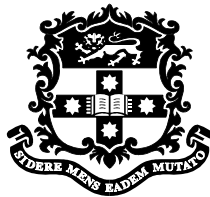


A Political Ecology of Living Aquatic Resources in Lao PDR

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requirements for the degree of Doctor of Philosophy



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For Barb and Alan

ABSTRACT

This thesis uses a political ecology framework to critically analyse how development and environmental orthodoxies influence the use, management and development of living aquatic resources in an information poor developing country context. The research focuses specifically on Lao PDR, the only landlocked country of the Mekong River Basin, to question how knowledge over living aquatic resources is framed by a range of stakeholders. Specific attention is given to how aquaculture has gained ascendancy over capture fisheries in the rhetoric of resources users as well as government and non-government organisations. The empirical research focuses on the role of broad scale economic, social and environmental influences over resource use, the practical and perceived importance of both aquaculture and capture fisheries in rural Lao livelihoods and finally, how living aquatic resources are represented within the dominant development agendas of conservation, poverty alleviation and rural development.

Field work was conducted in Savannakhet province in Southern Lao PDR over 18 months from 2001 to 2002. The thesis has a strong empirical research base divided into activities carried out over multiple scales ranging from household to the Mekong River Basin. The thesis begins by establishing the historical context of resource use as well as the major orthodoxies on which development is based. Attention then turns to the extensive empirical research conducted over three districts of Savannakhet province.

The results of the empirical research report two macro scale studies at the district level. The first is a survey of fish ponds across three districts focusing on the spatial distribution of investment and resource use. The second is a survey of fish trade focusing on the differential trade between culture and capture fish species. The results of both studies highlight the disjuncture between complex patterns of aquaculture and capture fishery use and the major assumptions made about the use of these two resources by policy makers and management. Analysis then moves to the local level focusing on the role and importance of aquaculture and capture fisheries to the livelihoods of rural Lao communities. The results show the instrumental and hermeneutic importance of fish and other aquatic resources in the livelihoods of households and the community. In particular it is shown that capture fisheries are more important to rural livelihoods in terms of income and nutrition, while aquaculture is perceived as a more important activity in the development of community and household economies.

The final section then compares the empirical findings of the thesis with the policy and planning agendas of government and non-government organisations. The analysis focuses on the role of ideas and agency creating a highly politicised policy environment concluding that aquaculture based policy is more compatible with both government and non government agendas of poverty alleviation and rural development than capture fisheries. Furthermore, capture fisheries are marginalised within conservation as a resource that cannot contribute to the improvement of livelihoods or alleviate poverty.

The thesis concludes that living aquatic resources provide an imperative source of food and income to rural communities through diverse and complex human-environment interactions. In contrast government and non-government organisations operating at regional, national and local scales of policy and planning simplify these relationships drawing on wider orthodoxies of aquaculture and capture fisheries development. These simplifications do not reflect the problems and needs of the predominantly rural population. Furthermore, in the absence of a strong empirical base of information, living aquatic resources management and development has become highly politicised. Instead of responding to the realities of resource users, policy and planning reflect the interests and beliefs of development organisations, government and non-government.

The thesis provides an important, grounded account of the importance of living aquatic resources to rural livelihoods in Lao PDR and how these resources are understood and translated into national development and management agendas. In doing so the thesis contributes to an understanding of how complex human-environmental systems are perceived and represented in development policy and wider knowledge systems. The thesis also makes an important theoretical contribution to the growing body of literature on critical political ecology by arguing for the revitalisation of ecology as an integrated approach within political ecology and more widely within the study of human-environment interaction.

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LIST OF ACCRONYMS

AIT	Asian Institute of Technology
AMFC	Assessment of Mekong Fisheries Component (of the Mekong River Commission)
DAFO	District Agriculture and Forestry Office
DLF	Department of Livestock and Fisheries
DoF	Department of Forestry
FAO RAP	United Nations Food and Agriculture Organisation Regional office for Asia and the Pacific
IFF	Inland fresh fish
IUCN	The World Conservation Union (formerly the International Union for the Conservation of Nature)
LARReC	Living Aquatic Resources Research Centre
LECS	Lao Economic Consumption Survey
LMB	Lower Mekong Basin
MAF	Ministry of Agriculture and Forestry
MCC	Mennonite Central Committee
MLI	Mekong Learning Initiative
MRC	Mekong River Commission
NAFES	National Agriculture and Forestry Extension Service
NAFRI	National Agriculture and Forestry Research Institute
NCA	Norwegian Church Aid
OAA	Other aquatic animals
PAFO	Provincial Agriculture and Forestry Office
PLFO	Provincial Livestock and Fisheries Office
RDC	Regional Development Coordination for Livestock and Fisheries in Southern Lao PDR
UNDCP	United Nations Drug Control Programme
UNDP	United Nations Development Programme
VAM	Vulnerability Assessment Mapping
WCS	World Conservation Society
WWF	World Wide Fund for Nature

GLOSSARY AND TRANSLITERATION OF LAO

The following transliteration system was taken from Hoshino and Marcus (1995).

Phonetic	Lao Consonants	Phonetic	Lao Consonants
b	ບ	l	ລ ຫຼ
pb	ປ	m	ມ ນມ
ch	ຈ	n	ນ ນນ
d	ດ	ng	ງ ນງ
dt	ຕ	ny	ຍ ນຍ
f	ຟ ຝ	p	ພ ຜ
g	ກ	s	ຊ ສ
h	ຮ ຫ	t	ທ ຖ
k	ຄ ຂ	w	ວ ຫວ
l	ຣ	y	ຢ

Phonetic	Lao Vowel (short)	Phonetic	Lao Vowel (short)
a	ໂຮ	er	ເຮີ
i	ຮີ	ia	ເຮັຍ
eu	ຮື	ua	ຮວຍ
u	ໂຮຸ	eua	ເຮືອ
e	ເໂຮ	ai	ໃໂຮ
ae	ແໂຮ	ao	ເຮົາ
o	ໂໂຮ	am	ໂຮມ
oh	ເໂຮາຍ		

Phonetic	Lao Vowel (long)	Phonetic	Lao Vowel (long)
aa	Xາ	oh	໊
ii	ຶ	er	ເຶ
eu	ຶ	ia	ເຶງ
hou	Xູ	ua	ຶວ
e	ເX	eua	ເຶອ
ae	ແX	oi	Xອຍ
o	ໂX		

Lao transliterations are used in proper nouns, where the descriptor, such as village, river or the title of a person, is an essential part of the name of the place or person.

Transliteration	Lao	English
<i>Ban</i>	ບ້ານ	Village
<i>Beung</i>	ເບືອງ	Wetland or swamp (e.g. Beung Va)
<i>Het gan paliit bep tansamai</i>	ເຮັດການຜະລິດແບບທັນສະໄໝ	Modern (agricultural) production system
<i>Lambaak</i>	ລຳບາກ	Difficult (describing a persons existence)
<i>Tuk nyaak</i>	ທຸກຍາກ	Poor (describing people)
<i>Haa ngai</i>	ຫາງ່າຍ	Easy to catch (fish)
<i>Haa nyark</i>	ຫາຍາກ	Difficult to catch (fish)
<i>Het kin bep thamasaat</i>	ເຮັດກິນແບບທຳມະຊາດ	Collection of food from nature
<i>Huay</i>	ຫ້ວຍ	Stream (e.g. Huay Kadan)
<i>Sawatigaan</i>	ສະວັດດີການ	Welfare
<i>Kwam samakhey</i>	ຄວາມສາມັກຄີ	Solidarity
<i>Lao khao</i>	ເຫລົ້າຂາວ	Rice whiskey
<i>Mae Tao</i>	ແມ່ເຖົ້າ	Grandmother
<i>Nam</i>	ນ້ຳ	River (Central and northern provinces)
<i>Nong</i>	ໜອງ	Pond or lake (e.g. Nong Kham)
<i>Oudom somboon</i>	ອຸດົມສົມບູນ	Abundance
<i>Pba</i>	ປາ	Fish (e.g. <i>Pba Suay</i>)

<i>Pbaa</i>	ປ້າ	Aunty
<i>Paw Tao</i>	ພໍ່ເຖົ້າ	Grandfather
<i>Paa nong</i>	ພ່າໜອງ	Community fishing day
<i>Paa pba</i>	ພ່າປາ	Community fishing day
<i>Phou nyai</i>	ຜູ້ໃຫຍ່	A respected person
<i>Salaa</i>	ສາລາ	Small hut (In a rural context)
<i>Se</i>	ເຊ	River (Southern provinces)
<i>Suan beer</i>	ສວນເບັງ	Beer garden
<i>Thamasaat</i>	ທຳມະຊາດ	Nature
<i>Than</i>	ທ່ານ	Mister
<i>Thansamai</i>	ທັນສະໄໝ	Modern

LIST OF FISH SPECIES

Scientific name	Common name	Lao name	Transliteration
<i>Aristichthys nobilis</i>	Big Head Carp	ປາຫົວໃຫຍ່	<i>Pba Hua Nyay</i>
<i>Bagarius spp.</i>	Goonch	ປາແຂ້	<i>Pba Kee</i>
<i>Barbodes altus</i>	Red Tailed Tinfoil	ປາໝາກມົງ	<i>Pba Maak Mong</i>
<i>Belodontichthys truncatus</i>		ປາຂົບ	<i>Pba Kop</i>
<i>Channa micropeltes</i>	Indonesian Snakehead	ປາກະໂດ	<i>Pba Ka Do</i>
<i>Channa striata</i>	Snakehead	ປາຄໍ້	<i>Pba Kor</i>
<i>Chitala ornata</i>	Featherback	ປາຕອງຄວາຍ	<i>Pba Dtong Khao</i>
<i>Cirrinhus microlepis</i>		ປາພອນ	<i>Pba Phon</i>
<i>Cirrinus cirrhosus</i>	Mrigal Carp	ປານາງຈັນ	<i>Pba Nang Chan</i>
<i>Clarius batrachus</i>	African Walking Catfish	ປາດຸກບອນ	<i>Pba Duk Paan</i>
<i>Clarius macrocephalus</i>	Walking Catfish	ປາດຸກ	<i>Pba Duk Na</i>
<i>Cyclocheilichthys enoplos</i>		ປາໂຈກ	<i>Pba Chok</i>
<i>Dasyathys laosensis</i>	Mekong Stingray	ປາຝາໄລ	<i>Pba Faa Lai</i>
<i>Hampala dispar</i>		ປາສູດ	<i>Pba Suut</i>
<i>Heliophagus waandersii</i>		ປາໝູ	<i>Pba Nu</i>
<i>Hemibagrus spp.</i>		ປາກົດ; ປາເຄິງ	<i>Pba Kot; Pba Keung</i>
<i>Hypophthalmichthys molitrix</i>	Silver Carp	ປາແກ້ດແລບ	<i>Pba Ket Leb</i>
<i>Labeo barbatulus</i>		ປາເພັຍ	<i>Pba Phia</i>
<i>Labeo rohita</i>	Rohu Carp	ປາລູຮູ	<i>Pba Rohu</i>
<i>Mackeral</i>		ປາທູ	<i>Pba Tuu</i>
<i>Macrogynathus siamensis</i>	Peacock Eel	ປາຫລົດ	<i>Pba Lot</i>
<i>Micronema micronema</i>		ປານາງ	<i>Pba Nang</i>
<i>Monopterus albus</i>	Lai Eel	ອຸ່ນ	<i>Ian</i>
<i>Morulus spp.</i>	Sharkminnow	ປາເພັຍ	<i>Pba Phia</i>
<i>Mystus spp.</i>		ປາຂະແຍງ	<i>Pba Kanyeng</i>
<i>Notopterus notopterus</i>	Bronze Featherback	ປາຕອງ	<i>Pba Tong</i>
<i>Ompok bimaculatus</i>	Butter Catfish	ປາເຊ້ອມ	<i>Pba Seuam</i>
<i>Oxyeleotris marmorata</i>	Marble Goby	ປາບູ່	<i>Pba Buu</i>
<i>Pangasianodon hypophthalmus</i>	Sutchi catfish	ປາຊວຍ	<i>Pba Suay</i>
<i>Trichogaster spp.</i>	Gourami	ປາກະເດີດ	<i>Pba Kadert</i>
<i>Wallago spp.</i>	Wallago	ປາຄ້າວ	<i>Pba Khao</i>