

## 7 Living aquatic resources in policy and planning

### 7.1 Introduction

A major obstacle to developing a rational, socially conscious fisheries development strategy results from the presence of three major actors involved in these efforts: local fishing communities, national fisheries policymakers, and international assistance agencies. Each has a distinct value profile that affects its perceptions of the need for and direction of change. (Bailey 1986, p. 1270)

Living aquatic resources contribute to rural livelihoods in complex and diverse ways. However, these realities are often not reflected in government and non-government policy. A dramatic example of this was the lack of attention given to living aquatic resources at the World Summit on Sustainable Development in Johannesburg 2002 and the World Water Forum in Kyoto 2003 (WCSD 2002; WWF 2003). Another significant instance was the Second Large Rivers Symposium in Phnom Penh held in 2003 where it was concluded that inland living aquatic resources are one of the least developed and most poorly communicated areas of planning and policy in international development. Rather than relying on empirical research, policy is based on orthodoxies such as those set out in Chapter 3. Within information-poor decision making environments policy statements outline solutions based on what is considered 'best practice' rather than what is most suitable for resource dependent communities.

This chapter compares the grounded reality of living aquatic resource use in rural Lao communities, outlined in Chapters 4, 5 and 6, with the policy statements and plans of government and non-government organisations in Lao PDR. Specific attention is given to the way in which living aquatic resources are problematised and acted upon within the wider development agendas of poverty alleviation, rural development and environmental conservation. Central to this analysis are questions of how perceptions of 'reality' are translated into knowledge and how, in turn, this is translated into policy (Keeley and Scoones 1999). The chapter continues to build on a geography of living aquatic resources drawing on the critical political ecology of Tim Forsyth used to assess the political and scientific coproduction of knowledge.

The chapter begins by revisiting political ecology theory as it relates to policy, knowledge and power, thereby reiterating the role of orthodoxies and narratives in influencing the development and management of living aquatic resources in an information poor environment. The results of a policy review are then presented focusing first on the overriding development objectives of government and non-government organisations examining the justification current development activities involving living aquatic resources. Finally, discussion turns to the relationship between ideas, knowledge and global orthodoxies of aquaculture, critiquing the process through which they gain power and control over development agendas.

## **7.2 Theory**

A critical political ecology focuses on the construction of environmental knowledge through multiple social, economic, and political forces. The chapter extends this analysis by looking beyond the content of living aquatic resources policy to include the process of policy formulation. As James Keeley and Ian Scoones (1999) outline, it is important to move beyond viewing linear systems of policy formulation towards a complex understanding of the role of agency, action and change within the complex interaction of multiple organisations and institutions. The approach outlined here specific attention is given to agency and the power of ideas that draw upon wider development orthodoxies of living aquatic resources management and development. Analysis focuses on how ideas are based on the interests and beliefs of diverse actors and how they, in turn, influence and politicise the management and development of living aquatic resources in Lao PDR.

### **7.2.1 The primacy of ideas and ‘epistemic communities’**

Holistic approaches to policy analysis have concentrated on established systems of governance in the ‘First World’. In contrast little attention has been given to ‘Third World’ policy formulation characterised by uncertainty, complexity and polarisation (Roe 1994). In these highly politicised environments policy is based on the ideas of academics, consultants and multi-lateral development agencies with competing values, beliefs and interests. Together these contribute to a highly politicised policy environment. Analysing how these ideas become prominent and how they influence policy is outlined by Peter John (1998) and elaborated by Randall Hansen and Desmond

King (2001). This chapter adopts their framework within the wider political ecology framework of this thesis.

In a democratic society there is open public discussion about uncertain and complex issues. In Lao PDR, civil society is stifled and policy formulation is controlled by the government. Because of the dependence on donor funds, international development organisations can promote ideas that reflect their own values and interests. Two forms of ‘ideas’ outlined by Hansen and King (2001) are relevant in the Lao context. The first is ‘ideas as expert knowledge’, where consultation and advice is promoted and proliferated as ‘fact’. The second is ideas as ‘programmatic belief’, where systems of belief and knowledge are institutionalised and reproduced as fact. Both occur in Lao PDR. Through ‘expert’ consultation a variety of ideas, based on the personal experience of consultants and wider development orthodoxies, is promoted. As there is little information by which to assess the relevance or worth of many of these ideas in the Lao context, they often gain undue prominence, becoming part of government policy and rhetoric.

Ideas and the knowledge that they collectively form are reproduced within groups that Peter Haas (1992) terms *epistemic communities* (adapted from Ruggie 1975). These are networks of knowledge-based experts:

... from a variety of disciplines and backgrounds [that] ... have a shared set of normative and principled beliefs. (p. 3)

They are influential in framing problems and solutions through the promotion of new ideas and policy innovations (Haas 1992; Alder and Haas 1992). Membership is characterised by a shared worldview or, using the Foucauldian term, *episteme* – a set of shared symbols, references, expectations and a mutual predictability of intention (Ruggie 1975). Haas adapts this definition of *episteme* to describe a value based rationale, with shared causal beliefs, notions of validity and a common set of problems.

The importance of epistemic communities lies in their ability to synthesise knowledge into ideas that provide solutions for complex issues in an environment of uncertainty (Zito 2001). Their influence is greater when there are no alternative information sources,

or when the cost of data collection is too high (Radaelli 1999). Haas (1992) argues that ideas are interpretations of social and physical phenomena designed to reduce uncertainty as well as seeking power and wealth. This process is inherently political and in the case of Laos is emphasised by an endemic lack of grounded information and public participation. Ideas are reinforced when policy makers, in order to retain authority, appeal to those working within the episteme drawing on global orthodoxies.

### **7.2.2 A political ecology of policy**

Living aquatic resources in Lao PDR are an example of an ideas-based policy environment composed of multiple government and non-government stakeholders. What emerges is the importance of power relations. Analysis of this environment draws directly on a critical political ecology approach by analysing discursive struggles which stifle alternative voices (Peet and Watts 1996; Stott and Sullivan 2000). Central questions include ‘Who determines the dominant narratives?’, ‘How do they persist in mainstream environmental or development discourse?’, and finally ‘What potential is there for challenging and redirecting the *status quo*?’ (Bryant and Bailey 1997; Stott and Sullivan 2000; Peet and Watts 1996; Adger *et al.* 2001).

A major criticism of policy analysis, especially in developing countries, has been the failure to incorporate local perspectives. Some authors have begun to investigate the contradictions between local realities and global narratives by incorporating locally based rural livelihood analysis (Fairhead and Leach 1995, 1996; Stott and Sullivan 2000; Leach and Mearns 1996; Shankland 2000). This investigates how different ideas are reproduced by both government and non-government organisations operating at different scales (Carswell 2003; Hoben 1995; Adams and Hulme 2001). Alex Shankland (2000) argues that there is confusion over how policy influences livelihoods, and there is often an assumed cause-and-effect relationship between policy and change. He recognises that the emphasis should be on institutions and organisations as mediating structures of policies.

The role of organisations in negotiating policy, and how ideas become prominent in an information poor environment, is central to understanding how living aquatic resources management and development are framed in national development discourse. It also provides a causal link in understanding how different development actors communicate

the priorities of natural resources management. In the Lao context this process is politicised by the interplay between the different organisations operating at different scales in an environment of uncertainty, complexity, as well as annual project budgets and an unstable political climate.

### **7.2.3 Classification of policy narratives**

A central question for this chapter is therefore how ideas surrounding the management and development of living aquatic resources become prominent and institutionalised. Organisations communicate ideas through narratives which outline what is being done as well as the reason and justification for why it is being done. Two classifications of narratives are defined here. The first are *development narratives*. They are ‘stories’ that problematise issues in rural development, or ‘enabling assumptions’ that give meaning to actions or policies within an organisation (Roe 1994, 1995, 1999). As David Rochefort and Roger Cobb (1994) argue, policy formulation should reflect the nature of the problems being dealt with. Therefore policies are solutions which are adopted based on underlying beliefs, values and prevailing ‘science’.

Second are *underlying narratives*. These are statements that reflect the wider assumptions (or epistemologies) that instruct how a problem is defined and solved. These identify the role of epistemic communities, government and local communities in the production of ideas that in turn drive the policy environment (Fischer 2000). Underlying narratives are related to the interests and values of different groups who each promote and suppress different ideas based on their own values (Haas 1992). There are many organisations working in developing countries purporting Christian, humanitarian, political, cultural, economic or environmental values. Each brings with it a set of interests and an epistemology that influence their ideas. The epistemic communities are maintained under specific discourses which allow actors to support an idea without coordinating their actions or sharing deep values (Hajer 1993). These ideas are institutionalised within knowledge paradigms which subsequently provide a basis for problem identification and political action.

## **7.3 Methodology**

Interviews on which this study is based were carried out over four weeks in January and February 2003 in Vientiane and Savannakhet. In total, 29 organisations were

interviewed. These included seven government departments, eighteen non-government organisations (NGOs) and four multi-lateral development organisations (MLOs, see Table 7-1). Each was selected because of their use of living aquatic resources in their development programmes. Government organisations were selected across district, provincial and national levels. These included district and national Department of Livestock and Fisheries, research and educational institutions.

The following questions were asked in a semi-structured interview format:

- What is the problem (development narrative)?
- What is this problem based on (underlying narrative)?
- What are the main activities and/or policies?

#### ***7.4 Development objectives in Lao PDR***

The Lao government sets a specific development agenda that must be adhered to closely by non-government organisations and multi-lateral agencies. The main planning mechanism is a set of policy documents ratified at each National Assembly meeting. The most prominent is the National Economic and Social Development Plan. There is continual negotiation between government, NGOs and MLOs over the scope of these plans and how projects can conform. The strong poverty and production link made within government means that the scope of NGO and MLO action is constrained as they negotiate their position within the government agenda.

**Table 7-1 Organisations interviewed**

<b>Type of Organisation</b>	<b>Name</b>	<b>Acronym</b>	<b>General Area</b>
	Action Nord Sud	ANS	General Rural Development
	Asian Institute of Technology Aqua Outreach/ Regional Development Coordination	AIT/RDC	Education/Development Humanitarian Organisation
	CARE Australia	CARE	Humanitarian Organisation
	CESVI	CESVI	Christian Humanitarian Organisation
	Church World Service	CWS	General Rural Development
	CIDSE	CIDSE	Humanitarian Organisation
	Community Aid Abroad	CAA	Conservation and Sustainable Development
Non Government Organisations	International Conservation Union	IUCN	Christian Humanitarian Organisation
	Menonite Central Committee	MCC	Christian Humanitarian Organisation
	Norwegian Church Aid	NCA	Humanitarian Organisation
	OXFAM Belgium	OXFAM Belgium	Christian Humanitarian Organisation
	Quaker Service Lao	QSL	Networking Organisation
	Sustainable Agriculture Forum	SAF	Organisation
	World Conservation Society	WCS	Conservation
	World Food Programme	WFP	Disaster Relief and Management
	World Vision Lao	WV Lao	Christian Humanitarian Organisation
	World Wildlife Fund	WWF	Conservation
	ZOA	ZOA	General Rural Development
	United Nations Drug Control Programme	UNDCP	Drug Control
Government Organisations	Savannakhet Province Livestock and Fisheries Office	PLFO	Extension and Policy
	Chumphone District Agriculture and Forestry	DAFO	Extension
	Outhomphone District Agriculture and Forestry Office	DAFO	Extension
	Khantabouli District Agriculture and Forestry Office	DAFO	Extension
	Living Aquatic Resources Research Centre	LARReC	Research
	National Department of Livestock and Fisheries	DLFO	Policy
	Pakse Southern Agricultural College	PSAC	Education

Type of Organisation	Name	Acronym	General Area
Multi-Lateral Organisations	Mekong River Commission Fisheries Programme	MRC	Inter governmental organisation
	FAO Regional Office for Asia and the Pacific	FAO RAP	Inter governmental organisation
	Network of Aquaculture Centres in Asia and the Pacific	NACA	Inter governmental organisation
	STREAM	STREAM	Inter governmental organisation
Local Level	Kadan Village, Chumphone District		Village
	Phone Muang Village, Chumphone District		Village
	Gnang Soung Village, Khantabouli District		Village
	Keng Hin Soung Village, Khantabouli District		Village
	Anhung Nyay Village, Outhomphone District		Village
	Dong Kham Het Village, Outhomphone District		Village

#### 7.4.1 Government

The main stated objective of the Lao government is to raise the country out of the ranks of the world's poorest countries by 2020 (UNDP 2001). To achieve this, the government seeks to balance economic growth and socio-cultural development with environmental preservation by addressing poverty alleviation caused by food insecurity, a lack of resource conservation and human resources (UNDP 2001; MAF 1999; GoL 2000). A central focus of these objectives is raising agricultural production.

The Department of Livestock and Fisheries has adapted these goals and objectives into a "human-economic-natural environment approach" to living aquatic resources development (Phonvisay 1997). The aim of this approach is to draw the rural population out of a subsistence economy towards diversified farming systems that ensure food security and also develop future export markets (ibid.). This is reflected in extension, planning and research. The National Agriculture and Forestry Institute (NAFRI), for example, aims to increase the average level of income for rural people, reduce the fluctuation of income (and food), enhance the resource base to maintain productivity and increase real income growth for rural people (NAFRI 1991). These objectives draw on both Lao socialism and the Green Revolution production-based rhetoric outlined in Chapter 3. For living aquatic resources the importance of aquaculture is elevated above

capture fisheries because it meets the production based poverty alleviation agenda set by the government.

Confusion exists between government departments over roles and responsibilities for living aquatic resources (Chanphengxay *et al.* 2004). Much of this stems from the fact that capture fishery management once existed under the wildlife conservation unit of the Department of Forestry. Although fishing regulations are enforced by the Department of Livestock and Fisheries, as outlined in the Law on Agriculture, jurisdiction over fish conservation and wetland habitat remains under Forestry (Ministry of Justice 2002; DOF 1996). The ambiguity over responsibility has meant that the DLF has not had a clear understanding of its role in capture fisheries management beyond increasing production for food and income. As such capture fisheries within the DLF are predominantly associated with conservation while aquaculture is linked with production.

#### **7.4.2 Non Government Organisations**

Non-government organisations working in Lao PDR have a variety of development objectives. As Lao NGOs are not permitted by the government, these organisations are subject to internationally set agendas. NGOs fall into four categories: humanitarian, rural development, disaster relief and conservation. Humanitarian organisations have a wide remit, generally focusing on the improvement of well-being through a range of social, cultural and economic activities, often with the support of international religious organisations. Rural development organisations are similar although they tend to focus on the technical implementation of development in areas such as agriculture, health and education (see Shepherd 1998). Disaster relief organisations are concerned with risk management and acute food shortage. Finally, conservation organisations are predominantly concerned with the protection and management of biodiversity and natural resources.

Interviews with a range of NGOs provide insights into the specific objectives of the organisations and their justification for carrying out work in Lao PDR. Objectives vary considerably, but common to each NGO was a statement addressing its commitment to poverty alleviation. For example, one Christian humanitarian organisation interviewed framed poverty in terms of addressing the “potential for human development ... through Christian values” (Interview 66, 26/01/02). They identify their role as a:

... change agent that facilitates 'transformation development'. This is different to socio-economic development. [We] want to change attitudes and values not just service provision."

Secular rural development NGOs have more pragmatic objectives. They tend to frame their goals of poverty in more technical terms.

... to improve the living conditions of people in rural areas (Interview 63, 07/02/03)

Sustainable rural livelihoods and empowerment of people over their resources ... [which follows] on to food security and economic prosperity (Interview 58, 03/01/03)

Strengthen the capacity of villagers to be independent of outsiders (Interview 67, 07/02/03)

Helping people to become independent when they are off drugs (Interview 56, 31/01/03)

These goals highlight the variety of ways in which poverty is framed, ranging from drug addiction to dependency on outsiders. However, each statement refers to the need for intervention to increase both food and income through agricultural production, bringing them into line with the government's anti-poverty policies of diversified production.

Conservation-based NGOs also have strong poverty alleviation statements. However, their agenda is not directly amenable to the agricultural production orientation of the government. To avoid scrutiny, these NGOs have framed their objectives within wider rural development goals. This adaptation can be awkward at times. One organisation revealed that the government saw their role in National Biodiversity Conservation Management as providing an alternative livelihood for forest-dwelling ethnic minorities (Interview 60, 06/02/03). The government asked this organisation to address this problem by funding wet rice extension. The NGO was forced to adapt agriculture extension into its conservation programme by arguing that rice production would reduce the hunting of forest animals.

Conservation NGOs have had to adapt to the Lao context by drawing on community based management of natural resources as a means of conserving biodiversity. One NGO worker argued his work focuses on "enhancing communities, not enhancing resources". He went on to describe that:

[Our organisation] is interested in stopping [the] trend in biodiversity loss, but not necessarily at the cost of human food security or economic prosperity. Its not intentionally one sided. What we see with aquatic resources in a country like Lao is that they are the corner-stone of food security especially in rural areas. ... it is not all one sided as simple a viewpoint such as fish not people, I think the two are intricately linked. I think it's a matter of helping people to manage the fishery for the future and therefore the biodiversity on these areas will help food security in the future. Its not [only] conservation, there is an obvious link to economic livelihoods, food security, culture. These are areas which have been fished by these communities for generations. Many of them have spiritual beliefs, so there are cultural benefits, food security benefits and livelihood benefits all within this larger umbrella of biodiversity (Interview 61, 20/03/03)

Although not detracting from the personal belief of this worker, his statement provides a clear example of how the interests and values of NGOs are modified to fit with government objectives, and highlights the divide between aquaculture and capture fisheries.

The role of NGOs is highly politicised as they negotiate the scope of their work with the government. All of the NGOs interviewed placed emphasis on transmitting their own interests, values and beliefs to influence government policy. Bryant and Bailey (1997) outline three ways in which NGOs can exert influence: through policy advocacy, direct action (working with grass roots actors) and well publicised campaigns. The limited public debate and lack of popular voice in Laos means that NGOs are only able to exert influence through what many describe as 'learning by doing', or as one NGO worker said "working within the Lao perspective" (Interview 67, 07/02/03). As a number of different NGO workers explain:

... we try to influence government policy by working from the local level ... by raising awareness. If [the government] continue to see examples it makes it hard for them to ignore. This will eventually lead to the policy of the country. (Interview 60, 06/02/03)

[We] Introduce new ways of thinking ... when working with and training government officials. This builds the strength of the government workers and this leads to policy improvements. (Interview 58, 03/01/03)

[We aim to] give [communities] strength. With internal strength they can work within the [Lao People's Revolutionary] party structure and influence policy. This is the most important ... to make the changes sustainable. (Interview 67, 07/02/03)

The interface between government and NGOs is continually being re-negotiated as ideas are accepted and rejected by the government depending on how compatible they are with wider policy agendas. Conservation-based NGOs must continually rework their approach to make conservation aims and goals compatible with production agendas of rural development and poverty alleviation. In contrast rural development NGOs are firmly aligned with existing production agendas and can therefore better engage the government in extending their ideas through a 'learning by doing' approach to advocacy and change. The main constraint to a broadly based selection of living aquatic resource strategies is that only a few NGOs are concerned with capture fisheries management.

#### **7.4.3 Summary**

There is a dynamic relationship between government and non-government organisations in the formulation of policy. The government has set a clear overarching development agenda of poverty alleviation through the development of the agriculture sector with the dual objectives of self sufficiency and market access. Aquaculture appears to be more amenable to this production based agenda while capture fisheries are framed within conservation. The next section outlines how the government system of planning and policy formulation incorporates ideas and knowledge of living aquatic resources that further support aquaculture over capture fisheries.

#### **7.5 Ideas, policy and planning**

The lack of open debate in Laos, coupled with the reliance on external consultation, means there is no public exchange of ideas and knowledge regarding most aspects of national development. Policy is almost exclusively generated within a narrow NGO-government circle. The centrally planned economy under the ideological control of the Lao People's Revolutionary Party limits public participation in natural resource management and agricultural debate (Evans 1988, 1995). This section briefly describes the nature of the Lao government bureaucracy, guided by the Party; which underpins research, planning and extension for living aquatic resources.

### **7.5.1 Research, planning and extension**

Living aquatic resources fall within the jurisdiction of the Ministry of Agriculture and Forestry. Responsibility for research, planning and extension is divided between different Departments within this Ministry. Changes in the structure of the Ministry made in the 1990s and early 2000s have had important consequences for the way living aquatic resources are perceived and accounted for. Originally capture fisheries were under the control of the Department of Forestry, while aquaculture was under the control of the Department of Livestock and Veterinary Service. Then in 1998 the Department of Livestock and Fisheries was formed to focus on capture fishery resources. However, the expertise of staff was in aquaculture so there was little capacity, or willingness, to adopt an agenda for capture fisheries extension. Throughout this time responsibility for enforcement of fisheries regulations has remained under the jurisdiction of the Department of Forestry, further complicating the governance of living aquatic resources.

Further changes occurred in 1999 when the National Agriculture and Forestry Research Institute (NAFRI) was founded. Living aquatic resources research was moved under the Living Aquatic Resources Research Centre (LARReC) within NAFRI, leaving the DLF as a planning and extension organisation. Then in 2000 the National Agriculture and Forestry Extension Service (NAFES) was formed with the aim of coordinating all extension services.

### **7.5.2 Decentralisation and the planning process**

In theory, agricultural development planning in Laos is based on village development plans submitted to district offices. The district then submits an annual development plan to the province who then in turn applies for funds from the national government. This system promotes a ‘needs based development’ framework, based on ‘grass roots’ planning. In practice, however, there are serious limitations to this process. It appears the process is organic but there is no devolution of policy formulation. Like the main critiques of decentralisation policy in Lao PDR, power and control remain with the central government, to which each lower level of government must conform.

### **7.5.3 Power, interests and values**

The government has the power to implement its ideas but is limited by money, human resources and poor physical access to a large proportion of the rural population. In

reality the implementation of ideas often occurs at the local level, without government intervention. In many cases the government co-opts existing strategies at the local level into the government planning system (Evans 1995). This is characteristic of policy development in Laos. Government planning is information poor and as a result has become increasingly politicised drawing on socialist rhetoric and development orthodoxies in lieu of grounded understanding. In this situation, the role of individual agency also increases, as development planning often comes down to the person writing the plan at each level of government. The transmission of ideas between different organisations is therefore a complex interaction of government power, interests and values with the needs of local communities.

#### **7.5.4 Summary**

The Lao government has ultimate control over both knowledge and policy in Laos as public discussion and debate over development issues is not encouraged and often stifled. The participation of communities and the role of NGOs are continually negotiated within the bounds of government rhetoric. However, the government's ability to implement policy is limited by its lack of funds and human resources. This gives both local communities and NGOs leverage. Both work within the government structure and rhetoric, influencing individuals in the hope of influencing departments. This complex interaction of organisations, individuals and communities means that the exchange of ideas has become highly politicised. The multiplicity of ideas means that policy decisions are made under uncertainty, are often polarised and are always complex.

#### **7.6 *Development Narratives and Activities***

Projects can be implemented at all levels of government in Lao PDR. In an information poor environment living aquatic resources development is based on a perceived need for aquaculture and not capture fisheries management. The perception of a greater need for aquaculture is a characteristic of the rural communities studied in this thesis. As shown in Chapter 6 the reasons for this perception are various, but do not reflect the higher instrumental importance of capture fisheries. The following analyses the justifications given to aquaculture development by communities and then compares these to the development narratives and implementation of activities within various government and non government organisations.

### **7.6.1 Local development narratives**

As outlined in Chapter 6, there is a bias towards the hermeneutic values of aquaculture over the instrumental value of capture fisheries. In theory the government planning system and the needs-based development models of many NGOs reflect what is communicated by local communities. These communications vary according to the resource base of the village and their past experiences with projects. Over half are focused on aquaculture. They range from the extension of technical assistance, irrigation construction and seed quality research to direct financial assistance for pond construction (see Table 7-2). A smaller proportion is focused on the development of capture and culture fisheries, explaining problems such as fish disease and the provision of year-round water. The remaining narratives relate to capture fisheries, focusing on retention of dry season habitat, conservation and access to fishing grounds.

The different narratives reflect the geography of the villages presented in the previous two chapters. Villages with a strong aquatic resource base, such as Ban Gngang Soung, Ban Phone Muang and Ban Kadan, place equal emphasis on capture and culture fisheries. Problems with capture fisheries include disease, distances from the village to the fishing grounds, overfishing from surrounding communities and increased efficiency of fishing gears (see Table 7-2). Alternatively, villages lacking aquatic resources, such as Ban Ahung Nyay and Ban Dong Kham Het, focus more on aquaculture. These communities identified a range of constraints to aquaculture evident in national policy such as a lack of available fingerlings, suitable land and finance. However, the most important method of increasing fish production identified is the extension of improvement of water resources such as irrigation canals, reservoirs and weirs.

### **7.6.2 Government development narratives**

In theory the hierarchical planning system communicates the needs of local communities so that development plans at each level of government address the problems and concerns of the population. Instead each level of planning reflects the agency of individuals and politics of project intervention.

#### *District government*

The development narratives put forward by each of the districts reflect the variety of local conditions (Table 7-3). The Livestock and Fisheries office in Chumphone District

identified capital for pond construction and a lack of fingerlings as the most pressing issues in the development of living aquatic resources (Interview 73, 22/02/03). The office also recognised the impact of native fish disease. In Outhomphone and Khantabouli, problems identified focused on constraints to aquaculture, however some reference was made to the need for conservation and management of capture fishery resources (Interview 72, 22/02/03 and Interview 74, 23/02/03). These responses generally reflect the development narratives of communities but inevitably some degree of detail is lost from the specific problems identified by communities.

#### *Provincial government*

At the provincial level these development narratives are distilled into narrower areas of expertise. The Savannakhet Provincial Livestock and Fisheries Office (PLFO) recognise the lack of information they have to base planning and policy, referring to supply and demand figures for fingerlings (Interview 71, 21/02/03). In response most of the government funds and resources are given to the state hatchery at Pak Bor. In addition most PLFO activities have been implemented by international projects reflecting a diversity of both aquaculture and capture fisheries (See Table 7-3).

The development of living aquatic resources in Savannakhet can be divided into three distinct phases.

- Phase 1: During the early 1980s, when the FAO and UNDP aquaculture projects began (see Chapter 3), infrastructure at Pak Bor was upgraded and PLFO staff were trained in fish husbandry.
- Phase 2: The AIT Aqua Outreach project began in 1992 bringing with it a strong emphasis on fingerling supply. Over the 1990s the project set up an extensive network of fingerling and nursing farmers with the aim of decentralising fingerling production to the farmer level (Litdamlong *et al.* 2002).
- Phase 3: Beginning in the mid to late 1990s Imperial College London began a series of projects researching impacts to fishery resources and the development of conservation, community management in closed water bodies.

**Table 7-2 Summary of local development narratives**

<b>Local Level Development Narrative</b>	<b>Village</b>	<b>Capture/Culture</b>	<b>Category</b>	<b>Scale of responsibility</b>
Technical assistance from government in fish culture	Kadan	Culture	Extension	District
Increased assistance from district staff in research for both aquaculture and capture fisheries development	Kadan	Capture/Culture	Research	District
Assistance from all levels of government to identify funds and projects from overseas to assist in the management and development of aquaculture and capture fisheries.	Kadan	Capture/Culture	Technical Assistance	International
Want to raise fish but no capital to build ponds.	Kadan	Culture	Financial Assistance	District/Local
Area not suitable to aquaculture development. Other areas are suitable but lack capital to carry out any aquaculture.	Kadan	Culture	Local Resource Suitability	Local
There is a lack of fishing gears	Kadan	Capture	CBRM Strengthening	Local
There are a lot of gear bit there are less fish to catch.	Kadan	Capture	CBRM Strengthening	Local
Some ponds in DS used for DS rice cultivation and as results less ability to do aquaculture.	Kadan	Culture	Access	Local
Can fish only community/open access ponds in ponds where people have started farming they cannot fish which is a problem for the families wishing to catch fish in those water bodies.	Kadan	Capture	Access	Local
Fishing in areas a long way from village, distance is a problems for the families that are going to catch fish	Kadan	Capture	Local Resource Suitability	Local
Many other villages come to Sangaa Wetland to catch fish	Phone Muang	Capture	CBRM Strengthening	Local
In the dry season, December to February fish die from disease because it is too cold.	Phone Muang	Capture/Culture	Local Resource Suitability	Local
Make the village agree only to fish from 6:00 am to 5:00pm.	Phone Muang	Capture	CBRM Strengthening	Local
Want to grow fish but don't have the resources to do it, namely suitable land	Phone Muang	Culture	Local Resource Suitability	Local
Have money to build the pond but no resources to do it with.	Phone Muang	Culture	Financial Assistance	Local
Still don't have any skills in aquaculture so would like to invite the DLF to come and teach them before they invest in aquaculture.	Phone Muang	Culture	Technical Assistance	Provincial
The use of technologies such as hooks and nets will have an impact on the fishery.	Phone Muang	Capture	CBRM Strengthening	Provincial/Local
Build a canal from the Mekong river to the village to increase dry season rice and also provide habitat for fish.	Gnang Soung	Capture	Local Resource Suitability	Provincial
If projects are done in their village they want the opportunity to borrow money from the bank to finance other works.	Gnang Soung	Culture	Financial Assistance	International
We will improve our water resources, increase the area of our water resources and create conservation areas. This will increase the area of water in the dry season so fish will be saved during this time of the year.	Gnang Soung	Capture	CBRM Strengthening	Local

<b>Local Level Development Narrative</b>	<b>Village</b>	<b>Capture/Culture</b>	<b>Category</b>	<b>Scale of responsibility</b>
Streams lose all water in the dry season and there are no fish in the streams. Especially in the dry season.	Keng Hin Soung	Capture	Local Resource Suitability	Local
The dam is broken and no water in the upper reaches of the stream which means there is no habitat for the fish.	Keng Hin Soung	Capture	Local Resource Suitability	Local
There is not enough choice in the types of fish they want to grow.	Keng Hin Soung	Culture	Research	Provincial
There is a lack of knowledge of aquaculture	Keng Hin Soung	Culture	Technical Assistance	Provincial
Not enough capital to build a pond and fingerlings	Keng Hin Soung	Culture	Financial Assistance	Local
In the future the village would like to grow fish community ponds with community resources	Keng Hin Soung	Culture	CBRM Strengthening	Local
Lack of water resources	Dong Kham Het	Capture/Culture	Local Resource Suitability	Local
No irrigation in the village	Nong Kham Het	Capture/Culture	Financial Assistance	Provincial
Lack of fingerling resources	Nong Kham Het	Culture	Extension	Provincial
Fingerlings are of a poor quality	Nong Kham Het	Culture	Extension	Provincial
Stocking rates in the ponds are too high. But don't know if this was really a problem or not. They have not experience or knowledge about this.	Nong Kham Het	Culture	Technical Assistance	Provincial
Lack of good management	Nong Kham Het	Capture	CBRM Strengthening	Local
Need district or provincial staff to recommend how to carry out aquaculture	Anhung Nyay	Culture	Extension	Provincial
Want to borrow money to dig the pond but with an interest rate over a long period to make it lower interest in the long run.	Anhung Nyay	Culture	Financial Assistance	Provincial
Need to maintain irrigation for storing water in the dry season for livestock and vegetables.	Anhung Nyay	Culture	Local Resource Suitability	Local
Want to build irrigation at Huay Thoop	Anhung Nyay	Culture	Financial Assistance	Provincial

**Table 7-3 Summary of government development narratives (from interviews)**

<b>District</b>	<b>Chumphone, DAFO</b>
	Capital for pond construction
	Need lowland fish in upland areas
	Fish disease for capture fish
	Lack of fingerlings
	<b>Khantabouli, DAFO</b>
	Fingerling quality
	Feed management
	Capital for pond construction
	<b>Outhomphone, DAFO</b>
Lack of fingerlings	
No funds for village nursing	
No technical capacity of villagers	
No fish conservation or management	
<b>Province</b>	<b>Savannakhet, PLFO</b>
	Not enough fingerling production at Pak Bor fish station
	No reliability of fingerling production at Pak Bor fish station
	No value adding of fish products before they are sold to Thailand
	Some impacts from irrigation reservoirs but there are a lot of fish caught in these reservoirs
Lack of fisheries information to write plans for extension	
<b>National</b>	<b>DLF</b>
	Environmental degradation
	High demand for fish
	Low technology level of aquaculture
	Low level of irrigation (habitat)
	Appropriate community management
	Inadequate extension activities
	Insufficient Seed Supply
	Low capability in technology improvement/development
	<b>LARReC</b>
	Fish stocks are in decline due to habitat degradation/ destruction from water management schemes
	Low production output per area unit
	Inadequate seed supply and quality
	Inadequate availability of feed, high cost of feed
	Potential of indigenous species for culture may not be utilized
	Improved sector integration in planning and management
	Relation between production and conservation interests
	Wetlands are negatively impacted by development
	Inadequate knowledge on physico-ecological, human use values and quality of life values of resources.
	Insufficient Seed Supply
Low capability in technology improvement/development	
Inadequate extension activities	

These projects have influenced provincial planning and policy since 1980s. The FAO UNDP project initiated capacity building in aquaculture. This was followed by AIT fed into a growing decentralisation policy in the early 1990s focusing on fingerling production. Later projects have focused on community fisheries enhancement (e.g. Garaway *et al.* 2002). A recent interest in conservation was introduced by the World Wide Fund for Nature (WWF). However, unlike aquaculture, there is no capacity in conservation, which limits its extension.

### *National government*

At the national level government policy and planning is beset by multiple external agendas. The MAF's central aim is to promote 'appropriate management' for natural and agricultural resources, focusing specifically on *local contingency* – a discourse that has emerged from the debate over shifting cultivation in upland areas (MAF 1999). Within the MAF the national DLF aims

... to conserve the natural resources and develop sustainable fish farming system by pursuing the research for better integration the sustainable use and conservation of aquatic resources by the communities into the extension and development of fish farming (sic.) (Phonvisay 1997, p.3).

This confuses the distinction between aquaculture and capture fisheries but embodies the main development narratives of the national DLF which focus on the need for greater technical capacity to meet demand for fish production (Table 7-3). There is little attention given to capture fisheries beyond the National Fish Release Day when exotic species are released into rivers and lakes. The only external 'fisheries' project at the DLF was the JICA funded Aquaculture Improvement Project (AQIP). This project is the main extension activity of the DLF currently focused on the development of a national aquaculture centre at Nam Souang. The long term goal of the project is to "... enhance activities of technology improvement and extension in the field of aquaculture in Lao PDR" (AQIP 2001).

**Table 7-4 Activities involving living aquatic resources in Savannakhet province**

Activity	Project	Year	Description
Development of Pak Bor fish <sup>a</sup>	FAO/UNDP	1980-1987	Extension
Capacity building of Pak Bor <sup>b</sup>	FAO/UNDP, AIT	1980-1996	Extension
Community Fisheries 1 <sup>c</sup>	MRAG	1996-1999	Research and Extension
Community Fisheries 2 <sup>c</sup>	MRAG	2000-2002	Research and Extension
Impacts of Irrigation <sup>d</sup>	Imperial College	1999-2002	Research
Impacts of Aquaculture <sup>d</sup>	Imperial College	1999-2000	Research
Assessment of Rice Field Fisheries <sup>e</sup>	Eric Meusch,	1995	Research (M.Sc.)
Community Management of reservoir fisheries <sup>f</sup>	Caroline Garaway	1999	Research (PhD)
Fingerling Quality development	Sterling University	2000	Research (MSc)
Rice Field Fisheries enhancement	Sterling University	2000	Research
Fingerling Network <sup>g</sup>	T. Haitook	1997	Research (M.Sc.)
Spawning Networks <sup>h</sup>	AIT/RDC	1996-Ongoing	Extension
Nursing Networks <sup>h</sup>	AIT/RDC	1996 - Ongoing	Extension
Impact Assessment of Sepone Goldmine <sup>i</sup>	LARReC	2001	Consultancy, Impact Study
Fish Station Muang Phine	CAA	2000	Extension
Community fisheries on the Se Bung Hiang River	WWF	2003	Research
Fish Conservation Zones, Se Bung Hiang, Phine District	District Governor	1999	Extension/conservation
Fish Conservation Zones in Chumphone	District Governor	2003	Extension/Conservation
Community Fisheries	AIT/RDC	1993-1995	Extension

<sup>a</sup>(FAO/UNDP 1996; Gupta *et al.* 2000)<sup>b</sup> (Gupta *et al.* 2000; Singh 1994)<sup>c</sup> (Garaway *et al.* 2002) <sup>d</sup>(Lorenzen *et al.* 2000) <sup>e</sup>(Meusch 1996)<sup>f</sup>(Garaway *et al.* 1999) <sup>g</sup>(Haitook 1997)<sup>h</sup> (Litdamlong *et al.* 2002)<sup>i</sup>(LARReC 2001)

In comparison the research agenda at LARReC is multi-faceted, including fish stock decline from habitat degradation, aquaculture extension services and the development of technical capacity. Activities are outlined in the current Medium Term 5-year Research plan in which four main areas have been identified: aquaculture, capture fisheries, wetland resources and the development of information systems (LARReC 2000).

Despite this broad base of activities most of the activities involve aquaculture. A number of these have been established by students from the National University of Laos (NUOL) undertaking research on frog and shrimp culture as well as cage culture stocking systems

(Phonvisuk 2001; Phusavan 2001; LARReC 2001). The main body of capture fisheries research has focused on CPUE studies in Southern Laos carrying on from DLF work in the early 1990s funded by IDRC (Sukaseum 2000; Chomchanta *et al.* 2000). LARReC has also carried out socio-economic research on reservoir capture fisheries and fish marketing in various parts of the country (Phonvisay 2002; Phonvisay and Bush 2001; Phonvisay 2001; Sjorslev 2000; Mattson *et al.* 2000).

Government staff recognise the research LARReC should conduct ‘needs-based’ research (Interview 70, 06/02/03). The Medium Term 5-year plan set an agenda that was a broadly based mix of living aquatic resource research. However, most of this research is driven by external projects. The research agenda of LARReC for example, was formulated through the DANIDA funded National Agriculture Research Institute project.

The multiple agendas influencing government and NGO policy creates a politicised exchange of ideas between government and externally funded projects. Development narratives tend to reflect these influences rather than the diverse and complex realities of rural communities. The following outlines the variety of interests and values of NGOs and how these influence the use of living aquatic resources.

### **7.6.3 Non government organisations**

NGOs work with all levels of government influencing policy and development activities. There is a complex mix of politics surrounding diverse values and interests that influence the development narratives and activities of NGOs. Each organisation must meet both the overall development plans of the central government while also addressing the needs of the specific government department they work through.

The relatively recent influx of NGOs during the 1990s has come as the Lao government seeks to consolidate its market reforms. This means NGOs must assist the Lao government by supporting agricultural production in a transitional economy. As a Lao NGO worker eloquently stated:

The first [time period] was *Nyook Haa Kin* [the collection era]. This was a time when people had to find food to eat from their natural resources. After that was *Nyook Sok Kin* [the searching era]. This was when people still relied on natural resources but as resources became scarcer they needed to work harder to find them. The present is *Nyook Het Kin* [the production era]. That

means a time when natural resources are depleted and people have to abandon their reliance on natural resource collection and instead cultivate food, or find work to buy food in the market.  
(Interview 51, 23/01/03)

Lao communities exist in all three stages of natural resource dependency – collection, searching and production. Under an interventionist development framework, NGOs are more likely to address modernist approaches to rural development to meet their poverty statements.

The specific activities carried out by different organisations relating to living aquatic resources can be categorised as either aquaculture or capture fishery conservation. As outlined in Table 7-5 aquaculture based activities include fingerling production, training centre construction, school fish ponds, rice-fish culture, integrated agriculture and fish feed production. These fit directly with the main government development narratives of increased food and income production. In contrast capture fishery activities are predominantly under the guise of conservation, in including both fish and frog conservation management, capacity building and habitat management. Assistance is directed at technical support for community governance rules and regulations.

Most NGOs translate ‘food and income’ as aquaculture while few address capture fisheries. Those that have focus mainly on the conservation of either aquatic habitat or fish stocks. The type of work that is carried out (either production or conservation based) is linked to the wider development objectives of the NGOs. That is, conservation is mainly carried out by organisations such as the World Wide Fund for Nature, The International Union for the Conservation of Nature (IUCN) and the Wildlife Conservation Foundation (WCF).

Aquaculture is also carried out by NGOs focused on rural development and humanitarian goals. Some of these organisations such as the Italian Cooperazione e Sviluppo (CESVI) and Australian Community Aid Abroad (CAA), also looked at living aquatic resources more widely, carrying out management and conservation activities. In these cases capture fisheries are said to be identified by the communities that they work with as a fundamental livelihood activity under threat. Instead of identifying fish with aquaculture these organisations draw on existing ideas and experience to work with communities to

conserve their natural resources. As such these NGOs are able to problematise food and income provision under natural resource conservation. The experience that each of these organisations drew upon was from a single foreign NGO worker. This individual's previous experience before coming to Laos allowed him to frame community development within the conservation of capture fishery resources. As he explained:

I had an idea to do community fisheries in the first place. I was already doing community fisheries in the first place [Thailand]. And so the idea was to ... apply it to a river system ... So I had an idea of fisheries but I didn't know what would work. So it wasn't until the end of the first year to determine what we would do and set up the first conservation area. (Interview 62, 14/02/03)

**Table 7-5 NGO development narratives**

<b>Name</b>	<b>Acronym</b>	<b>General Area</b>	<b>Problematic</b>
Action Nord Sud	ANS	General Rural Development	Food and Income Lack of fingerling supply
AIT Outreach (RDC)	AIT/RDC	Aquaculture Extension	Food and Income Need for conservation
CARE Australia	CARE	Humanitarian Organisation	Food and Income Need for conservation
CESVI	CESVI	Humanitarian Organisation Christian Humanitarian Organisation	Food and Income Fingerling supply and fishery decline
Church World Service	CWS	Humanitarian Organisation	Fishery decline Natural Resource Conservation
CIDSE	CIDSE	General Rural Development	Habitat degradation, Food and Income
Community Aid Abroad	CAA	Humanitarian Organisation	Food and Income
International Conservation Union	IUCN	Conservation and Sustainable Development Christian Humanitarian Organisation	Food and Income
Mennonite Central Committee	MCC	Christian Humanitarian Organisation	Food and Income
Norwegian Church Aid	NCA OXFAM	Humanitarian Organisation Christian Humanitarian Organisation	Food and Income
OXFAM Belgium	Belgium	Humanitarian Organisation Christian Humanitarian Organisation	Food and Income Habitat degradation, Fishery decline
Quaker Service Lao	QSL	Humanitarian Organisation	Habitat destruction
Sustainable Agriculture Forum	SAF	Networking Organisation	Food and Income
World Conservation Society	WCS	Conservation	Food and Income
World Food Programme	WFP	Disaster Relief and Management Christian Humanitarian Organisation	Food and Income
World Vision Lao	WV Lao	Humanitarian Organisation	Food and Income
World Wildlife Fund	WWF	Conservation	Biodiversity decline
ZOA	ZOA	General Rural Development	Food and Income

Through a CESVI project in Southern Laos he facilitated the formation of community managed fish conservation zones. While ideas were initially opposed by provincial officials, they have subsequently gained ascendancy and have instructed the work of not only Community Aid Abroad and the conservation NGOs but have also been adopted more widely within the Mekong River Commission Fisheries Programme.

Overall the development narratives and the activities of NGOs in relation to living aquatic resources are influenced by a range of interests and values as well as individual agency. Nevertheless, there is a clear divide between aquaculture and capture fisheries based on production and conservation activities.

#### **7.6.4 Multi-lateral organisations**

Multilateral organisations frame problems in terms of wider orthodoxies based on international or regional experience. They not only create ideas but also institutionalise them through research, direct consultancy and facilitating networks within expert communities.

The Aquaculture and Aquatic Resources Management (AARM) programme at the Asian Institute of Technology has been an important protagonist in the development of small-scale aquaculture systems throughout Northeast Thailand. From there they moved to Savannakhet Province in the early 1990s and have been instrumental in the promotion of small-scale aquaculture through fingerling supply. They adapted their activities from Northeast Thailand by developing nursing and spawning networks while linking in with wider research agendas at the main campus in Bangkok. The organisation's development objectives not only fit with the government's, but given the legitimacy of AIT, where a number of government officials have been trained, they have also been able to directly influence provincial fisheries agendas.

The Mekong River Commission is the largest and most influential intergovernmental organisation in the Mekong Basin. In Lao PDR the MRC Fisheries Programme works through LARReC. Each of the MRC components – Management of Inland Fisheries, Assessment of Mekong Fisheries and the Aquaculture of Indigenous Species - has influenced the agendas of LARReC. The MRC is a secretariat and consults to the

government. As such the Lao government must reconcile this advice with its own policy agendas.

IUCN is involved in management and conservation activities of wetlands in Southern Laos. The organisation aims to provide the best example of how to promote the Ramsar convention to all levels of government. This work highlights a development narrative that does not fit with that of the government. As a staff member stated:

[IUCN aims] to make the government aware of Ramsar, make them clear what it is ... For the government it is not clear where [wetlands] fit ... wetlands are only research because [they are] under LARReC. Extension is not possible at the moment through irrigation, agriculture or the DLF. At the provincial level it is very difficult [to identify] who is responsible for wetlands. (Interview 60, 06/02/03)

The Lao government is suspicious of wetland management because of its strong conservation connotations (Chanphengxay *et al.* 2004). Conservation is a problematic concept in Laos as it is seen as the antithesis of access and use of natural resources outlined as Constitutional rights. This has been most acutely felt within wetland conservation and, in turn, living aquatic resources. Within the Ministry of Agriculture and Forestry wetlands have historically come under the conservation division within the Department of Forestry. Only recently has jurisdiction moved to the department of Livestock and Fisheries and wetlands management discussed openly (*ibid.*). However, government scepticism remains. The IUCN openly promotes the ratification of Ramsar but in order to do so must frame wetlands in terms of poverty alleviation and rural development.

The most influential MLOs working with living aquatic resources are those facilitating the transfer of information. These are similar to the epistemic communities that Haas described, moving information between a select group of people that have a shared body of knowledge and common interests and beliefs. Two that are now working under the same office are the Network of Aquaculture Centres Asia (NACA) and the Support to Regional Aquatic Resources Management initiative (STREAM).

NACA has historically focused on the transfer of technical information on aquaculture between member countries. The main aim of the network is to enable governments to “share their experiences so that they do not reinvent the wheel every time” (Interview 46, 22/01/03). They control information to support policy development in the member countries. As a senior NACA advisor outlined:

Some governments think of livelihoods as giving people things to use for their productivity – such as giving nets and things like this. Organisations such as NACA look at developing guidelines to improve policy relating to aquaculture. (Interview 46, 22/01/03)

They have undergone change since the mid 1990s. They now focus on sustainable and responsible aquaculture with a far greater focus on social impacts. This has drawn them directly into debate and discussion about the role of aquaculture in poverty alleviation. The advisor went on to argue:

It must be recognised that aquaculture fits into development and poverty not the other way around. Development does not fit into aquaculture. That means that aquaculture is only one tool for the alleviation of poverty, it is not an entity that development can fit into. If it is responsibly done, and this is the key issue, then it can influence the poverty status of families. It can provide income, employment and nutrition to the benefit of all that are involved. But it has to be responsible.

This poverty focus is also supported by STREAM. It classes itself not as an NGO or an intergovernmental organisation, but as a hybrid between the two with direct influence over policy through linkages with individuals working within the government (Interview 47, 21/01/03). STREAM identifies its role as communicating the needs of rural poor communities to the government so development is more targeted and realistic. As a coordinator for the organisation pointed out:

A key theme is ‘narrative’, to give poor people a voice in the policy making process nationally and regionally. Because policy makers tend not to include them very well as there are different discourse communities and it’s not easy to engage with poor people in these areas. STREAM has a facilitating role to tell it how it is from their point of view. We are neutral arbiters whereas others that are within the system find it more difficult to do that. (Interview 47, 21/01/03)

The identification of STREAM as a neutral arbiter is central to its charter. The organisation is more interested in the process of information exchange than the outcomes and seeks to facilitate development planning that reflects the wants and needs of communities. However, a major motivation in forming STREAM was that aquaculture was not an activity directly accessible to rural poor. The coordinator stated that:

The way they [governments] target ... is a little off beam and particularly in aquaculture where the technologies that they were trying to promote were a little too high tech. So we have been trying to help poor communities to describe their experiences of service provision, and where the good parts and short-comings are, and then talking to government to reflect that to them and try to find a way forwards for the policy to better reflect the needs of poor people and for poor people to play a role in that. We believe that this is the most important areas to use communication to influence policy change.

The ideas that MLOs bring are often based on international development orthodoxies. As they work through government line agencies MLOs are able to directly influence staff responsible for planning and policy. AIT has been able to promote ideas surrounding aquaculture extension as they fit within existing government systems. IUCN and MRC have a more difficult time because they promote activities that do not fit with government policies and agendas. The networking MLOs act as gatekeepers to information that is not value-less and subject to change. MLOs are therefore a key actor in the generation of knowledge.

#### **7.6.5 Summary**

In the absence of quality information on living aquatic resources in Lao PDR much of the work that is carried out is determined by ideas based on existing government rhetoric, and the interests and values of organisations with wider international experience. Policy has been influenced almost exclusively by a narrow exchange of ideas and knowledge surrounding aquaculture, not capture fisheries. As such, Lao fisheries are most often problematised in terms of overcoming the constraints to aquaculture. This is what is communicated through the government planning system, and is also what fits with the wider socialist rhetoric of production. Furthermore there is overwhelming support for the idea that fish supply is a problem that aquaculture solves, not capture fisheries.

## **7.7 Discussion**

This chapter has shown that ideas about what living aquatic resources mean and how they are dealt with by government and non-government organisations are largely polarised. Complexity, uncertainty and polarisation have created a politicised exchange of ideas and knowledge. These ideas are translated into policy and action to conform to the government's overall development plans for poverty alleviation, rural and economic development. There is no public debate or discussion. The diverse realities of living aquatic resources are simplified and polarised into production and conservation narratives. The result is a highly politicised exchange of ideas based on production orthodoxies of aquaculture rather than the grounded realities of rural Lao communities.

### **7.7.1 Reducing uncertainty and complexity**

Both Haas (1992) and Roe (1994) argue policy makers draw on technical expertise in circumstances of uncertainty and complexity. Haas calls these policy makers “uncertainty reducers” - people that make rational decisions based on established knowledge. But instead of being value-less these decisions are fundamentally political. Decisions surrounding living aquatic resources in Laos are a classic instance of the politicisation of environmental and development policy in response to a lack of information. A large body of capture fishery management knowledge exists which simplifies complexity for policy and decision makers. However, models and management systems cannot always account for uncertainty in fisheries. When decisions are based on ungrounded orthodoxies a high degree of uncertainty ensues. Finlayson (1994) called this ‘interpretative flexibility’ - a process whereby a number of conclusions can be drawn from the data depending on the needs, political or otherwise, of the interpreter.

Under situations of uncertainty problems are often only defined when a solution has been developed through existing technical expertise and supported by political rhetoric (Salz 1999; Wildavsky 1979; Rochefort and Cobb 1994; Peretz 2000). In Laos this is a major reason for the support given to aquaculture over capture fisheries. Capture fisheries are framed by NGOs as natural resources in decline and in need of conservation.

Government rhetoric places capture fisheries in the natural economy, as the resource is not in keeping with the goals of agricultural modernisation in the transition to a market economy. Aquaculture, on the other hand, provides an immediate technical solution for

the wider problem of poverty alleviation as well as the specific needs of food and income generation. As such, aquaculture has been framed as a “common-sensical” tool in rural development policy (Kelly 1996, see Chapter 1). It has its own specialised area with associated problems defined within specific epistemic groups. These problems include spawning new species, nursing fingerlings and improving growth rates through the supply of quality feed, and are evident throughout the development narratives outlined above. In Lao PDR these problems have been reified and placed within mainstream development thinking. Instead of a production based activity under the control of rural communities, fisheries are framed in terms of complex natural systems outside any form of control.

### **7.7.2 Production, conservation and poverty alleviation**

The living aquatic resources continuum outlined by Guttman (1996, see Chapter 1) sets out a polarisation of aquaculture and capture fisheries also reflected in the dichotomy of production and conservation. The policy review shows that aquaculture is supported by the production oriented orthodoxies of poverty alleviation and rural development. However, this orientation does not reflect the relative importance of capture and culture fisheries for the rural poor. This has meant that in countries like Laos aquaculture remains the main policy vehicle within living aquatic resources management and development.

A central tenet of the government’s poverty alleviation policy is to increase all agricultural production to meet national food security needs while also providing products for future exports. As outlined by the ex-Director of the DLF, Singkham Phonvisay (1997), development must be suitable for both the *use* and *conservation* of physico-ecological resources. However, as Bourdet (2001) notes, this is potentially contradictory. He argues that the development of a national economy based on the agriculture system is flawed because the sector is mainly subsistence and, as such, characterised by little or no growth. As outlined in previous chapters the government, since coming to power in 1975, has focused on self sufficiency and furthering the transition from subsistence to market economies. Problematising living aquatic resources in terms of production-based food and income security makes it fit into the wider development agendas of the government. In contrast capture fisheries, under the rubric of conservation, are removed from food security and income. The reality of rural

communities (as highlighted in Chapters 4, 5 and 6) is that capture fisheries play an important instrumental and hermeneutic role in the provision of food and income. However, because of a lack of information the importance of these resources is not widely recognised and aquaculture prevails in policy.

The focus on production within the NGO sector is associated with what Ellis and Biggs (2001) call the ‘small farm orthodoxy’. This outlines the attention that has been given to agriculture in rural development as the starting point of poverty alleviation policy since the 1950s. They argue that recent expansion of the livelihoods approach places agriculture as only one activity within a wider portfolio of both on-farm and off-farm strategies. As outlined by Allison and Ellis (2001) fishing communities must be looked at in the same way. Fishing is rarely a primary occupation, but rather one activity of many undertaken by rural households. However, as argued in Chapter 6 the diversity of fishing activities makes it an imperative livelihood activity that is not perceived in the same way as agricultural activities. Increased productivity is confined to agriculture and not natural resources. The only recourse that the government has to capture fisheries in policy is through the national fish release day – a mainly ceremonial event involving the release of fingerlings into rivers and wetlands. Underlying this event are also strong religious and cultural connotations of conservation which the government also draws upon.<sup>27</sup> Although there has been some success with fish enhancement in Laos (e.g. Garaway 1999; Noraseng *et al.* 1999) this day highlights a process of reconciling conservation of capture fisheries with national production goals firmly entrenched in aquaculture production.

It appears that in many cases conservation based policy and action is only successful when they are complementary to the aims of the government (see Sprinz and Vaahtoranta 1994). In Lao PDR conservation values have been integrated with use values, rather than use with conservation. This is a fundamentally political process, whereby the government sets a development agenda and NGOs negotiate their role by adopting activities that are compatible. NGO driven conservation is only successful

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<sup>27</sup> This government practice of ‘customising tradition’ has become a common method of the government in legitimising politically based activities (Evans 1998). It is also seen with national tree planting day, national women’s day and as well as the larger festivals of That Luang and boat racing.

when there is synergy between policy and political will. There are a number of examples. In Luang Namtha the World Conservation Society (WCS) was asked to set up a fish conservation zone when provincial officials were obliged to meet central government land allocation goals. Community Aid Abroad was asked by provincial officials to set up a fish conservation zone in Salavane Province. In Southern Laos the success of the fish conservation zones set up by CESVI gained support through the recognised importance of the capture fishery to the people of Khong district and the political value of wetland conservation.

Government and NGOs are working towards similar policies and actions, based around production and conservation. However, Hansen and King (2001) argue that ideas are more likely to be translated into policy when: 1. there is synergy between ideas and interests; 2. the actors possess the requisite enthusiasm and 3. when timing contributes to the preferences for that issue. Production-based policies that suit aquaculture fulfil these requirements. Aquaculture is supported by government and NGO ideas and interests, there is enthusiasm and, at the present time, these interest and values are compatible. In comparison capture fisheries lack ideas that are compatible with interest and values outside of conservation.

### **7.7.3 Crisis narratives**

Another way in which aquaculture is being supported in development narratives is through what Roe (1995) has labelled 'crisis narratives'. These are narratives that force a response from a select group of experts. Two of these are evident in Lao living aquatic resources policy. The first framed aquaculture as a crisis of fingerling supply and the second focuses on the crisis of capture fishery decline and supply.

The crisis of fingerling supply is evident throughout government policy and planning having been the main feature of technical support given to living aquatic resources in Laos since the 1960s. The basis of this narrative was first developed through the government estimates of supply and demand that indicated a severe shortfall. This then attracted interest from the UNDP/FAO projects as well as AIT. Their interventions reiterated the crisis (Haitook 1997; Funge-Smith 2000; Litdamlong *et al.* 2002). Within this group of fish farmers there indeed may be issues of supply and quality of fingerlings. However, as established in this thesis, the overall contribution of aquaculture to diet and

income of rural communities is low compared to that of native species. The response to the crisis is a well established system of technical assistance. This supports the argument made by Peretz (2000) and others, that policy focuses on problems that already have a technical solution. As such, the narrative has been reproduced among the NGO community as a key development agenda in rural development.

The crisis of capture fisheries decline frames the resource in terms of a crisis of protein supply. Because of the complexity and uncertainty surrounding capture fisheries both government and NGO responses are weak. Both frame capture fisheries decline within the wider orthodoxy of a crisis in food supply which draws directly upon the global fisheries crisis. As argued throughout this thesis capture fisheries are reduced to 'fish' which in turn are simplified aquaculture. In contrast conservation does not require the same perceived technical input and, as such, is not pervasive in policy.

#### **7.7.4 Micro and macro politics**

The transfer of ideas between individuals and organisations in Laos can be integrated at both micro and macro political levels. At the micro level decisions within organisations are based on the experience and knowledge of individuals which directly influence how they perceive and interpret the problems and issues they face (Finlayson 1994).

Individuals also have their own interests and agendas which influence policy. As Keeley (1999) points out:

Different bureaux, ministries and agencies have differing functions, histories and are staffed by people with different types of (often technical) training. These differences in perspective are more general predilections for increasing jurisdictions and agency resources mean that policies emerge often incrementally from the micro-level trade offs and contests within the bureaucracy (p. 15).

Living aquatic resources management and development in Laos highlights this point. Capture fisheries are neglected as a result of staff having limited knowledge and experience within aquaculture. Almost all of the government staff as well as many NGO workers are constrained within the bounds of their knowledge and experience. Lao staff especially have only been exposed to aquaculture as tertiary education institutions in the country focus exclusively on fish husbandry.

Local politics and the power of some community members over others is also an important factor. The expectations of individuals at the local level have also biased living aquatic resources to aquaculture. As outlined in Chapter 6 the aspirations of some community members are an important factor in the development of aquaculture over capture fisheries. However, in reality aquaculture is a supplementary activity and an aspirational asset promoted by households that can afford it. In the process the needs of poorer households are often overlooked. Needs based participatory development therefore needs to take into consideration the role of local political processes in determining what information is communicated and what responses are formulated.

Living aquatic resources also fit within a wider political environment of water management and development. In Lao PDR especially, water development projects are highly politicised. Over the 1990s and 2000s hydro power has especially faced opposition over its impacts to fishery resources (e.g. Bakker 1999). Impacts to capture fisheries has become one of the most prominent platforms on which the construction of these dams are fought (e.g. Roberts 1995, 1996; Warren 1999). Instead many hydro dams have explicitly used the development of aquaculture as a replacement for capture fisheries after the dams are completed. Capture fisheries are therefore placed within the wider development agendas of the Lao government as they try to develop their water resources for foreign income. Acknowledging the value of this fishery brings the resource in direct conflict with these wider development goals.

## **7.8 Conclusion**

In Lao's information poor policy environment global development orthodoxies are reproduced locally in response to the lack of accurate information and limited public debate on the importance of natural resources to rural communities. Ideas based on these wider orthodoxies support aquaculture as a technical intervention to a perceived decline in fish supply. In turn these ideas are supported by the political agendas of the Lao government that focus on increasing agricultural production to address poverty alleviation and rural development. The lack of national expertise and knowledge within the country means the policy environment is also strongly influenced by international expert communities. The NGOs and MLOs within these expert communities work with government agencies directly influencing the production and implementation of policy. In turn government agencies also constrain the activities of these organisations by

making them work within specific development goals and agendas. The result is a highly politicised policy environment.

Support for aquaculture is based on its synergy with development agendas, and its role in simplifying living aquatic resources within in a definable, technologically based policy response to a range of problems within rural development and poverty alleviation. Aquaculture can be summarised as a policy response that is based on linear understandings of living aquatic resources that draws on global orthodoxies. The realities of local communities that are dependent on complex capture fishery resources are not addressed in terms of ‘development’ but rather in terms of conservation. The politics of the support given to aquaculture as a development activity stems from the compatibility of government and NGO agendas around notions of production. These agendas draw directly on the green Revolution and Blue Revolution rhetoric. In contrast capture fisheries are marginalised as they are framed in terms of conservation – a highly problematic term in Laos. Aquaculture has therefore become a self-serving development narrative within the information poor environment of Lao PDR. It is applied with little reference to the reality of Lao communities and when critiqued defers to orthodoxies far removed from the Lao context. Until further information is gathered on living aquatic resources as a whole capture fisheries will continue to be marginalised as an uncertain and complex resource suited only to conservation measures.