên, is situated in the famous scenic area of "Three Rivers Convergence" -- (The Jinsha, Lancang, and Nujiang Rivers, based on a proposal by UNESCO, was approved and designated as the "Three Rivers Convergence" district by China's State Council in 1988.) -- and Dêqên has nevertheless in recent years been the scene of forest clear-cutting and severe soil erosion, resulting in a number of landslides.

53.38 In Yunnan's major tourist spot, Xishuangbanna, the total area of forest cover dropped from 50% in the 1950's to 30% in the 1970's, the eco-systems of the mountain areas have degenerated, and the number of endangered plant and animal species have increased. During the past 40 years, several hundred species of plants and animals have vanished from this region, and those now endangered comprise more than 15% of the total. Since the time of liberation, when the area of tropical rain forest stood at 1740 *wan mu*, it has been reduced to 777 *wan mu* in 1982, a loss of 55%. The area of forest cover in yet another important tourist area, Lijiang, has dropped from 63% in 1947 to 37.8% in 1985. The ecological degradation of forest species in the famous tourist spots of Dali and Dehong is also very pronounced.

54.5 Rare plants and animals, high plains grassland and lakes, are all vital resources for carrying out eco-tourism; yet the crisis facing these very resources in Yunnan is a major problem threatening both the tourism industry and the livelihood of the people. For example, in Dêqên there are thirty-one plant species presently known to be national important protected species, which comprise 7.9% of the national total of protected species, and 20% of Yunnan's total. Likewise some forty-eight animal species are protected, 25.1% of the national total, and 49.5% of Yunnan's total. Nonetheless, many years of wanton trapping, killing, cutting and digging have reduced



Dêqên's plants and animals to a sorry state indeed, and some species are on the brink of dying out.

54.9 Another example is the so-called Shen Hu [Spirit Lake], Na Pa Hai, in Zhongdian County. Owing to the blind reclamation of farmland in the past, the forests in the mountains surrounding the lake were nearly wiped out, the surface area of the lake shrank, and the lake's depth became shallow. One priority protected species, (used as an example of an extremely endangered species by the United Nations,) is the Black-necked Crane, which winters in Na Pa Hai. Originally there were several hundred pairs remaining, but these have dwindled to only twenty or thirty pairs. The forests encircling Yong Ding's Lugu Lake are also severely depleted, greatly affecting the entire lake's charm.

54.13 In the early 1950's, *Yu zhu jing tian*, the famous scenic area in Lijiang, was still a place of ancient artifacts, and dense forests where wild animals appeared and vanished. But owing to many years of wild and excessive cutting, its forests today are bare, its temples wrecked, and visitors few. Significant damage has been done by the same actions in Lijiang's national nature conservation area, the Yulong Mountains, so that little of the original forest has been preserved. On the Yulong's mid-range and lower slopes, the plants and animals are fewer every year.

54.16 Formerly Lijiang was the home of a number of species of pheasant, one of which, called by Western scholars Lijiang Pheasant (*Lijiangnensis Crossoptilon*), is presently one of the rarest species of pheasant in the world...(according to Prof. Ives, chairman of the International Mountain Association.) Prof. Ives, with the support of the International Pheasant Research Association, conducted a field study of the condition of the Lijiang Pheasant and considered Lijiang as an ideal place for tourists to appreciate bird watching.

54.19 But to be honest, because of the reductions in forests, on top of which are repeated cases of unbearable trapping, Lijiang's current number of pheasant species is

much lower than before. Even today in Lijiang's towns and villages there are many people who take hunting dogs and raptors to seize and kill pheasants. If serious measures are not taken to stop them, then before long this precious natural resource will vanish.

54.22 Erh Hai Lake is a part of Yunnan's most treasured landscape in the Dali tourism district, but in recent years nearby factories have been dumping more than 10,000 tons of waste water per day into the lake; with effluents including: mercury, arsenic, cyanide, phenol and other waste residues.

54.23 China's second deepest lake, Fuxian Hu, has suffered critical deforestation in its surrounding aquifer. According to statistical records for 1975, the forest cover amounted to only 7.8%, and the broken ecological balance has caused the water level to drop. In many important tourism areas of Yunnan, we are seeing the water level of lakes falling, their surface area shrinking, and their sources drying up, all of which pose a great threat to these rich resources.

54.27 Because of this, if we want to establish Yunnan as a major tourism destination, maintaining superb and sustainable tourism resources, then we must begin by improving our eco-environment and we must start this by preserving what we have. If one day it dawns on us that all of our resources have been wasted, then our tourism industry will turn into a tree without any roots. We can no longer be blind or complacent toward Yunnan's present ecological situation and the continued development of the tourism industry. We must look instead at the various crises hidden within development.

54.30 Sustainable development of the tourism industry depends on the tacit cooperation of tourists and the local community; as for protecting good tourism resources and improving the eco-environment, the tourist area's local government and



residents must make a concerted effort too. The message of the Globe '90 International Conference on Sustainable Tourism (held in Canada) was expressed in five ways, of which the first point was: promote people's understanding of the environmental and economic effects of tourism, and strengthen their ecological awareness. The fifth point was: protecting the future development of tourism depends on the quality of the existing environment. The purpose of eco-tourism is to promote the improvement of tourist areas' eco-environment by means of close cooperation between travelers, local government, and residents.

54.35 In Yunnan today, we must create and ecological awareness, especially in improving tourist spots, and we must take up relevant measures to accomplish this. The People's Government of Yunnan Province has already enacted some rules for conserving the environment of tourist and vacation areas, for instance the "Environmental Protection Regulations for Yangzong Lake, Yunnan" and others; and it has promulgated the "Environmental Protection Objectives and Mission for the Current Plan (1993-98) of the Yunnan Provincial Government." The Provincial People's Congress also passed the "Yunnan Province Environmental Protection Ordinances." In developing Yunnan's tourism industry we must use every effort to protect our tourism resources and eco-tourism movement by fully implementing these regulations and enhancing our eco-environment.

## TWO

55.2 In human ecology studies we consider human beings and other living things as existing together in a specific natural environment, and we consider human society and culture as the pattern of all humankind in its struggle to adapt to the environment. Whether man to man, or man within the environment, these relationships mutually affect the formation of culture and cause cultural change. Another aspect emphasized by eco-tourism is the culture that is created by human beings within the physical

environment of Nature, and this can also be called "human cultural ecology." Human cultural ecology is another important resource to rely on in developing the tourism industry, complementing, as it does, the ecology of nature.

55.5 According to studies conducted over the last several years by the National Tourism Bureau, and to the responses of foreign travelers, foreign visitors are more interested in the customs and conditions of Chinese society than in scenic areas or famous historical sites. Yunnan's greatest strength in cultural resources lies in the diverse, colorful, and spirited folk customs created by twenty-five ethnic groups. These ancient ethnic cultures form Yunnan's special allure to tourists and provide a splendid foundation to develop Yunnan into a major tourist destination. The recent vigorous growth of Yunnan's tourism, in addition to relying on superb landscapes, was also motivated by our interesting cultures. If we lacked such interesting cultures, Yunnan's tourism industry could not be built up, and it wouldn't even be worth discussing the establishment of a major tourist destination. What we must then realize is that Yunnan's ethnic traditions are really in dire straits and on the verge of total collapse.

55.12 We can no longer delude ourselves with the fame of bygone days by saying: 'Yunnan has a rich, diverse culture.' After a long period of historical transformation, all the ethnic groups of Yunnan have experienced profound change in lifestyles and culture. Because we didn't attach enough importance to the minorities' traditional cultures in the past, those aspects which are the most characteristic and endearing to tourists are now vanishing and changing.

55.14 For example, there is the famous Naxi Dongba culture, which has brought many scholars and visitors from China and abroad to come sample the charms of Lijiang, and has even drawn some tourism investors...it was actually due to this



singular human cultural ecology that they came. Sadly, this important cultural heritage and cultural resource of Lijiang is in a state of crisis and on the verge of being lost.

55.17 Of those elderly Dongba who fully understand Dongba texts and ancient customs, there are hardly more than a few remaining; and the young people studying the traditional culture and wisdom from the older Dongba are very few indeed. As for Dongba religion, which formed a major element of Naxi customs, it is already extremely rare among the people. If we don't take immediate measures to save it and revitalize it, then after a few years, with only a few old books and artifacts left in the Naxi district, lacking both a living Dongba culture and anyone to carry it on, a great cultural resource (which has a bearing on the growth and decline of tourism) will be lost forever.

55.21 The situation of the Dongba culture, on the verge of collapse, is very common for all of the traditional ethnic cultures in Yunnan. In many places, traditional mountain songs, ditties, dances and such are vanishing and not being handed down to the next generation. Folk artists familiar with traditional ethnic art forms are fewer every day. As a result, many ethnic youths no longer understand traditional art forms, song duets, or singing contests, and those who participate are mostly their elders. As for some of our ethnic groups in important tourist districts, the younger people are crazy about singing *karaoke* and dancing in the latest trendy, informal dances, but when it comes to their own ethnic songs and dances they couldn't care less, and on average they appear to be completely ignorant of their own traditional culture.

55.27 Traditional ethnic costume, which is a part of traditional customs that always fascinates tourists, is also currently in a state of crisis. In many minority districts, that many young people are unwilling to wear traditional clothing is self-evident. Take for example the ancient town of Lijiang, one might spend year after year there, but on holidays it would be difficult to bump into a Naxi youth wearing traditional ethnic

clothes. As a result, many tourists mistake Bai youths wearing traditional clothes for Naxi youths. The Yeché people of Lang Di and other villages in Hong He County originally had very distinctive style of dress,<sup>9</sup> but now they've already been called "bad habits" and abolished. Also, the singular women's clothing and accessories of the Ximeng Wa people are now slowly vanishing. On a recent visit to the fairly conservative Ximeng Wa Autonomous County village, Yue Song, the author saw that many women had switched to Han Chinese dress. Except for New Year or other festivities, the Jinuo people of Jinghong usually wear the latest fashion in Han or Western clothes. Looking at the current trends in Yunnan, if we don't take action with some suitable measures for improvement, and energetically promote them, many of our ethnic costumes will become Sinified or Westernized, and we'll be losing an important ethnic taste.

55.36 In addition to the decline of traditional ethnic clothing customs, traditional ethnic architecture has gone through great changes. Minority groups are now universally substituting Han style wood/brick or rebar/cement construction techniques for their own traditional architecture in the hinterlands. Already the original architecture styles of the local people are gradually disappearing.

56.3 Folk customs are an important resource for the tourism industry, but now our most colorful traditional holidays and customs are also on the decline. For example, the biggest holiday of Lijiang's Naxi ethnic group, the *ji tian*,<sup>10</sup> has by now basically disappeared. Also the Naxi ethnic festival, *san duo*,<sup>11</sup> held on the 8th of the 2nd lunar month, is a spectacle which many visitors to Lijiang hope to see being celebrated while among the Naxi people; but sadly enough, in most places the *san duo* rituals are gone forever. Likewise the characteristic festivals among the Jinuo people for raising a new house, for passing the new year, and for youths coming of age, are quickly



fading away. As for the many Yunnan ethnic folkways portrayed on television and in films, nowadays, most of them are organized re-enactments by people on location, they are not really living folkways still preserved by the ethnic groups.

56.10 Each of our ethnic group's most characteristic traditional cultures and customs are daily on the decline. Therefore with an ambition to make Yunnan a major tourist destination, we are forced to deal with a crisis in sustaining our culture as a resource for tourism. If we don't take proper measures and promote them with heroic efforts, then all of our colorful ethnic traditions and the very unique qualities of Yunnan's culture will very shortly become a thing of the past.

56.12 If we can universally launch eco-tourism in Yunnan, with the aim of protecting the natural and cultural landscape, then we will make a great contribution to sustaining the conservation of Yunnan's superior tourism resources. Experience gained in various places around the world has shown that a healthy growth in the tourism industry both boosts the local economy and can be of great use in the recovery and preservation of local traditional cultures. The heart of the matter lies with the tourism district policy-makers and with the leaders of the local people, who must rely on the eco-environment to develop tourism...they must also be conscious of protecting natural and human ecology as a way to protect their tourism resources. They must not see only the appearance of tourism flourishing before their eyes, while neglecting a huge catastrophe hidden beneath the surface.

### THREE

56.20 Of all the things we can use to promote eco-tourism, their primary motive is to alleviate and put a stop to any negative influences that the tourism industry might have upon the local natural environment and human ecology. This is because the goal of eco-tourism is to protect the natural and human environment by means of tourist activity.

Although, as everyone knows, eco-tourism has been called a "smokeless industry," with positive benefits for advancing the local economy and cultural exchange, it can also produce some harmful effects in the tourist district, such as impacts on the area's eco-environment by the tourists. At many scenic spots in Yunnan, tourists are the outstanding producers of environmental pollution. Take, for example, Yunshaping, at the Yulong Mountain Nature Conservation District in Lijiang, which is a famous scenic spot...many domestic tourists have been littering the roads and scenic district with all sorts of garbage, beverage containers, plastic bags, and scraps of paper, without a care in the world; and they are not only seriously polluting the scenery, but also directly endangering the local villagers' livestock and livelihood. In the local hamlets of the Yi people, many cows and goats have died by swallowing plastic bags containing bits of food thrown away by tourists. Similarly, after Zhongdian County was opened and saw a subsequent increase in tourists, the Bita Hai, Napa Hai, and other famous scenic lake areas all experienced the same phenomenon of tourist's littering and negligently tossing their garbage everywhere. The tourist litter at Yongding's Lugu Lake and Lunan's Changhu Lake is quite evident.

56.29 Studies of this subject have shown that the majority of those responsible for this pollution are domestic tourists. Foreign tourists are comparatively self-conscious in this respect, they place their rubbish into a small bag and carry it away from the area back to a suitable place to dispose of it. This reveals the problem of a real gap between the levels of traveler's cultural upbringing and civic awareness. Because of this gap, we not only must work on the long-term promotion of national moral upbringing, but we must also redouble our efforts to manage tourist districts, to establish and correct our regulations for managing tourist areas, and to make this a strong action in the opening of eco-tourism.

56.34 Another negative influence upon the environment caused by the tourism industry is the pilfering of ecological resources. This phenomenon has appeared in



recent years, involving both domestic and foreign travelers who use tourism as a pretext to steal ecological rarities. For example, between 1988 and 1991, at Lijiang's Yulong Mountain Nature Conservation District, there were seven incidents of tourists being apprehended for taking rare butterflies, insects, and seed plants. Masquerading as tourists, these thieves of local resources came from Japan, Australia, Eastern Europe, and other places. Some of them were caught when they went to the nature conservation areas, while some were caught while trying to hire local residents to act as guides or while trying to hire peasants to go and collect the specimens. The damage caused by people posing as tourists in order to steal plants and animal species is significant, especially because by using money to entice local people to collect these plants and animals they have caused no end of troubles. If this continues to spread, then it will encourage the local people to wreck their local resources without regret in pursuit of profit, and an atmosphere of selling off of resources will endanger the entire eco-environment.

57.4 In addition, following the development of tourism the phenomenon of people coming as tourists and illegally collecting and purchasing cultural artifacts is always increasing. According to my own observations, even in Lijiang a number of precious Dongba cultural artifacts have fallen into the hands of travelers from unknown places of origin. Therefore, another important item in the work to protect Yunnan's cultural resources is to prohibit the loss of our ethnic cultural artifacts.

57.7 Eco-tourism is useful for stimulating the recovery of local traditional cultures, for spurring social development, and for strengthening our awareness of opening up to the rest of the world, but it can also have harmful effects on our human eco-environment. For example, the many different cultural concepts and lifestyles that foreign and domestic tourists bring with them are an invasion of the local culture, aggravating the conflicts between local and outside cultures.

57.9 In reference to the sustainable development of tourism, the 'Three Principles' of the *Manila Declaration*, (passed by the Manila World Tourism Conference, Sep. 1980), suggested this specific measure: to educate the foreign and domestic tourists to "safeguard, protect, and respect their tourist district resources, cultures, and human relations." Eco-tourism is rooted in this sort of objective, to improve the local natural and human eco-environments, therefore the energetic development of eco-tourism in Yunnan will aid in the preservation of our tourist resources.

57.14 The commercialization of local ethnic cultures in places where tourism is facilitated can also lead to its vulgarization. This appears in the form of fake, inferior quality goods being passed off, which also has a long-term effect on the opening up and reputation of cultural resources for tourism. Since the Naxi Dongba culture is famed for having the "world's only living pictographic writing system," and a "unique socio-cultural history," many tourists really like to buy contemporary Dongba paintings by Dongba and Naxi artists. Due to this demand, a lot of roughly executed fake artworks have appeared on the market, which in turn effect the reputation of Dongba culture. In order for the people's traditional cultures to receive the greater benefit from the economy and to sustain their power of attraction over tourists, these types of cultural products should be inspected and authenticated by a special agency, they should be properly managed, and they should be kept from becoming crude and randomly produced hack work. Even while local ethnic groups everywhere are encouraged to open up cultural tourism, they must be careful to protect the original form and unaltered qualities of their ethnic traditional culture. They must not go the way of vulgarization and over-commercialization, which would be to lose the cultural characteristics most attractive to visitors. Only in this way will all of the people's rich cultural resources have a flourishing rather than declining power of attraction, and



prove useful to the advancement of the local economy and the improvement of the people's lives.

57.23 One important link to preserving sustainable tourism resources and attracting tourists is to coordinate and harmonize tourist facilities within specific natural and cultural environments---this is also the primary principle of eco-tourism. Therefore when selecting sites and designs for building hotels, restaurants, and attractions in tourist districts we must be extremely cautious. Both the outward appearance and interior should match the local ethnic flavor as much as possible so that it blends in with the natural and human environment. We should not clutter the landscape with stereotypical contemporary architectural forms or tourist attractions that are incompatible with the nature of local cultures. That sort of tourist facility, trending toward other western or domestic models, will, on the contrary, reduce the power to attract tourists. In this light, many knowledgeable scholars from around the world have strongly disapproved of building modernized hotels and tourist attractions in the hinterlands of the Yulong Mountain Scenic District near Lijiang; they believe that this sort of construction can only worsen pollution in the scenic area and that is not in harmony with the natural scenery of the Yulong Mountains. The author has also heard many foreign scholars and travelers say that if they wanted to play golf, there was no need to come running half-way around the world to Yunnan.

57.32 Foreign friends have been honest about the highly unsuitable appearance that has been produced in China's ancient cities of great historical and cultural value---Xi'an, Luoyang, Chengdu, and so on---by building endless rows of modern buildings. They've painfully pointed out: "When speaking of a famous city with a long history and cultural identity, *ancient* does not merely signify an established geographic position together with a bunch of historical facts. What is more important is that it still preserves an ancient style, an ancient tradition, and its ancient treasures."

57.35 Yunnan has a good number of nationally recognized historic cities that are important tourist destinations. When we take up the problem of how to build up these famous cities, it is worth considering the points mentioned above. As everyone knows, Kunming today is caught in a wave of tearing down the old to make way for the new, but isn't this a greater and greater loss of the city's ancient cultural character?

57.38 Proven successes here and abroad have made use of every traditional ethnic architectural style to build folk custom villages or to build hotels, restaurants and tourist parks. The arresting features of these structures, and the appeal of being in a strange place, have attracted crowds of tourists. The author, while conducting research in Canada, visited guest houses in the style of traditional Native American igloos<sup>12</sup> and log cabins.<sup>13</sup> They were beautiful to look at, quite cozy, and perfectly suited to the peoples' spirit. Every year many travelers come to these for a taste of the Native American ambiance. In Yunnan, the traditional architecture of the old town in Lijiang, and the Dai architecture of Jinghong's Manjinglan Village in Xishuangbanna, are both successful examples of attracting tourists. To build tasteful hotels or small restaurants in this sort of architectural style is not so difficult to do, as in the small restaurants built in the traditional courtyards of Dali's old town, which have become traveler's favorites.

58.4 In developing the Sino-Canadian "work-unity" joint venture project, (under the leadership of the Yunnan Academy of Social Science and Canada's Simon Frazier University,) the groundwork for an "International Cooperative Lijiang Development Research Center" was recently established. In addition, it was suggested that the center itself should be set up in a traditional Naxi-style "Three shops and one facing wall"<sup>14</sup> setting. Many of the foreign tourists who arrive in Lijiang have expressed interest in staying in Naxi housing, and this too offers an insightful guide for developing Yunnan's tourist industry.



58.8 The fate of Yunnan's tourism industry rests on the strong resources of its unique, enchanting natural and human environment. Therefore, to develop Yunnan's tourism industry, we must seize on the preservation and improvement of these resources, and we must expand eco-tourism to the point where the local people and tourists all share a public consciousness to protect the environment. In addition to formulating and carrying out necessary rules and regulations, promoting a vital awareness of protecting tourism resources, and strengthening management, we must work hard to utilize and respect all the ethnic peoples' ecological sense of ethics and their customary ways of protecting the environment. For example, the worship of sacred mountains among Tibetans has made it a taboo to chop trees or pollute in sacred places. Because of this taboo, in the regions surrounding the sacred mountains, sacred forests, and sacred lakes, the environment has been fairly well preserved. Historically, the Naxi and Tibetan people have also had the custom of an annual specified time to "shore up the mountains and prohibit swine,"<sup>15</sup> which has been greatly beneficial to their localities. The taboo against taking life among Tibetans has also helped to preserve wildlife. And the Naxi, in their Dongba religion, have a sort of interdependent traditional ecological morality and customs. They see Nature and humankind as bound together into a single set, as conceptual brothers in their philosophical system.

58.17 The beneficial factors of ethnic culture can all be amply carried forward and used to advance the preservation of the environment. In the course of developing the tourism industry we should also widely publicize these traditional ecological ethics and customs to travelers so that they might better understand the spirit of the local people and work together to protect the environment in tourism districts. Once these factors have been set into motion and publicized, they will attract large numbers of eco-tourism enthusiasts. We can also seek related foreign organizations to cooperate on opportunities to further develop eco-tourism and environmental protection.

## NOTES FOR APPENDIX

1. *Quanmin dazhan gangtietong* 全民打戰鐵同. The campaign for mass production of metal ores, undertaken during the Great Leap Forward.
2. *Da yue jin* 大躍進. The Great Leap Forward, launched in May 1958.
3. *Da ban shitang* 打班食堂. Communilization of dining halls (ca 1958).
4. *Weihu zaotian* 圍湖造田. Mass labor land reclamation (ca 1958-62).
5. *Wenge* 文革 The Cultural Revolution, shortened from of *wenhua dageming* 文化大革命, the Great Cultural Revoluton (ca 1966-76).
6. *Sanfei* 三廢 the "three pollutions" of earth, water and air.
7. The scenic high elevation lake, Dianchi, which sits at the base of majestic soaring cliffs, had become the recipient of the Kunming's untreated wastes. Beginning in the 90's a large-scale clean-up project was undertaken, and a US\$130 million clean-up project was proposed to the World Bank. The Xiyuan tunnel, which diverts municipal wastes away from the lake began construction in 1994 and went into operation in Mar 1996. (Xinhua 13 Mar 96, via LexisNexis).
8. Dêqên, the local pronunciation is used, instead of Mandarin reading, Deqin 德欽. Note also that this area was hit by a devastating earthquake on February 3rd, 1996, which levelled parts of Lijiang, and caused several hundred fatalities. Another quake hit the region in September 1996.
9. Yiche clothing is illustrated in *China Pictorial* 5 (1987): 43 and cover.
10. Ji tian 祭天.
11. San duo 三多.
12. *Dong wu* 冬屋. Alternate of *bing wu*, 冰屋 (see Liang, 1982: 93).
13. *Mu leng fang* 木稜房. As in a house assembled of wood interlocked at the "edges and corners," or a log cabin.
14. San fang yi zhao bi 三房依照比.
15. Feng shan jin zhu 峰山禁豬.



## BIBLIOGRAPHY

### A. English and French Sources Cited

- Anderson, Edward F. *Plants and People of the Golden Triangle: Ethnobotany of the Hill Tribes in Northern Thailand*. Portland: Dioscorides Press, 1993.
- Aris, Michael, editor. *Lamas, Princes and Brigands*. New York: China House Gallery, 1992.
- Asian Development Bank. 1993 *Subregional Economic Cooperation: Initial Possibilities. Proceedings of the First Conference on Subregional Economic Cooperation among Cambodia, People's Republic of China, Lao People's Democratic Republic, Myanmar, Thailand and Vietnam (Manilla, October 1992)*. Manilla: ADB, 1993.
- Asian Development Bank. 1994a *Economic Cooperation in the Greater Mekong Subregion: Toward Implementation. Proceedings of the Third Conference on Subregional Economic Cooperation among Cambodia, People's Republic of China, Lao People's Democratic Republic, Myanmar, Thailand and Vietnam (Hanoi, 20-23 Apr 1994)*. Manilla: ADB, 1994.
- Asian Development Bank. 1994b *Subregional Economic Cooperation among Cambodia, People's Republic of China, Lao People's Democratic Republic, Myanmar, Thailand and Vietnam: Proceedings of the Fourth Conference (Chiang Mai, 15-16 Sep 1994)*. Manilla: ADB, 1994.
- Audemard, Louis. *Les jonques Chinoises*. 10v. Rotterdam: Museum voor Landen volkenkunde en het Maritiem Museum Prins Hendrik, 1957-1971.
- Backus, Charles. *The Nanchao Kingdom and Tang China's Southwestern Frontier*. Cambridge Univ Press, 1981.
- Bai, Man. "Historical Relics on the Bonan Road." *China Pictorial* 5 (1994): 4.
- Becker, Bertha K. "Undoing Myths: The Amazon--An Urbanized Forest." In *Brazilian Perspectives on Sustainable Development of the Amazon Region*. Edited by M. Clusener-Godt and I. Sachs. Man in the Biosphere Series, v.15. Paris: UNESCO, 1995: 53-89.
- Burleigh, Charles. *The Living Mekong*. Sydney: Angus & Robertson, 1971.
- Campbell, Reginald. *Teak-Wallah*. (1935); rpt., Singapore: Oxford, 1986.

Center for Southeast Asian Studies, Univ. of Kyoto. *Water Resource Utilization in SE Asia*. Symposium Series III. Kyoto: Center for SE Asian Studies, Univ of Kyoto, 1966.

Chandran, J. *The Burma - Yunnan Railway*. Papers in International Southeast Asia Series #21. Ohio University Center for International Studies, Southeast Asian Program, 1971.

Chapman, E.C. "Expansion of Rubber in Southern Yunnan." *Geographical Journal* v157 (1), 1991: 36-44.

*CFFA = China, Facts & Figures Annual*

Chen, 1941. See Chen, Bisheng, in "Chinese and Japanese Sources Cited."

Chen, 1984. See Chen, Chuan, in "Chinese and Japanese Sources Cited."

Chen, 1994. See Chen, Xingyan, in "Chinese and Japanese Sources Cited."

Chen, Fei. "Past, Present, and Future of Border Trade Between Burma and China." *Guoji maoyi wenti* 8 (6 Aug 1995): 59-61. Translated in FBIS CHI-95-191, 3 Oct 95.

*China, Facts & Figures Annual*. Vols 1-10 edited by John L. Scherer. Vols 11- edited by Charles E. Greer. Gulf Breeze (FL): Academic Intl Press, 1978-

Cohen, Paul T. "Irrigation and the Northern Thai States in the 19th Century." In *Patterns and Illusions, Thai History and Thought*. 2nd edition. Edited by Gehan Wijeyewardene and E. C. Chapman. Singapore: Institute of Southeast Asian Studies, 1993.

Colquhoun, Archibald Ross. *Amongst the Shans*. London: Field & Tuer, 1885.

Davies, H. R. *Yun-nan, the Link Between India and the Yangtze*. (1909); rpt., Taipei: Cheng Wen, 1970.

de Carne, Louis. *Voyage en Indo-Chine et dans l'Empire Chinois*. Paris: E. Dentu, 1872. English edition, *Travels on the Mekong--Cambodia, Laos, and Yunnan*. Bangkok: White Lotus, 1995.

Ding, Weimin and Sun, Yifu. "The Development of the Lancang-Mekong International Waterway." In *China Pictorial* (4) 1995: 30-33.

Dong and Guo, 1990. See "Chinese and Japanese Sources Cited."



DZSH See "Chinese and Japanese Sources Cited."

EIU = Economist Intelligence Unit.

Economist Intelligence Unit. *Cambodia, Laos, Myanmar - EIU Country Profile, 1995-96*. London: EIU Ltd., 1995.

Etherington, Dan and Forster, Keith. *Green Gold, the Political Economy of China's Post-1949 Tea Industry*. Hong Kong: Oxford Univ, 1993.

*Far East and Australia 1995*. 26th Edition. London: Europa Publications, 1995.

FBIS = Foreign Broadcast Information Service. (daily bulletins, until July 1996, Washington, D.C.: U.S. Information Agency.)

FEA = Far East and Australia.

FEER = Far East Economic Review.

Fiske, John D. *China, Facts and Figures Annual Handbook, No17*. Gulf Breeze: Academic International, 1993.

Fujioka, Yoshikazu, editor. *Water Resource Utilization in SE Asia*. Symposium Series III. Kyoto: Center for SE Asian Studies, University of Kyoto, 1966.

Gill, Teena. "Indochina Tourism: Asian Tigers Invest With Gleams in Their Eyes." *Inter Press Service*, 1 Apr 1996 (via *LexisNexis*)

GTJJ See "Chinese and Japanese Sources Cited."

Gu, 1992. See "Chinese and Japanese Sources Cited."

Hafner, James, Joel Halpern, and Barbara Kerewsky-Halpern. *River Road Through Laos: Reflections of the Mekong*. Asian Studies Program, Occ. Papers Series No. 10. Amherst: Univ of Mass, 1983.

Halpern, Joel. *Rural and Urban Economies, Laos Project Paper No. 18*. Los Angeles: Dept of Anthropology, UCLA, 1961.

Harrell, Stevan. *Cultural Encounters on China's Ethnic Frontiers*. Seattle: Univ of Washington, 1995.

Hill, Anne Maxwell. "Chinese Dominance of the Xishuangbanna Tea Trade." *Modern China* v15 no3, Jul 1989: 321-345.

- Hirshfield, Claire. "Struggle for the Mekong Banks, 1892-96." *Journal of Southeast Asian History*. vol9 no1 (Mar 1968) 25-52.
- Howard, Angela Falco. "A Gilt Bronze Guanyin from the Nanzhao Kingdom of Yunnan: Hybrid Art from the Southwestern Frontier." In *Journal of the Walters Art Gallery*, 48 (1990): 1-12.
- Hsieh Shih-chung. "On the Dynamics of Thai / Dai-Lue Ethnicity." In *Cultural Encounters on China's Ethnic Frontiers*. Edited by Stevan Harrell. Seattle: Univ of Washington, 1995.
- Jacobs, Jeffrey W. "Mekong Committee History and Lessons for River Basin Development." In *Geographical Journal*, v.161 (2) July 1995: 135-148.
- Jiang, 1983. See "Chinese and Japanese Sources Cited."
- Jones, Clayton. "A New Dawn Along the Mekong." In *Christian Science Monitor*. 12 Jan 1994: 11.
- Kaulback, Ronald. *Salween*. London: Hodder & Stoughton, 1938.
- Kingshill, Konrad. *Ku Daeng - the Red Tomb*. Chiangmai: Prince Royal's College, 1960.
- Kunstadter, Peter and Sally L. Kunstadter. "Population Movements and Environmental Changes in the Hills of Northern Thailand." In *Patterns and Illusions, Thai History and Thought*. 2nd edition. Edited by Gehan Wijeyewardene and E.C. Champan. Singapore: Inst of Southeast Asian Studies, 1993.
- Land, Thomas. "Mekong Basin Scheme Prompts Talks." *Lloyds List*, 16 Aug 1996 (via LexisNexis).
- Lebar, Frank, Gerald Hickey, and John Musgrave. *Ethnic Groups of Mainland Southeast Asia*. New Haven: Human Resource Area Files, 1964.
- Lighte, Peter Rupert. *The Mongols and Mu Ying in Yunnan -- At the Empire's Edge*. Princeton University, PhD Dissertation, 1981.
- Li, 1991. See "Chinese and Japanese Sources Cited."
- Lin, 1991. See "Chinese and Japanese Sources Cited."
- Lintner, Bertil. *Land of Jade, a Journey Through Insurgent Burma*. Bangkok: White Lotus, 1990.



- Lintner, Bertil. "Add Water." *FEER*, (13 Oct 94): 70-71.
- Lintner, Bertil. "Road of Death." *FEER*, (28 Nov 96): 32-36.
- Liu, 1991. See Liu, Daqing in "Chinese and Japanese Sources Cited."
- Liu, 1995. See Liu, Zhi in "Chinese and Japanese Sources Cited."
- Liu, Qijun. "Conquering the Golden Sands." *China Pictorial* 2 (1987): 6-9.
- Lombard-Salmon, Claudine. *Un exemple d'acculturation chinoise: la province du Gui Zhou au XVIIIe siecle*. Paris: Ecole Francaise d'Extreme Orient, 1972.
- Luce, Gordon, translator. *The Man Shu, Book of the Southern Barbarians*. Ithaca: Cornell Univ. SE Asia Program Data Paper 44, 1961.
- Luo, 1995. See "Chinese and Japanese Sources Cited."
- McCoy, Alfred W. *The Politics of Heroin*. Revised edition. Chicago; Lawrence Hill, 1991.
- Moseley, George. *Consolidation of the South China Frontier*. Berkeley: Univ of Calif, 1973.
- Mu, et al 1992. See "Chinese and Japanese Sources Cited."
- MZYJ See "Chinese and Japanese Sources Cited."
- Narramore, Terry translator. "Commerce in the Tai Autonomous Region of Sipsong Panna." In *Thai-Yunnan Project Newsletter* 3 (Dec 1988): 7-11.
- Nguyen, Mark. "Laos, Back to the Land of Three Kingdoms." In *Southeast Asian Affairs* 1996. Edited by Daljit Singh and Liak Teng Kiat. Singapore: Institute of Southeast Asian Studies, 1996: 197-214.
- Ouyang, 1993. See "Chinese and Japanese Sources Cited."
- Peng, Jianqin. "Yunnan's Hydropower Construction." *China Today*, Jan 95: 52-55.
- Peng, 1995b. See Peng, Yong'an in See "Chinese and Japanese Sources Cited."
- Pettman, Ralph. *China in Burma's Foreign Policy*. Canberra: Australian National University, 1973.

Pu Hanqin, Chen Dingmao, Yang Minhua, Gao Lin, and Liu Zhaorui. "Regional Ecology and Economic Development in Yunnan." *Chinese Environment and Development*. (1993)v4, no3: 51-67.

*Qiao Bao*. See "Chinese and Japanese Sources Cited."

Rock, Joseph. *The Ancient Na-Khi Kingdom of Southwest China*. 2v. Cambridge, Harvard Univ, 1947.

Schafer, Edward H. *The Golden Peaches of Samarkand*. Berkeley: Univ of California, 1963.

Schweinfurth, Ulrich. *Exploration in the Eastern Himalyas and the River Gorge Country of Southeast Tibet*. Geological Research, v. 3. Weisbaden: Franz Steiner, 1975.

Shigeharu, Tanabe. "Tai Lu Guardian Cults in Yunnan." In *Sojourn* 3.1 (1988): 1-25.

Simons, Marlise. "In Wild Asia, Caravan to a River's Source." *New York Times*. 17 Apr 95: pA1.

Smith, Nicol. *Burma Road*. NY: Bobbs Merrill, 1940.

Smyth, A. H. Warington. *Five Years in Siam, from 1891-1895*. 2v. NY: Scribners, 1898.

Sun, Shirley. "By Rail to Monsoon Jungles." In *Journey Into China*. Edited by Kenneth Danforth. Washington D.C.: National Geographic Society, 1982: 309-367.

Sutton, Stephanie B. *In China's Border Provinces, the Turbulent Career of Joseph Rock, Botanist-Explorer*. NY: Hastings House, 1974.

Swain, Margaret Byrne. "A Comparison of State and Private Artisan Production for Tourism in Yunnan." in *Tourism in China*. Edited by Alan Lew and Lawrence Yu. Boulder: Westview, 1995: 223-33.

Takebe, 1987. See "Chinese and Japanese Sources Cited."

Tan, Ricardo M.; Pante, Filologo and Abonyi, George. "Economic Cooperation in the GMS." In *Regional Cooperation and Integration in Asia*. Edited by Kiichiro Fukusaku. Paris: OECD, 1995: 223-48.



- Tapp, Nicholas. "Squatters or Refugees." In *Ethnic Groups across National Boundaries in Mainland Southeast Asia*. Edited by Gehan Wijeyewardene. Singapore: Institute of Southeast Asian Studies, 1990.
- Thai-Yunnan Project Nesletter*. Canberra: Anthropology Department, Research School of Pacific and Asian Studies, Australian National University, 1987- (occasional)
- TYPN = *Thai-Yunnan Project Nesletter*.
- Tregear, T. R. *A Geography of China*. University of London, 1965.
- Wang, 1993. See "Chinese and Japanese Sources Cited."
- Ward, F. Kingdon. *Land of the Blue Poppy, Travels of a Naturalist in Eastern Tibet*. (Orig edition: Cambridge Univ Press, 1913.) Repr. Sakonnet (Rhode Island): Theophrastus, 1973.
- Ward, F. Kingdon. "Yunnan and Eastern Tibet." In *Journal of the Royal Central Asiatic Society*, 1924: 124-135.
- Wiens, Herold J. *Han Chinese Expansion in South China*. (Orig Title: *China's March Toward the Tropics*, 1954). Repr. Shoe String Press, 1967.
- Wijeyewardene, Gehan, "Thailand and the Tai: Versions of Ethnic Identity." In *Ethnic Groups across National Boundaries in Mainland Southeast Asia*. Edited by Gehan Wijeyewardene. Singapore: Institute of Southeast Asian Studies, 1990.
- Wijeyewardene, Gehan and E.C. Chapman, editors. *Patterns and Illusions, Thai History and Thought*. 2nd edition. Singapore: Inst of Southeast Asian Studies, 1993.
- Xu, Liqun. "Notes on Southern Yunnan." In *China Pictorial* 5 (1990): 34-36.
- Yang, 1881. See Yang, Shen, in "Chinese and Japanese Sources Cited."
- Yang, 1995. Yang, Fuquan, in "Chinese and Japanese Sources Cited."
- Yang, Dali. "Patterns of China's Regional Development Strategy." *China Quarterly* (122) June 1990: 230-257.
- Yang, Dao. *Hmong at the Turning Point*. Minneapolis: Worldbridge Assoc, 1993.
- YNDZ See "Chinese and Japanese Sources Cited."

*Yomiuri Shinbun*. See "Chinese and Japanese Sources Cited."

*Yunnan gongshang qiye minglu*. See "Chinese and Japanese Sources Cited."

*Yunnan nianjian*. See "Chinese and Japanese Sources Cited."

Zang, 1996. See "Chinese and Japanese Sources Cited."

Zhang, 1937. See "Chinese and Japanese Sources Cited."

Zhang, Changjiang. "The Thriving Yunnan Border Trade." *China Pictorial* 4 (1993): 8-11.

Zhao and Wu, 1991. See "Chinese and Japanese Sources Cited."

*Zhongguo shaoshu minzu*. See "Chinese and Japanese Sources Cited."

*Zhongguo tongji nianjian*. See "Chinese and Japanese Sources Cited."

#### B. Chinese and Japanese Sources Cited

Chen, Bisheng. 陳碧笙. *Dian-bian san-yi*, 滇邊散憶 [Miscellaneous memories of the Yunnan Border]. (1941) Repr. in *Minsu congshu, Zhuan hao 2, Min-zu pian* 19. 民俗叢書，專號二，民族編十九. Taipei: Orient Cultural Service, 1976.

Chen, Chuan. 陳椽. *Chaye tongshi*, 茶葉通史 [Complete History of the Tea Industry]. Beijing: Nongye chubanshe, 農業出版社, 1984.

Chen, Xingyan. 陳興琰. *Chashu yuanchandi*, 茶書原產地 [Original Locality of the Tea Plant]. Kunming: Yunnan renmin chubanshe, 雲南人民出版社, 1994.

*Daizu shehui lishi diaocha: Xishuang Banna*, 傣族社會歷史調查：西雙版納 [Investigation into the Social History of the Dai People, Xishuangbanna]. 10v. Kunming: Yunnan renmin chubanshe, 雲南人民出版社, 1983-87.

DZSH = *Daizu shehui lishi diaocha: Xishuang Banna*



Dong, Mengxiong 董孟雄, and Guo Yafei 郭亞非. "Jindai Yunnan de jiaotong yunshu yu shangpin jingji," 近代雲南的交通運輸與商品經濟 [Transport, Shipping and Commerce in Modern Yunnan]. In *Yunnan shehui kexue*, 雲南社會科學. [Yunnan Social Science] 1990 (1): 81-89.

GTJJ = *Xishuangbanna guotu jingji kaocha baogao*.

Gu, Yongji. 古永繼. "Yunnan gudai de shuiyun fazhan," 雲南古代的水運發展 [Early Development of Shipping in Yunnan]. In *Yunnan shehui kexue*, 雲南社會科學. [Yunnan Social Science] 1992 (1): 79-85.

Jiang Yingliang. 江應樑. *Daizushi*, 傣族史 [History of the Dai People]. Chengdu: Sichuan minzu chubanshe, 四川人民出版社, 1983.

Li, Zuohong. 李作洪. "Lancangjiang shui ziyuan kaifa liyong yu diqu jingji fazhan," 瀾滄江水資源開發利用與地區經濟發展 [Utilization of Lancang River Resources and Development of the Regional Economy]. In *Kaifa da xinan--Sichuan Yunnan juan*, 開發大西南—四川雲南卷 [Developing the Greater Southwest--Sichuan, Yunnan] Beijing: Xueyuan chubanshe, 學院出版社, 1991: 498-505.

Lin, Fatang. 林發堂. "Kaifa Lancangjiang -- Meigonghe guoji hangyun dui yunnan he xinan diqu de duiwai kaifa juyou zhanlue xing yiyi," 開發瀾滄江—湄公河國際航運對雲南和西南地區的對外開放具有戰略性意義 [Strategic Significance of the Development of the Lancang / Mekong River International Shipping in Terms of Opening Up Yunnan and the Southwest Region]. In *Kaifa da xinan--Sichuan Yunnan juan*, 開發大西南—四川雲南卷 [Developing the Greater Southwest--Sichuan, Yunnan] Beijing: Xueyuan chubanshe, 學院出版社 1991: 421-423.

Liu Daqing. 劉大清. "Lancang jiang hangyun zai jingji fazhan zhanlue zhong de diwei yu kaifa fanglue," 瀾滄江航運在經濟發展戰略中的地位與開發方略 [Position of Lancang River Transport in Economic Development Strategy and in the Overall Development Scheme]. In *Kaifa da xinan--Sichuan Yunnan juan*, 開發大西南—四川雲南卷 [Developing the Greater Southwest--Sichuan, Yunnan] Beijing: Xueyuan chubanshe, 學院出版社 1991: 506-515.

- Liu, Zhi. 劉稚. Zhongguo Yunnan yu Mian Lao Yue Tai pilindiqu de hezuo kaifa yanjiu," 中國雲南與面老越泰毗鄰地區的合作開發研究 [Study of Yunnan, China and Joint Development with Neighboring Myanmar, Laos, Vietnam, and Thailand]. In *Yunnan shehui kexue*, 雲南社會科學. [Yunnan Social Science] 1995 (6): 25-33.
- Luo, Mingyi. 羅明義. "Fenxi he yuce Kunming guowai luyou keyuan shichang," 分析和預測昆明國外旅遊客源市場 [Analysis and Forecast of Kunming's Foreign Tourist Market]. In *Jingji wenti tansuo*, 經濟問題探索 [Economic Problems Review] 1995 (2): 14-16.
- Minzu yanjiusuo, Beijing. 民族研究所，北京. *Minzu yanjiu gongzuo de yuejin*, (= MZYJ) 民族研究工作的躍進 [Advances in the Study of Minority Nationalities]. Beijing: Kexue chubanshe, 科學出版社, 1958.
- Mu Jihong, 木霽弘, Chen Baoya, 陳保亞 et al. *Dian Cang Chuan 'Da san jiao' wenhua tanmi*, 滇藏川「大三角」文化探秘 [Exploring the secret culture of the "Great Triangle"-- Yunnan, Tibet, and Sichuan]. Kunming: Yunnan renmin chubanshe, 雲南人民出版社, 1992.
- MZYJ = Minzu yanjiu suo, Beijing
- Ouyang, Guobin 歐陽國斌 et al. *Yunnan jingji nianjian*, 雲南經濟年鑒 [Yunnan Economic Yearbook]. Kunming: Yunnan nianjian zazhishe, 雲南年鑒雜誌社 1993.
- Peng, Yong'an. 彭永岸. "Yunnan bianjing dui wai kaifang de shengchanli buju yanjiu," 雲南邊境對外開放的生產力步局研究 [Research on the Overall Productive Forces in Yunnan's Border Region and it's Opening to the Outside World]. In *Jingji dili*, 經濟地理, [Economic Geography] v.15 no.1, Mar 1995: 21-26.
- Qiao bao*. 僑報. New York, daily newspaper.
- Takebe, Kenichi 武部健一. *Chu-goku mei kyo monogatari*, 中國名橋物語 [Story of China's Famous Bridges]. Tokyo: Gihodo 技報堂, 1987.



Tang, Guohui 湯國輝 and Wang, Yingsu 王影蘇. "Lun Yunnan yanbian kaifa," 論雲南沿邊開發 [On Yunnan's Border Development]. (Kunming) *Jingji wenti tansuo*, [Investigations into Economic Problems] 經濟問題 探索, 1995 (4): 32-33.

Wang, Jianzhong, 王建中, Li Caiyun, 李彩云, and Zhou Fang, 周昉, editors. *Yunnan bianjing jingji maoyi quanshu*, 雲南邊境經濟貿易全書 [Omnibus of Economy and Trade in Yunnan's Border Region]. Kunming: Yunnan renmin chubanshe, 雲南人民出版社, 1993.

*Xishuangbanna guotu jingji kaocha baogao*, (= GTJJ) 西雙版納國土經濟考察報告 [Report of the Economic Survey of the Xishuangbanna Territory]. Kunming: Yunnan renmin chubanshe, 雲南人民出版社, 1990.

Yang, Fuquan. 楊福泉. "Shengtai luyou yu Yunnan de luyou ziyuan baohu," 生態旅遊與雲南的資源保護 [Eco-Tourism and the Protection of Yunnan's Tourism Resources]. *Yunnan shehui kexue*, 雲南社會科學, [Yunnan Social Science] (1) 1995: 52-58.

Yang, Shen. 楊慎. "Yunnan shanchuan zhi," 雲南山川志 [A Record of Yunnan's Landscape]. In *Han hai*. 函海. Edited by (Qing 清) Li, Diaoyuan. 李調元. Fang wan juan lou 仿萬卷樓 edition, 1881. Reprint, Taipei: Hong ye shuju, 宏業書局, 1968, v. 22.

Yao, Hesheng. 姚荷生. *Shuibaiyi fengtuji*, 水擺夷風土記 [Record of Local Customs and Conditions of the Shuibaiyi People]. (1948) Reprinted, Shanghai: Shanghai wenshu chubanshe, 上海文術出版社, 1990.

YNDZ = *Yunnandi zhou shi xian gaikuang*

*Yomiuri Shinbun*. 讀賣新聞. Daily Newspaper, Satellite Edition 堪 盞 閣

Yu, Yi'ze. 余貽澤. "Ming dai zhi tusi zhidu," 明代之土司制度 [Tribal Chieftan System of the Ming Dynasty]. (1936); rpt. in *Ming shi luncong* 明史論叢 v.5. Taipei: Xuesheng shuju 學生書局, 1968: 5-16.

*Yunnan di zhou shi xian gaikuang / Xishuangbanna Daizu zizhizhou fenge*, = YNDZ. 雲南地州市縣概況—西雙版納傣族自治州分冊 [Survey of Yunnan's Prefectures, Cities, and Towns / Xishuangbanna Dai Autonomous Prefecture Series]. Kunming: Yunnan renmin chubanshe, 雲南人民出版社, 1988.

*Yunnan gongshang qiye minglu*, 雲南工商企業名錄 [Directory of Yunnan Industrial and Commercial Handbook]. Beijing: Xinhua, 新華, 1985.

*Yunnan nianjian*, 雲南年鑒1992 [Yunnan Yearbook, 1992]. General Editor, Wu Guangfan. 吳光範. Kunming: Yunnan nianjian zazhishe, 雲南年鑒雜誌社, 1992.

Zang, Lihe 臧勵蘇 et al. *Zhongguo gujin diming da cidian*, 中國古進地名大辭典 [Great Dictionary of Ancient and Modern Chinese Place-names]. (Reprint) Taipei: Shangwu yinshuguan, 商務印書館, 1966.

Zhang, Cheng-sun. 張誠孫. *Zhong/Ying Dian/Mian jiangjie wenti*, 中英滇面疆界問題 [The Sino-British Yunnan-Burmese Border Problem]. Yanjing xuebao, zhuanhao 15. 燕京學報專號十五. Taipei: Orient Cultural Service, 1937.

Zhao Cunxin 召存信, & Wu Jinhua 吳錦華. "Lun Xishuangbanna zai da xinan kaifa zhong de zhanlue diwei," 論西雙版納在大西南開發中的戰略地位 [On the Position of Xishuangbanna in the Strategy of Developing the Greater Southwest Region]. In *Kaifa da xinan--Sichuan Yunnan juan*. 開發大西南—四川雲南卷. [Developing the Greater Southwest - Sichuan, Yunnan] Beijing: Xueyuan chubanshe, 學院出版社, 1991: 492-7.

*Zhongguo shaoshu minzu*, 中國少數民族 [China's Ethnic Minorities]. Beijing: Renmin chubanshe, 人民出版社, 1987.

*Zhongguo tongji nianjian*, 中國統計年鑒 [China Statistical Yearbook], Beijing: Zhongguo tongji nianjian chubanshe, 中國統計年鑒出版社 (Annual).



