



UNIVERSITI PUTRA MALAYSIA

**GOVERNANCE, EMPOWERMENT AND BENEFITS OF
CO-MANAGEMENT OF INLAND OPEN WATER FISHERIES
IN BANGLADESH**

**GOLAM MD. SHAMSUL KABIR
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**GOVERNANCE, EMPOWERMENT AND BENEFITS OF
CO-MANAGEMENT OF INLAND OPEN WATER FISHERIES
IN BANGLADESH**

By

GOLAM MD. SHAMSUL KABIR

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Doctor of Philosophy**

December 2009



DEDICATION

**To my mother and late father; my wife beloved lucky and my loving sons Rafi
and Rasfi**



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment
of the requirement for the degree of Doctor of Philosophy

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Chairman : Professor Tai Shzee Yew, PhD

Faculty : Economics and Management

The main objective of the study is to assess co-management approaches as institutional arrangement of inland openwater fisheries in Bangladesh. It was done by examining the factors enhancing the governance and empowerment of fishers for improved arrangements of fishers' and co-management based organisations' (CBOs. The benefits of co-management approaches on income and transaction costs of fisher communities are examined and the effectiveness of conflict mitigation and resolution are compared. A survey of 311 fishing households in Bangladesh was conducted from July 2008 to October 2008 to obtain information from fishers in the Community Based Fisheries Management (CBFM) project sites and non CBFM sites (control sites) using structured interview questionnaire.

The CBFM approaches aim mainly at building local fishery community organizations for managing fisheries sustainably and to improve institutional arrangements of fisher communities. Institutional arrangements have been done



through formation of local co-management based organisations which have led to increased democratic participation, empowerment, enhanced fisheries management and better compliance of rules and regulations. Descriptive analysis, Factor analysis and finally Regression analysis are used to analyse the data.

The results of the study reveal that the fishers of CBFM sites have increased participation in collective decision-making, improved leadership, trust, decentralisation of management, power sharing responsibility and social networks which have led to improve governance of the fisher communities. The study shows that the fishers and CBOs are more empowered due to training in skill development and capacity enhancement and awareness raising programs facilitated by the Government and NGOs. In addition, they have greater individual access rights to their fisheries through administrative support from the government and they are more capable of controlling the exploitation of fisheries resources in project areas. All these factors have made the CBOs more accountable and transparent. The results also indicate that there are improvements in compliance and legitimacy and lowering of transaction costs. The study shows that conflicts are resolved quickly and conflict management process is smooth in project sites compared to non CBFM control sites. The results of the study show that there is significant difference in total transaction costs in management between project and control sites over the years. The transaction costs trended downward within project sites, but it is increasing in control sites.

The results of regression analysis of governance and empowerment models show that all the variables except institutional arrangement are statistically significant factor in CBFM sites. The conflict resolution variable has negative relationships with the dependent variables. Institutional arrangement is insignificant and positively correlated which indicates that there is still lack of institutional arrangement under co-management intervention to be achieved at optimum level. On the other hand, all of the variables are found to be insignificant in the control sites.

The results of the regression analysis of household income model show that earning member per household, age of household head, fishing area, gear used, education and resource abundance are significant contributors to household income in project areas. Total land size and income generating activities have positive but insignificant impact. On the other hand, age of household head and total land size are significant factors to household income in control sites.

The overall findings indicate a positive outcome of co-management institution of fisher communities in Bangladesh and provide support for the development of co-management based fisheries to improve resource management. The positive impact of fisheries co-management approach leads towards improved institutional arrangements of fisher communities.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**KERAJAAN, PEMBERDAYAAN DAN FAEDAH PENGURUSAN BERSAMA
PERIKANAN PERAIRAN TERBUKA PEDALAMAN DI BANGLADESH**

Oleh

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Objektif utama kajian ini adalah untuk menilai pendekatan pengurusan bersama yang dilaksanakan melalui projek Pengurusan Perikanan Berasaskan Komuniti (PPBK) sebagai peraturan institusi dalam perikanan perairan terbuka kawasan pedalaman di Bangladesh. Penelitian dibuat dengan melihat faktor tadbir urus dan pemberian kuasa (empowerment) kepada nelayan bagi berasaskan komuniti memperbaiki susunan dan organisasi nelayan dan komuniti. Faedah pendekatan pengurusan bersama ke atas pendapatan dan kos transaksi komuniti nelayan dikaji dan keberkesanan pengurangan dan penyelesaian konflik juga dibandingkan. Survei nelayan 311 isirumah perikanan yang dilaksanakan di antara Julai hingga Oktober 2008 untuk mendapatkan maklumat daripada nelayan dalam kawasan Pengurusan Perikanan Berasaskan Komuniti (PPBK) dan bukan PPBK menggunakan borang soal selidik berstruktur.

Pendekatan PPBK terutamanya bertujuan untuk membangun organisasi komuniti nilayan tempatan bagi mengurus perikanan secara mapan and menambahbaik susunan institusi bagi komuniti nelayan. Penyusunan institusi dilaksanakan melalui pembentukan organisasi berasaskan pengurusan bersama yang telah meningkatkan penglibatan demokratik, pemberian kuasa, peningkatan pengurusan perikanan dan pematuhan. Analisis deskriptif, analisis komponen prinsipal dan analisis regresi digunakan dalam kajian ini.

Keputusan kajian menunjukkan nelayan dalam kawasan PPBK telah meningkatkan penglibatan di dalam pembuatan keputusan bersama, meningkatkan kepimpinan, kepercayaan, pemberian kuasa dan pengurusan nyahpusat, tanggungjawab perkongsian kuasa, jaringan sosial yang telah menambahbaik tadbir urus komuniti nelayan. Kajian mendapati nelayan dan organisasi berasaskan komuniti (OBK) diberi lebih kuasa berasaskan peningkatan kemahiran dan kapasiti modal insan melalui latihan dan program bagi meningkatkan kesedaran yang dilaksanakan oleh kerajaan dan OBK. Seterusnya mereka mempunyai akses individu kepada perikanan dengan sokongan pentadbiran daripada kerajaan dan mampu mengawal perikanan dalam kawasan projek masing-masing. Kini OBK lebih bertanggungjawab dan telus. Keputusan juga menunjukkan terdapat penambahbaikan bagi pematuha dan kesahihan dan kos transaksi adalah lebih rendah. Kajian mendapati konflik diselesaikan lebih cepat dan proses pengurusan konflik lebih licin dalam kawasan projek berbanding kawasan kawalan – di luar kawasan projek.

Keputusan kajian menunjukkan terdapat perbezaan yang signifikan di antara jumlah kos transaksi bagi pengurusan kawasan projek dan kawasan kawalan bagi beberapa

tahun lampau. Bagaimanapun, kos transaksi mempunyai tren berkurangan dalam kawasan projek manakala bertambah bagi kawasan kawalan.

Keputusan model analisis regresi tadbir urus dan pemberian kuasa menunjukkan kesemua pemboleh ubah kecuali peraturan institusi adalah faktor signifikan dalam kawasan PPBK. Pemboleh ubah penyelesaian konflik mempunyai pertalian negatif. Peraturan institusi adalah tidak signifikan dan berkorelasi positif menunjukkan masih terdapat kekurangan peraturan institusi dengan campur tangan pengurusan bersama berbanding tahap optimum yang mungkin dicapai. Sebaliknya, didapati kesemua pemboleh ubah signifikan bagi kawasan kawalan.

Keputusan model analisis regresi pendapatan isirumah menunjukkan pendapatan anggota isirumah, usia ketua isirumah, kawasan penangkapan, peralatan yang digunakan, pendidikan dan kepadatan sumber memberi sumbangan positif kepada pendapatan isirumah dalam kawasan projek. Jumlah keluasan tanah, aktiviti yang menjana pendapatan mempunyai impak positif tetapi tidak signifikan. Sebaliknya, usia ketua isirumah dan jumlah kawasan tanah adalah faktor signifikan dalam kawasan kawalan.

Dapatan keseluruhan menunjukkan natijah yang positif mengenai institusi pengurusan bersama nelayan di Bangladesh dan memberi sokongan kepada pembangunan perikanan berasaskan pengurusan bersama bagi memperbaiki pengurusan sumber. Impak positif pendekatan pengurusan bersama perikanan ini memihak kepada penyusunan institusi bagi komuniti nelayan.

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I certify that an Examination Committee has met on 29 December, 2009 to conduct the final examination of **Golam Md. Shamsul Kabir** on his Doctor of Philosophy thesis entitled “Governance, Empowerment and Benefits of co-management of Inland Openwater Fisheries in Bangladesh” in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the student be awarded the Doctor of Philosophy.

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DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.

GOLAM MD. SHAMSUL KABIR

Date:

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AIGA	Alternative Income Generating Activity
<i>baor</i>	An oxbow lake
BBS	Bangladesh Bureau of Statistics
<i>Beel</i>	Deepest part of a floodplain, often with a permanent area of water/wetland
BMC	Beel Management Committee
CBO	Co-management Based Organisation
CBFM	Community Based Fisheries Management
DANIDA	Danish International Development Agency
DFID	Department for International Development
DOF	Department of Fisheries
EBSATA	East Bengal Acquisition and Tenancy Act
FAP	Flood Action Plan (a series of flood mitigation and water management planning studies undertaken in 1990-1995)
FAO	Food and Agriculture Organisation
FFP	Fourth Fisheries Project
FPCO	Flood Plan Coordination Organisation
GDP	Gross Domestic Product
GOB	Government of Bangladesh
GO	Government Organisation
<i>haor</i>	Deeply flooded saucer shaped depression
ICF	Inland Capture Fisheries Strategy
ICLARM	International Center for Aquatic Resources Management

