



UNIVERSITI PUTRA MALAYSIA

**KNOWLEDGE AND PERCEPTION OF FOREST CONSERVATION IN
THE FORESTRY DEPARTMENT HEADQUARTERS
OF PENINSULAR MALAYSIA**

AHMAD FARID ABDUL FUAD

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**MASTER OF SCIENCE
TROPICAL FOREST RESOURCE MANAGEMENT
UNIVERSITI PUTRA MALAYSIA**

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By

AHMAD FARID ABDUL FUAD

**A project report submitted in partial fulfilment of the requirements for the
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DEDICATION

Specially Dedicated To:

My Everlasting Beloved Daddy and Mummy

My Ambitious Kak Nora and family
My Supportive Kak Imash and family
My Understanding Kak Ina
My Courageous Kak Sally

My Sporting Adek Farah / Che Fa / Apai

And

My Guide Prof. Madya Dr. Faridah Hanum Ibrahim

For all the pain and joy we strive together
For our sacred hearts and soul sacrifices
May Allah Bless Us and Only Allah Ever Will

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ABSTRACT

KNOWLEDGE AND PERCEPTION OF FOREST CONSERVATION IN THE FORESTRY DEPARTMENT HEADQUARTERS OF PENINSULAR MALAYSIA

BY:

AHMAD FARID BIN ABDUL FUAD

**SUPERVISOR: ASSOCIATE PROFESSOR DR. FARIDAH HANUM
IBRAHIM**

The study was carried out to determine the extent of knowledge and the perception the staff have on forest conservation concepts and issues. A total of 57 respondents comprising of forest officers and administrative officers attached to all units within the Forestry Department Headquarters of Peninsular Malaysia participated in the study. The questionnaire was designed in three parts; Part I requested the respondents' demographic information, meanwhile the other two parts consist of 17 statements to test the knowledge of the staffs on the theory and concepts of forest conservation stipulated in current conservation biology textbooks and manifested within the National Policy on Biological Diversity 1998, and 20 statements to assess their perception on the current issues regarding forest conservation in Malaysia. The results showed that the respondents, regardless of their position have fair knowledge and considerably perceived positively the forest conservation concepts and issues. The results of Spearman rank order correlation test showed that only academic level positively correlated with knowledge. Profession or job specialisation was negatively correlated with perception. There was significant correlation in knowledge and perception of the respondents.

ABSTRAK

PENGETAHUAN DAN PERSEPSI TERHADAP PEMULIHARAAN HUTAN DI IBUPEJABAT JABATAN PERHUTANAN SEMENANJUNG MALAYSIA

**OLEH:
AHMAD FARID BIN ABDUL FUAD**

PENYELIA: PROFESOR MADYA DR. FARIDAH HANUM IBRAHIM

Kajian ini dijalankan untuk menentukan tahap pengetahuan dan persepsi kakitangan Ibupejabat Jabatan Perhutanan Semenanjung Malaysia terhadap konsep dan isu-isu pemuliharaan hutan. Seramai 57 kakitangan terdiri daripada pegawai hutan dan pegawai tadbir dari setiap unit di bawah jabatan tersebut telah mengambil bahagian dalam kajian ini dengan mengisi borang soal selidik yang dibentuk secara berstruktur. Borang soal selidik telah direkabentuk dalam tiga bahagian. Bahagian I bertujuan untuk mendapatkan maklumat demografi responden, manakala Bahagian II dan III, masing-masing bertujuan untuk menguji kefahaman responden terhadap konsep-konsep pemuliharaan hutan seperti yang digariskan di dalam buku-buku teks tentang pemuliharaan biologi dan sebahagiannya diperjelaskan di dalam Dasar Kepelbagaian Biologi Kebangsaan 1998; dan memahami persepsi responden terhadap isu-isu terkini tentang pemuliharaan hutan di Malaysia. Keputusan yang diperolehi daripada kajian menunjukkan bahawa responden mempunyai tahap pengetahuan yang agak tinggi dan persepsi yang boleh dikatakan positif terhadap konsep-konsep dan isu-isu berkaitan pemuliharaan hutan. Ujian korelasi berpangkat Spearman menunjukkan bahawa perkaitan positif berlaku di antara tahap pendidikan responden dengan pengetahuan mereka, sebaliknya perkaitan negatif didapati wujud di antara kepakaran responden dengan persepsi mereka. Adalah didapati bahawa tahap pengetahuan dan persepsi di kalangan responden menunjukkan pertalian yang nyata.

CHAPTER ONE

1.1 INTRODUCTION

Public appreciation and concern of the forest degradation in the tropics create conflicts and sensitivity towards the issues of environment, social and economics interest. The prevailing demand to own the environmentally friendly forest will be major challenge faced by the forestry sectors. Sustainable Forest Management originated in Europe in the early 18th century, but it was first introduced in the public debate in the World Conservation Strategy in 1980. The basic principle was to ensure the forest resources are managed sustainably to meet a balanced environment and ecologically sustainable development. A responsible forest management that aims at sustaining the forest, functions and productivity is guided by environment, socio-economic and managerial considerations. The concept implies the goal to satisfy the needs of all people at all times. In Malaysia, the sustainable forestry approach has long been recognised and practised but recently with the global consciousness, there is a need to recognise wider asset value of forests and develop instruments, which enable forest dwellers to get the best return.

International Tropical Timber Organisation (ITTO) defined sustainable forest management as the process of managing permanent forest land to achieve one or more clearly specified objectives of management with regard to the production and continuous flow of desired forest products and services without undue reduction of its inherent values and future productivity and without undue undesirable effects on the physical and social environment. In order to manifest this definition into good forest practices, certain rules of conducts have to be formulated to guide planning, implementation and control of all kinds of forestry activities. With deliberance to this, the Malaysian government has taken various important steps in achieving the practised sustainable forest management in its national forests through legal devices such as the National Forestry Policy 1978 (Revised 1992) (FDPM, 1995)

which gave birth to the enforced National Forestry Act 1984 (Act 313) (LRB, 1998). Prior to that, Malaysian government has ratified the Convention on Biological Diversity on 24th June 1994, which warrants the government to incorporate conservation of biodiversity into national development policies and programmes. Initiatively, the government has shown commitment in environmental issues and conservation by formulating the National Policy on Biological Diversity in 1998 (MOSTE, 1998). With respect to forest environment, the government has seen these positive trends as chances to revitalise the once faded value of forest conservation through the establishment of *Malaysian Criteria, Indicators, Activities and Standards of Performance (M C&I) for Forest Management Certification* in 1999, as proposed by the Forest Stewardship Council (FDPM, 1999).

Conservation is essentially the 'taking care' of our environment so that it may continue to be a fit place for living things (including us) (Hackett, 1995). The popularity of the concept of conservation is the result of our overdue awareness of the serious environmental problems, which have been created by careless exploitation of natural resources and increasing population with its ancillary effects (Agrawal, 1995). The phrase 'taking care' warrants the need of human-based management. Speaking of 'management' *per se*, one must not ignore the substantiality of human factor that is responsible to manage something for his own interest (Robbins, 1993). Through research and observation of forest ecology for the past decades, one can understand how the forest works, although it is rather inconceivably incomprehensible to explain the true nature of forest ecosystems. However, with this scarce knowledge, human can still manipulate the mechanism of forest ecosystems for his own use. Since the first human ever step on the surface of earth, he has been growingly dependent on forests for his survival. Until now, forests is somewhat life-source to human sustenance as soul to human body. The perceptual difference between our primitive ancestors and us towards forest is that they see forests as resources to survive and to us, this has developed further into forests as a 'goldmine' where we can get 'wooden gold' to transform it into some tools for material development. Since then, human species has been rapidly developing new technologies to enhance the

capability of forest ecosystems to cater their ever-increasing needs. Unfortunately, most of the time we have been taking more than the forests can give unrealisingly, which probably deliberately leads us to the collapse of our own species.

The issues of forest destruction and deforestation have been the major concern of the world community towards the environment and sustaining the remaining resources. In case of forest resources, forestry sector is basically a synergistic resource, which linked competitively to the actual requirements of mankind. Its existence is considered as necessities to supplement and compliment the unlimited demand and need at different level of interest of human society. Within the context of sustainable forest management, the emphasis will be to develop quality forests that are environmentally sensitive, socio- economically viable.

1.2 STATEMENT OF PROBLEM

An environmental economic's theory of Kuznet's Environment Curve once stipulated that a developing nation will use all of its resources to achieve a developed status with less consideration on the health of the environment and once it is satisfactorily developed, then it starts to look back and expresses 'concern' on the dilapidated environment (Lopez and Siddhartha, 2000). This implies the perception of the men in power at the time before, to develop its nation as soon as possible so that it would be affordable for them to take care of the environment afterwards. As most developing nations are mostly inherited and dependent to the forest environment for its development-based resources, it is no wonder if most of the tropical forests nowadays are in threat of resource depletion with questionable hope to sustain its future productivity. Malaysia as one of the developing tropical nations is very lucky because we have the chance to learn the mistakes of the western developed nations upon how close they were to loose their forests due to greed to develop. From them, we should realise that the sensitivity of forest environment depends on how sensitive men are on the limitation of human intervention on the fragile forest environment. Without due considerations on

the health of forest environment, how can we expect to sustain the availability of forest resources in an already scarce and poor forest environment?

By right, with the National Policy on Biological Diversity 1998 as a guide, we should clearly understand the importance of forest conservation in order to sustain the so-called sustained yield of forest resources and its environmental stability for a sustained life-support device of human ecology. However, according to the report on the *Assessment of Biological Diversity in Malaysia* in 1997, education and public awareness on biodiversity conservation is still at its infancy (MOSTE, 1997). This discrepancy has warranted the report to recommend ample actions to be taken to promote the development of policies on environmental education, awareness and training, which are incorporated into the Ministry of Education's National Education Policy.

For now, the only practical way to avoid repeating those mistakes is to conserve our forest environment for sustainable consumption of productive resources and to sustain its capability to support the survivability and functionality of every single organism (including us) on earth. To embark this 'green' thinking into actions, we must first shift our paradigm towards the importance of forest conservation and its crucial influence in toeing the line of development of our nation. In other words, we must change our perception towards forests not only as 'goldmine' but also our sole life-support system, and we have to change it now before it is too late.

Having to notice all these motivation factors for the past four years (since the establishment of the National Policy on Biological Diversity 1998) in emphasising the importance of conserving the national biodiversity, it is the intention of this study to unravel the questions on the extent of awareness and understanding of the forest personnel in the forestry department towards forest conservation concepts and issues through their initial knowledge and perception. How far have the conservation-based policies in the country been prevailed within the policy making of the policy makers and forest management of the resource managers in their duty-bound routines? A

positive answer towards such question would press a hope to realising forest personnel with adequate knowledge and positive perception on forest conservation, which eventually breeds such well-informed and positively perceived decision making and operational planning in forestry sector.

1.3 OBJECTIVES

The most important asset in any management system is manpower. With learned knowledge and positive perception towards duty-bound responsibility, man can manage almost anything with less destruction. Islam once preached that due to the hands of *homo sapiens* the world will achieve its harmony and prosperity with human as the 'heir' and 'manager' of earth, but it is most disastrous to believe that with his own hands too, he can destroy the world in a blink of an eye with human perceived as an inconceivable 'master' of earth. Therefore, with a change in perception towards anything at all will hopefully change the way of actions deliberately (Cassells and Green, 1991).

With regard to the tropical forest conservation, knowledge and understanding among foresters are considered the leading factors to perform the best forest conservation in action for both productive and protective purposes of the forest environment. One reason why it is so is because they are the most dependable ones who experience a first hand of the forest environment and understand it more than anyone of us in the social strata. This study is considered as preliminary assessment of forester's knowledge and perception on forest conservation concepts and issues with special reference to the Peninsular Malaysia's forest custodian and advisory that is Forest Personnel of Forestry Department Headquarters, Peninsular Malaysia.

The results of this study would be useful as a prior information in planning an improved human resource development programme to enhance the knowledge-wise and positive perception of forest personnel at all level towards conservation initiatives, especially on the tropical forest conservation in Malaysia. This is also important in realising the purpose of the National

Policy on Biological Diversity 1998 on conservation of biodiversity, especially in forest environment:

'...to provide the resources for training and education for an increasing number of Malaysian. This will be at all levels, from school education to university, and in industrial training and in public-policy makers awareness [the foresters].' (MOSTE 1998)

Therefore, the main objectives of this study are:

- 1.3.1 To evaluate the knowledge of forest personnel on the concepts of forest conservation in Malaysia.
- 1.3.2 To assess the perception on the forest conservation initiatives and issues in Malaysia.
- 1.3.3 To determine the factors and their extents that affects the knowledge and perception on the forest conservation concepts and issues in Malaysia.

CHAPTER TWO

2.0 LITERATURE REVIEW

This chapter reviews the background of forestry in Peninsular Malaysia. It describes the administrative structure of the Forestry Department Headquarters, discusses the current forestry policy and law, and the current initiatives with respect to forest conservation. The chapter also reviews some aspects of human behavioural psychology, which may have an impact on knowledge and perception.

2.1 FORESTRY IN PENINSULAR MALAYSIA

2.1.1 Forest Policy and Legislation

In 1977, the National Forestry Policy was accepted by the NFC and later endorsed by the NLC on 19th April, 1978. This policy was revised on 19th November, 1992 to take cognisance of the current concern expressed by the world community on the importance of biological diversity conservation and sustainable utilisation of genetic resources, as well as the role of local communities in forest development (LRB, 1998). The acceptance of the policy is a major breakthrough in strengthening the institutional base and enhances the co-operation and understanding between the Federal and State Governments in the field of forestry sector development. The salient points of the revised National Forestry Policy are as follows;

- i. to dedicate as Permanent Forest Estate (PFE) sufficient areas strategically located throughout the country in accordance with the concept of rational

land use. The PFE will be managed and classified under four major functions:-

- a. **Protection Forest**, for ensuring favourable climatic and physical conditions of the country, the safeguarding of water resources, soil fertility, environmental quality, conservation of biological diversity and the minimisation of damage by floods and erosion to rivers and agricultural lands;
 - b. **Production Forest**, for the supply in perpetuity at reasonable rates of all forms of forest produce, which can be economically produced within the country and are required for agricultural, domestic and industrial purposes, as well as for export;
 - c. **Amenity Forest**, for the conservation of adequate forest areas for recreation, eco-tourism and in promoting public awareness in nation's priceless forest natural resources; and
 - d. **Research and Educational Forest**, for the conduct of research, education and conservation of biological diversity, especially in the growing field of pharmacognosy and medicinal valued flora and fauna.
-
- ii. to manage the PFE in order to maximise social, economic and environmental benefits for the nation and its people in accordance with the principle of sustainable management;
 - iii. to implement a planned programme of forest development through forest regeneration and rehabilitation operations in accordance with appropriate silvicultural practices, as well as the

- establishment of forest plantations of indigenous and exotic species to supplement timber supply from the natural forest;
- iv. to promote efficient harvesting and utilisation within the production forest for maximum economic benefits from all form of forest produce and to stimulate the development of appropriate forest industries commensurate with the resource flow, especially in the production of more value-added finished and semi-finished products for local consumption and export, and to create employment opportunities;
 - v. to increase the production of non-wood forest products through scientific and sustainable management practices to supplement local demands and the requirements of related industries;
 - vi. to undertake and support a comprehensive programme of forestry education and training at all levels in the public and private sectors in order to ensure adequate supply of trained manpower to meet the requirements of the forestry sector, including the forest-based industries;
 - vii. to undertake publicity and extension services in order to generate better understanding among the community on the multiple values of forests and to encourage private sector investment in forest development through the establishment of forest plantations on private lands;
 - viii. to provide for the conservation of biological diversity and areas with unique species of flora and fauna, including specific areas for the purpose of forestry education and other scientific studies;

- ix. to develop a comprehensive programme in community forestry to cater for the needs of the rural and urban communities alike and to promote active local community involvement in forestry development projects, including agro-forestry projects; and
- x. to undertake and support intensive research programmes in forestry and forest products aimed at enhancing maximum benefits from the forest.

As each state in the Peninsular Malaysia has its own Forest Enactment and Rules which were adopted in the early 1930's for the administration of its forests, the NFC felt that these forest laws were deficient and weak in areas of forest conservation and management planning and in forest renewal operations, which are vital for sustainable forest management (FDPM, 1995). Hence, the National Forestry Act was formulated and accepted by the NFC in March and later endorsed by NLC in September, 1984.

This act, which was passed by the Malaysian Parliament on 17th October in the same year, would enable the effective implementation of the National Forestry Policy as it was formulated to uniformise and update the various State's Forest Enactments (LRB, 1998). However, to further strengthen its provision to curb illegal encroachment of forest areas and timber theft, the act was amended in 1993.

Other legislation, which are considered of major importance to the forestry sector apart from the National Forestry Act, 1984 (amended 1993) and the Wood-based Industries Act, 1984; include the Water Enactment, 1935;