



Current status of farming practices of striped catfish, *Pangasianodon hypophthalmus* in the Mekong Delta, Vietnam

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ABSTRACT

Aquaculture of catfish, *Pangasianodon hypophthalmus* (Sauvage), locally known as “ca tra”, and commonly referred to as striped catfish, river catfish and sutchi catfish, in Vietnam, having recorded a production of 683,000 tonnes in 2007, valued at about 645 million US\$ is one of the largest single species based farming system, restricted to a small geographical area, in the world. The product is almost totally exported to over 100 countries as frozen fillets, as an acceptable alternative to white fish. Catfish is farmed mostly in earthen ponds, up to 4 m deep, in nine provinces in the Mekong Delta in South Vietnam. The results of the grow-out system of catfish farming in the Mekong Delta from a survey of 89 farms are presented. The farm size ranged from 0.2 to 30 ha with a mean of 4.09 ha. The frequency distribution of the yield in tonne/ha/crop and tonne/ML/crop corresponded to a normal distribution curve, where 75% of the farms yielded 300 tonnes/ha/crop or more. It was found that the yield per crop was significantly correlated ($p < 0.05$) to stocking density, pond depth and volume but not to pond surface area. Yields per crop was significantly different ($p < 0.05$) between upper and lower provinces of the Mekong Delta and water source (river versus channels), amongst others. It was evident that diseases and/or symptoms were observed to occur mostly in accordance with the onset of rains. In this paper the history of the catfish farming in the Mekong Delta is briefly traced, and current harvesting and marketing procedures as well as pertinent social elements of the farming community are dealt with.

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1. Introduction

The Mekong River (known in Vietnamese as the Cuu Long River), with a mean discharge volume of 15,000 m³/s (the 10th highest in the world), traverses 4,880 km through six countries, and divides into seven major branches when it enters the Delta, approximately 170 km from the South China Sea (van Zalinge et al., 2004). The Mekong Delta (3.92 million ha), with a catchment of 49,367 km² and a population of 17.42 million (in 2004), is popularly referred to as the food basket of Vietnam; for example, it accounted for nearly half of the national food volume (in 2000 totalling 17.5 million tonnes), 55% of the national fishery and fruit production and 61% of the national food export value (Sub-Institute of Water Resources Planning, 2003).

The culture of striped catfish, *Pangasianodon hypophthalmus* (Sauvage), also known as “ca tra” in Vietnamese, or the striped catfish and sutchi catfish, in the Mekong Delta, Vietnam, can be considered as a unique aquatic farming system in many ways. Production is the fastest

growth recorded in any aquaculture sector, ever, based on a single species, superseding the production per unit for any form of primary production (Phuong and Oanh, 2009). Furthermore, over 90% of the farmed catfish is processed and exported to more than 100 countries globally (Nguyen, 2007; Wilkinson, 2008; Globefish, 2009; Phuong and Oanh, 2009).

The striped catfish from Vietnam has essentially become an affordable ‘white fish’ substitute to the Western world, and conceivably its acceptability and popularity is growing (Intrafish, 2003; Globefish, 2009). The term ‘white fish’ is commonly used to designate fish with white flesh, common in Western countries, represented by species such as cod, *Gadus morhua*. However, in the early growth phases of the sector it had to overcome trade embargoes and related restrictions that were imposed by some importing countries (Intrafish, 2003). Currently, such restrictions on the export of striped catfish from Vietnam do not exist in most importing countries, apart from conformity to food safety and food quality standards, but many issues on its quality and the nature of farming system have been raised (Holland, 2007; Neubacher, 2007). However, most of these negative publicities have been mostly unfounded thus far (Mohan et al., 2008; Urban et al., 2008; Rehbein, 2008).

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The catfish farming sector in its present form is a relatively new development in the Mekong Delta. It is thought to have become possible when the artificial propagation of the catfish species, *Pangasius bocourti* Sauvage (basa catfish) (Cacot, 1999; Cacot et al., 2002) developed and was adopted for *P. hypophthalmus*. This development enabled the traditional small scale aquaculture practices that were dependent on wild caught seed stocks to shift to more intensified systems and depend entirely on hatchery-produced seed (Trong et al., 2002). Also, over the last decade the farming of striped catfish took precedence, and pond farming became the dominant form because of its relatively faster growth rate, flesh quality and appearance, therefore marketability overseas (Phuong and Oanh, 2009; Sub-Institute for Fisheries Economics and Planning in Southern Vietnam, 2009).

The present paper attempts to describe the grow-out operations of this aquaculture sector that is of immense socio-economic importance

to Vietnam, and globally as a provider of a much sought after cultured food fish commodity. The work presented is associated with a research conducted to develop “Better Management Practices” for striped catfish farming in the Mekong Delta, that is considered as a key to attaining sustainability and food safety and marketability of the commodity, as had been demonstrated previously for example small-scale shrimp farming in India (Umesh, 2007; Umesh et al., 2009).

2. Materials and methods

Catfish farming in the Delta occurs along two main branches, Tien Giang (upper) and Hau Giang (lower) and the associated channels of the Mekong River (Fig. 1). The catfish farming area falls within the jurisdiction of nine provincial administrations of which An Giang, Can Tho, Dong Thap and Vinh Long are the most important (Sub-Institute

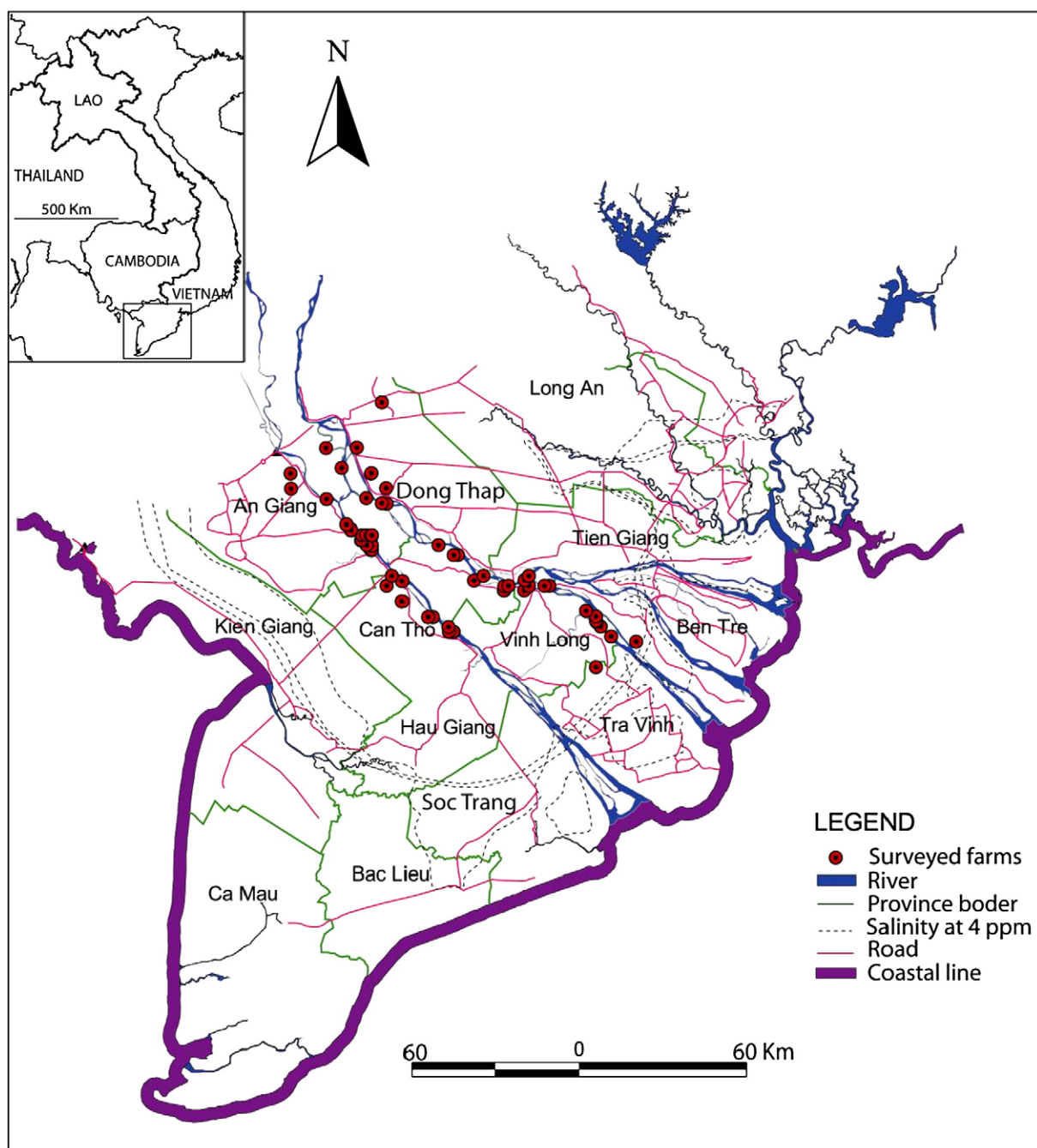


Fig. 1. The location of the main striped catfish farming areas in the Mekong Delta, Vietnam, in relation to the delta as a whole.

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