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**SOCIO-ECONOMIC CONSTRAINTS
TO RICE FARMERS' ADOPTION OF THE COMMUNITY
TRAP BARRIER SYSTEM FOR CONTROLLING RODENTS
IN RICE-BASED FARMING SYSTEMS
IN THE MEKONG DELTA, VIETNAM**

Thesis submitted by

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STATEMENT OF THE CONTRIBUTION OF OTHERS

This masters research was conducted under the primary supervision of Dr. Alison Cottrell and Associate Professor David King at the School of Earth and Environmental Sciences. Supervision was also provided by two scientists from Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO) - Dr. Peter Roebeling (from March to August 2007) and Dr. Ken Aplin (from August 2007 to February 2009).

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DECLARATION OF ETHICS

The research presented and reported in this thesis was conducted within the guidelines for research ethics outlined in the *National Statement on Ethics Conduct in Research Involving Human* (1999), the *Joint NHMRC/AVCC Statement and Guidelines on Research Practice* (1997), the *James Cook University Policy on Experimentation Ethics. Standard Practices and Guidelines* (2001), and the *James Cook University Statement and Guidelines on Research Practice* (2001).

The proposed research methodology received clearance from the James Cook University Human Research Ethics Review Committee (approval number H-2708).

STATEMENT OF SOURCES DECLARATION

I declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

March 8, 2009

Signature

Date

Dedication

This thesis is dedicated to my grandmother, and is in memory of my father.

They both taught me the value of hard work, patience and love.

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Abstract

In the Mekong delta region, rodents are one of the major pests that rice farmers need to control regularly using physical and chemical methods. Chemical methods are more commonly used because they are convenient. The Community Trap Barriers System (CTBS) is a new environmentally-friendly, physical rodent control method. Despite being introduced to farmers, the adoption has been slow because the technology requires collective adoption to overcome cost constraints. In this study, collective use of this method was found to be challenging because of two main reasons. First, farmers found it difficult to manage the trap barrier system as a common pool resource. Second, collective use at the field level is constrained by the difficulties to obtain consensus among farmers in the adoption area. Current levels of social capital, the source of collective action, at the field level were found to be in decline when compared with those in the past. The decline is attributed to the changes in relationships between farmers at the field level. Farmers are unable to maintain their traditional networks which were grounded on kin, neighbour, and friendship relations. In addition, social and economic development has improved rural lifestyles but this has resulted in a lack of need for the social capital represented by those traditional relationships, especially for the rice farming practice. The adoption of the CTBS, as well as other collective based technologies will be challenging unless there are efforts to improve social capital at the field level. This may well be best achieved at the local government level because farmers have a strong reliance on the government to facilitate the social capital generation process.

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