



UNIVERSITI PUTRA MALAYSIA

**ENVIRONMENTAL AWARENESS OF ARTISANAL FISHERS AND THEIR
PARTICIPATION IN CO-MANAGEMENT IN MANJUNG DISTRICT, MALAYSIA**

AHMAD FAISAL BIN ALIAS

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THEIR PARTICIPATION IN CO-MANAGEMENT IN MANJUNG
DISTRICT, MALAYSIA**

By

AHMAD FAISAL BIN ALIAS

**Thesis Submitted to the School of Graduate Studies,
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Requirements for the Degree of
Doctor of Philosophy**

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

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AHMAD FAISAL BIN ALIAS

February 2014

Chair: Associate Professor Mohd Bakri bin Ishak, Ph.D

Faculty: Environmental Studies

The research was conducted to measure the level of environmental awareness, knowledge, attitudes, and their perceptions of and the willingness to participate in community based fishery co-management program of artisanal fishers in the district of Manjung, Perak. The main research instrument is a face-to-face interview survey form. The respondents are 268 sampled (33.3 percent through stratified sampling method) coastal fishers holding the Class A license, who primarily operates small fishing boats within five nautical miles from shore and using traditional fishing methods. A series of surveys were conducted at selected fishing jetties and the district's fisheries department offices. The research employs a quantitative statistical analysis approach. The analyses found that the mean environmental awareness level is 'Medium' (Mean = 2.84; SD = 0.98) and is significantly correlated only to their level of education ($r = 0.159$, $n = 268$, $p < 0.005$). Their main sources of environmental information and knowledge are the television, newspaper and radio. Only 39.9 percent of the respondents reported that they were provided information regarding the environment from the authorities and that the authorities are not doing a good job at providing the information. The respondents also reported some degrees of 'Medium' environmental knowledge (Mean = 2.96) and knowledge of environmental concepts (Mean = 2.70; SD = 0.74) and also 'Medium' pro-protective attitude towards the environment (Mean NEP score = 3.22; 53.3 summative pro-NEP score). However, their environmental awareness, knowledge and attitude are critically undermined by the pro-Dominant Social Paradigm (DSP) worldviews and attitude, as revealed by the factor analyses of their environmental knowledge and New Ecological Paradigm (NEP) scale. This fact would negatively affect their perception and behavior towards the environment and their motivation to participate in fishery resource co-management programs. Therefore, it is highly recommended that artisanal fishers be given more direct access to environmentally related information so that the influence of the DSP could be

reversed and they would be more receptive towards and to actively participate in community-based fishery resource co-management programs. This can be achieved through direct and indirect methods such as having short courses or briefings, distribution of printed information or handouts and the use of mobile or other information and communication technologies (ICTs). Positive environmental awareness and attitudes can be enhanced through direct and indirect learning experience. Interest in co-management could also be encouraged through long term formal and informal information delivery methods and environmental education process and strategies at all levels.



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

**KESEDARAN ALAM SEKITAR PARA NELAYAN ARTISANAL
DALAM DAERAH MANJUNG DAN PENGLIBATAN MEREKA
DALAM PENGURUSAN BERSAMA DI DAERAH MANJUNG,
MALAYSIA**

Oleh

AHMAD FAISAL BIN ALIAS

Februari 2014

Pengerusi: Profesor Madya Mohd Bakri bin Ishak, Ph.D

Fakulti: Pengajian Alam Sekitar

Kajian ini telah dijalankan bagi mengukur tahap kesedaran, pengetahuan dan sikap alam sekitar, persepsi serta kesanggupan mereka untuk menyertai program pengurusan bersama sumber perikanan komuniti dalam kalangan nelayan artisanal di Daerah Manjung. Instrument utama kajiselidik ini adalah borang kaji selidik temuramah secara bersemuka. Para responden terdiri daripada 268 nelayan pantai yang disample dari memegang lesen Kelas A (33 peratus melalui kaedah persampelan berstrata), yang mengendalikan bot-bot menangkap ikan yang kecil sejauh lima batu nautika dari pantai serta menggunakan kaedah-kaedah menangkap ikan tradisional. Suatu siri kajiselidik telah dilaksanakan di beberapa jeti pendaratan terpilih serta di pejabat-pejabat Jabatan Perikanan Daerah Manjung. Kajian ini menggunakan pendekatan analisa statistik kuantitatif. Analisa mendapati bahawa tahap kesedaran alam sekitar para responden adalah pada tahap 'Sederhana' (Min = 2.84; SD = 0.98) dan berhubungkait secara signifikan hanya kepada tahap pendidikan mereka ($r = 0.159$, $n = 268$, $P < 0.0005$). Sumber utama maklumat dan pengetahuan alam sekitar mereka adalah televisyen, suratkhbar dan radio. Hanya 39.9 peratus menyatakan mereka menerima maklumat berkaitan alam sekitar dari pihak berwajib dan mereka tidak melakukannya dengan berkesan. Para responden juga melaporkan tahap pengetahuan alam sekitar (Min = 2.96) dan pengetahuan konsep-konsep alam sekitar yang 'Sederhana' (Min = 2.70, SD = 0.74), serta mempunyai sikap protektif terhadap alam sekitar (Skor min NEP = 3.22; jumlah skor NEP = 53.3). Walaubagaimana pun, tahap kesedaran, pengetahuan serta sikap alam sekitar mereka yang positif telah dipengaruhi secara kritikal oleh pandangan yang pro-Dominant Social Paradigm (DSP) terhadap alam sekitar, seperti yang ditunjukkan oleh analisa-analisa faktor eksploratori terhadap skala pengetahuan alam sekitar dan skala New Ecological Paradigm (NEP) mereka. Fakta tersebut akan mempengaruhi secara negatif persepsi dan perilaku mereka

terhadap alam sekitar serta kesediaan mereka untuk mengambil bahagian dalam program-program ko-pengurusan sumber perikanan. Sehubungan itu, adalah disyorkan agar para nelayan artisanal diberikan lebih banyak akses langsung kepada maklumat dan pengetahuan berkaitan alam sekitar bagi menongkah pengaruh DSP agar mereka lebih terbuka kepada penerimaan dan mengambil bahagian secara aktif dalam program-program ko-pengurusan sumber perikanan berasaskan komuniti. Ini boleh dicapai melalui kaedah-kaedah langsung dan tidak langsung seperti mengadakan kursus-kursus pendek atau sesi taklimat, penyebaran maklumat-maklumat bercetak atau makalah serta menggunakan teknologi mudah-alih dan lain-lain teknologi maklumat dan komunikasi (ICT). Kesedaran dan sikap alam sekitar yang positif juga boleh dipertingkatkan melalui pengalaman pembelajaran langsung dan tidak langsung. Minat terhadap ko-pengurusan juga boleh dipupuk melalui kaedah penyampaian maklumat secara formal dan tidak formal serta proses serta strategi pendidikan sepanjang hayat alam sekitar di semua peringkat.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Doctor of Philosophy. Members of the Supervisory Committee were as follows:

Mohd Bakri bin Ishak, PhD

Associate Professor
Faculty of Environmental Studies
Universiti Putra Malaysia
(Chairman)

Sutarji Kasmin, PhD

Associate Professor
Faculty of Environmental Studies
Universiti Putra Malaysia
(Chairman)

Dasimah Omar, PhD

Professor
Faculty of Architecture, Planning and Surveying
Universiti Teknologi MARA Malaysia
(Member)

BUJANG BIN KIM HUAT, PhD

Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date:

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- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2013 (Revision 2012-2013) are adhered to.

Mohd Bakri bin Ishak, PhD

Associate Professor
Faculty of Environmental Studies
Universiti Putra Malaysia
(Chairman)

Sutarji Kasmin, PhD

Associate Professor
Faculty of Environmental Studies
Universiti Putra Malaysia
(Member)

Dasimah Omar, PhD

Professor
Faculty of Architecture, Planning and Surveying
Universiti Teknologi MARA Malaysia
(Member)

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