A Political Ecology of Living Aquatic Resources in Lao PDR

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School of Geosciences
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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.
ACKNOWLEDGEMENTS

It is a difficult thing to thank those that have helped me along the bumpy PhD path. As a friend once noted - the most valuable thing about a PhD are not the words on paper but the people you meet. This rings true to my experience. It is with the collective thoughts of so many people that I am able to now continue along a new path and continue my involvement with fisheries research in Laos and beyond.

The most important people to acknowledge are those that this thesis is about – the fishers and farmers of Outhomphone, Chumphone and Khantabouli districts. I thank them for their patience, hospitality and goodwill. It is my hope that the proceeding pages live up to enthusiasm they showed in responding to my streams of questions. The list of thanks does not of course finish there. In Vientiane my sincerest gratitude is extended to Mr. Singkham Phonvisay and Mr. Xaypladeth Choulamany for providing official support to carry out my research. I must also thank my friends at LARReC who have assisted me with their comments and discussion in hallways and over beer glasses. Thank you Douangkham, Souvany, Kaviphone, Aloun and Sittavong. Special mention must also go to Prachit Noraseng and Douangchit Litudamlong in Southern Laos whose encouragement and enthusiasm has proved inspirational over the last six years.

It is in Savannakhet, the field site of this PhD, that I owe my greatest debt and gratitude. My friends in the Provincial Livestock and Fisheries Office have become a very important group of people. As well as my friends they are my teachers, through whom I have begun to understand the many intricacies of life in Laos. Thanks is extended to Ai Phansii for his ability to fix all problems behind the scenes, Euay Noulek for her administrative genius, Ai Thonglai for his humour, Ai Sonnoi for his sage like wisdom and mechanical skills, Ai Bouantnom for his advice, the boys – Sonvillai, Sisamut and Johnnii- for their friendship, the girls – Nang Nang, Nang Kheet, Nang Lii – for their help, and last, but never least, Nang Bee for her friendship. I am also very appreciative to Mr. Bouthien for allowing me to conduct my field research and interact with his staff. Thanks also to Phairat Phromthong, my fellow ‘ex-pat’ working in Savannakhet who became a good friend and lent advice when needed most. But above all I have to thank Ai Sonsai - for everything. With his incredible patience and soft spoken wisdom I managed to achieve everything I set out to and more. He lent his ear to every concern and query I had, providing a source of invaluable advice, discussion, criticism and
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The list continues to Australia. Thanks goes to my peers for offering discussion, argument and moral support – to Fiona Miller for being quite the role model, to Krishna Shrestra for sharing the air and making the office bearable, to Cameron McAuliffe for sowing the idea to do all this in the first place and kicking me along the way. Thanks also to Jeff Neilson, Anucha Leksakhundilok, Tim Wong, Rowena Butland, Andrew Wyatt and Kheungkham Keonuchan for hallway chats and pearls of wisdom. Thanks also to Bob Fisher for reading over my draft and offering some poignant last minute suggestions. Finally, I would like to thank Villiam Praxayavong who, from the first day I stepped into Ban Don Kho to the day I submitted my thesis, has been an absolute inspiration and a dear friend.

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I also have to thank my family for supporting me at various times throughout the PhD experience. Thanks to Colin, Mark, Anna, Josh, Sarah and David, for thinking I am much smarter than I am and providing me with wonderful sense of love, home and belonging. You don’t realise how important these things are to me. Thanks also to my adopted families, the Tings - Kathy, Lewis, Nathan and Andrew – and the Tyrrell girls, Rob and Alex, for their love and friendship over most of my life from both near and far. I would also like to thank the Leonards and the Spencers for their friendship, help and support when I’ve needed it most.

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30th November 2004
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<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AIT</td>
<td>Asian Institute of Technology</td>
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<tr>
<td>AMFC</td>
<td>Assessment of Mekong Fisheries Component (of the Mekong River Commission)</td>
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<tr>
<td>DAFO</td>
<td>District Agriculture and Forestry Office</td>
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<td>DLF</td>
<td>Department of Livestock and Fisheries</td>
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<td>DoF</td>
<td>Department of Forestry</td>
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<tr>
<td>FAO RAP</td>
<td>United Nations Food and Agriculture Organisation Regional office for Asia and the Pacific</td>
</tr>
<tr>
<td>IFF</td>
<td>Inland fresh fish</td>
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<tr>
<td>IUCN</td>
<td>The World Conservation Union (formerly the International Union for the Conservation of Nature)</td>
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<tr>
<td>LARReC</td>
<td>Living Aquatic Resources Research Centre</td>
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<td>LECS</td>
<td>Lao Economic Consumption Survey</td>
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<td>LMB</td>
<td>Lower Mekong Basin</td>
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<td>MAF</td>
<td>Ministry of Agriculture and Forestry</td>
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<td>MCC</td>
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<td>MLI</td>
<td>Mekong Learning Initiative</td>
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<td>MRC</td>
<td>Mekong River Commission</td>
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<td>NAFES</td>
<td>National Agriculture and Forestry Extension Service</td>
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<td>NAFRI</td>
<td>National Agriculture and Forestry Research Institute</td>
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<td>NCA</td>
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<td>OAA</td>
<td>Other aquatic animals</td>
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<td>PAFO</td>
<td>Provincial Agriculture and Forestry Office</td>
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<td>PLFO</td>
<td>Provincial Livestock and Fisheries Office</td>
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<td>RDC</td>
<td>Regional Development Coordination for Livestock and Fisheries in Southern Lao PDR</td>
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<tr>
<td>UNDCP</td>
<td>United Nations Drug Control Programme</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>VAM</td>
<td>Vulnerability Assessment Mapping</td>
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<tr>
<td>WCS</td>
<td>World Conservation Society</td>
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<td>WWF</td>
<td>World Wide Fund for Nature</td>
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The following transliteration system was taken from Hoshino and Marcus (1995).

### Phonetic Lao Consonants

<table>
<thead>
<tr>
<th>Phonetic</th>
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### Phonetic Lao Vowel (short)

<table>
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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.
<table>
<thead>
<tr>
<th>Khmer</th>
<th>English</th>
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<tbody>
<tr>
<td>Pbaa</td>
<td>Aunty</td>
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<tr>
<td>Paw Tao</td>
<td>Grandfather</td>
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<tr>
<td>Paa nong</td>
<td>Community fishing day</td>
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<tr>
<td>Paa pba</td>
<td>Community fishing day</td>
</tr>
<tr>
<td>Phou nyai</td>
<td>A respected person</td>
</tr>
<tr>
<td>Salaa</td>
<td>Small hut (In a rural context)</td>
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<td>Se</td>
<td>River (Southern provinces)</td>
</tr>
<tr>
<td>Suan beer</td>
<td>Beer garden</td>
</tr>
<tr>
<td>Thamasaat</td>
<td>Nature</td>
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<td>Mister</td>
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<td>Thansamai</td>
<td>Modern</td>
</tr>
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<td>Scientific name</td>
<td>Common name</td>
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<td>Aristichthys nobilis</td>
<td>Big Head Carp</td>
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<tr>
<td>Bagarius spp.</td>
<td>Goonch</td>
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<tr>
<td>Barbodes altus</td>
<td>Red Tailed Tinfoil</td>
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<tr>
<td>Belodontichthys truncatus</td>
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<td>Channa micropeltes</td>
<td>Indonesian Snakehead</td>
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<tr>
<td>Channa striata</td>
<td>Snakehead</td>
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<tr>
<td>Chitala ornata</td>
<td>Featherback</td>
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<tr>
<td>Cirrinhis microlepis</td>
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<tr>
<td>Cirrhus cirrhosus</td>
<td>Mrigal Carp</td>
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<tr>
<td>Clarium batracus</td>
<td>African Walking Catfish</td>
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<tr>
<td>Clarus macrocephalus</td>
<td>Walking Catfish</td>
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<td>Cyclocheilichthys enoplois</td>
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<td>Dasyatis laosensis</td>
<td>Mekong Stingray</td>
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<td>Hampala dispar</td>
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<td>Heliophagus waandersii</td>
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<td>Hemibagrus spp.</td>
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<td>Hypothalmichthys molitrix</td>
<td>Silver Carp</td>
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<td>Labeo rohita</td>
<td>Rohu Carp</td>
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<td>Peacock Eel</td>
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<td>Lai Eel</td>
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<td>Sharkminnow</td>
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<td>Marble Goby</td>
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<td>Sutchi catfish</td>
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<tr>
<td>Trichogaster spp.</td>
<td>Gourami</td>
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<td>Wallago spp.</td>
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