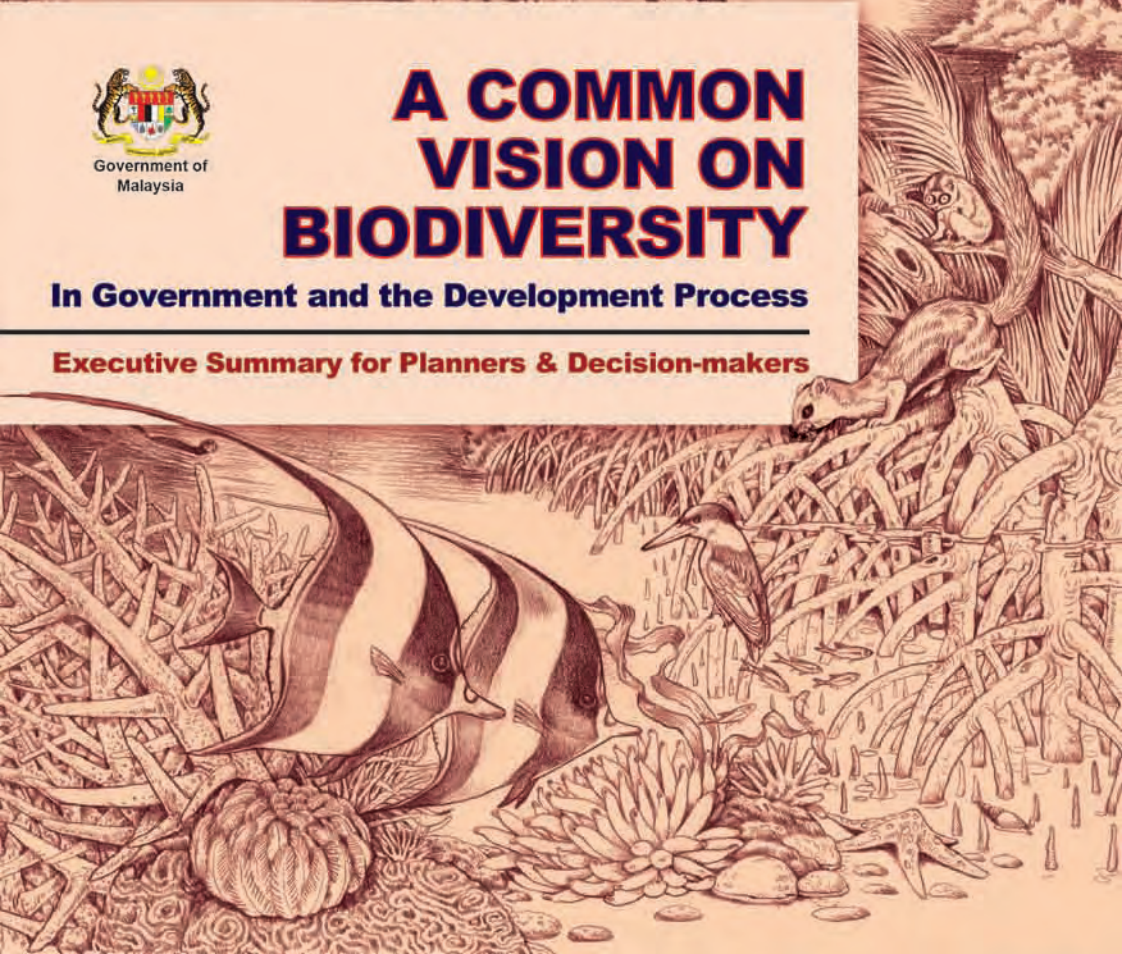


A COMMON VISION ON BIODIVERSITY

In Government and the Development Process

Executive Summary for Planners & Decision-makers



Published by



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ISBN 978-983-42956-6-0

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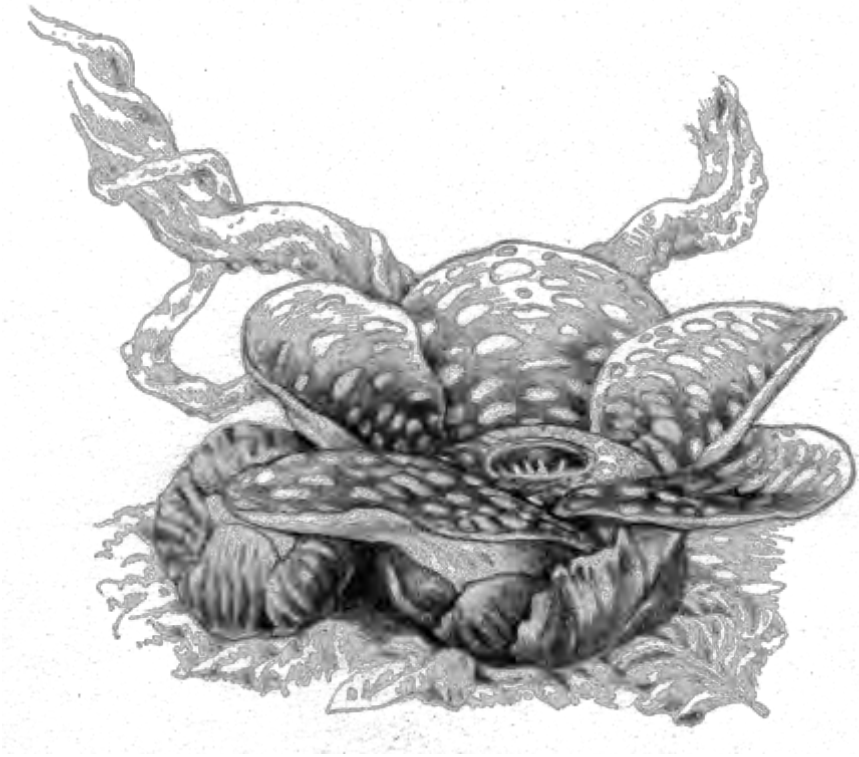


TABLE OF CONTENTS

Acronyms and Abbreviations..... ii

What is the Common Vision on Biodiversity?1

**What is Biodiversity and Why is it Important to Manage and
Conserve it?3**

A Three-Pronged Implementation and Outreach Strategy.....7

The Role of NRE.....15

ACRONYMS AND ABBREVIATIONS

BSAP	Biodiversity Strategies and Action Plans
DID	Drainage and Irrigation Department
EPU	Federal Economic Planning Unit
NRE	Ministry of Natural Resources and Environment
PA	Protected Area (in plural PAs)
PPP	Policy, Plan and Programme (in plural PPPs)
SA	Sustainability Assessment
SEA	Strategic Environmental Assessment

WHAT IS THE COMMON VISION ON BIODIVERSITY?

The Common Vision on Biodiversity aims to explain what biodiversity is, why it is important, how to maintain it and what measures are required to ensure a constant provision of ecosystem services that are essential for human livelihood. It is based on the different undertakings of NRE, its line agencies and the latest guidelines and experiences with respect to biodiversity planning and management. The Common Vision promotes a three-pronged implementation approach and outreach strategy that consists in:

- i) Strengthening the Protected Areas System
- ii) Land/Seascape management for biodiversity
- iii) Mainstreaming of biodiversity.

While responding to the provisions and policies already existing in Malaysia's Policies, Plans and Programs (PPPs), the Common Vision on Biodiversity focuses on the implementation and the operational aspects of such policies and the pursuit of sustainable development.

The Common Vision on Biodiversity can be used to rally support within the government and civil society for a shared perception of issues, priorities and the required inter-agency actions. It is a suitable framework and will support the ongoing transformation of environmental planning and management from a largely sector-based to an integrated approach, as recommended by national policy provisions.



WHAT IS BIODIVERSITY AND WHY IS IT IMPORTANT TO MANAGE AND CONSERVE IT?

“Biological Diversity” means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

Ecosystem properties depend greatly on biodiversity in terms of the functional characteristics of organisms present in the ecosystem and the distribution and abundance of those organisms over space and time. Species effects act in concert with the effects of climate, resource availability, and disturbance regimes in influencing ecosystem properties. Human activities can modify all of the above factors.

Biological diversity or *biodiversity* encompasses genes, species, ecosystems and their interactions. It includes all plants, animals, and micro-organisms, the ecosystems to which they belong, as well as the diversity within species, between species, and of ecosystems.

Biodiversity is essential for the functioning of ecosystems and supports the provision of ecosystem services that affect human livelihood. Our well-being is intricately linked to the status of biodiversity and its *web of life*. It is the biodiversity itself, with its numbers; relative abundances; compositions; and interactions which provides stability and

ensures that the ecosystem delivers its services at the local, state, national and regional levels.

Biodiversity provides us crops, timber and fish through agriculture, forestry and fishery, and it contributes significantly to national economies and employment. Goods provided by ecosystems range from food and water to timber and fodder to genetic resources. In addition, ecosystems provide, at no cost, essential services such as nutrient cycling, air and water purification, flood and drought mitigation and soil formation.

The management of the environment and biological diversity in Malaysia is the joint responsibility of federal, state and local governments. NRE has an over-reaching mandate concerning the environment, natural resources and biodiversity assets; therefore it can play a clear and unique role as an integrating *body for consultation and facilitation of synthesised data about biodiversity issues and priorities* to support federal, state and local planning levels.

With respect to biodiversity planning and management the

general principles in existing policies and plans are that:

- Development should be environmentally sustainable
- Human livelihood is dependent on biodiversity
- Planning and management should be integrated and holistic
- Critical habitats should be protected
- Protected Areas should be expanded to include all habitat/ecosystems
- Planning and management should be based on river basins
- Mainstreaming of biodiversity should be incorporated into Policies, Plans and Programmes.

Despite the difficulties, limitations, and issues surrounding ecosystem service valuations, there seems to be a general consensus that the value of ecosystem services often outweighs economic use and that today, protecting ecosystem services is, or should be, one of the most important responsibilities of politicians, resource managers, and society in general.

Presently, financial markets do not reflect the importance of biodiversity and natural processes as generators of ecosystem services that people depend on. Indirect values of biodiversity can be highly significant in comparison to the direct economic values derived from a particular site.

Incentives will be required to ensure sufficient conservation measures from private decision-makers.

Human activities have fundamentally – and to a significant extent irreversibly – changed the

diversity of life on Earth, and most of these changes represent a loss of biodiversity. The current rate of biodiversity loss greatly exceeds the rate that nature can compensate for and adapt to. The primary cause of erosion of biodiversity has been widespread transformation of once highly diverse natural ecosystems into relatively species-poor managed ecosystems. The reclamation / conversion of mangroves and mudflats for aquaculture, agriculture, industry, housing and recreational purposes is the major threat to waterfowl habitat.





A THREE-PRONGED IMPLEMENTATION AND OUTREACH STRATEGY

The Common Vision promotes a three-pronged implementation approach and outreach strategy that consists in:

- i) Strengthening the Protected Areas System
- ii) Land/Seascape management for biodiversity
- iii) Mainstreaming biodiversity.

I Strengthening the Protected Areas System

The creation of Protected Areas (PAs) *is* one of the most effective measures available for conserving biodiversity, but PAs are not meant to be islands in a sea of development. They must be part of our country's strategy for sustainable management and wise use of natural resources, and they must be set within a proper planning context.

A well-managed and secure Protected Areas System *is* fundamental to the long-term survival

of biodiversity. Still the fact that biodiversity is eroding in spite of the increase in PAs leads to the important conclusion that we cannot save biological diversity by this measure alone – we have to go further and manage the land / seascape to which the PAs belong.

The challenge faced by most nations today is to ensure that all habitats – including those falling outside Protected Areas – contribute to the maintenance of ecosystem services and national

goals of sustainability.

Dealing with natural resource and biodiversity assets, holistic management is today hampered by sector-based legislation and administrative setup.

By means of inter-agency coordination alone, Malaysia could significantly increase its extent of Protected Areas, incorporating and coordinating sites already set aside for long-term conservation by various entities at the Federal, State and Local levels. By in-

vesting efforts in increased inter-agency collaboration (for Peninsular Malaysia mainly within line agencies of NRE) the Protected Areas System could be increased almost three-fold to an estimated 16.5% of Malaysia – a truly impressive figure at the international level which does not require gazetting new areas. It will, however, require application of recognized standards and norms for their planning and management.

II Land/Seascape level management of biodiversity

Comprehensive long-term plans for conservation of biodiversity must include both a Protected Areas System and land/seascape-based strategies. The management of the land / seascape will influence the size and viability of populations of many (forest) species and thus biodiversity itself. The conditions of the land / seascape greatly influence connectivity between habitat fragments and the movement of organisms. In addition, the landscape conditions may act as buffers improving the combined effecti-

veness of Protected Areas and the Permanent Forest Reserve.

It is essential that the landscape sustains functionally viable populations of organisms that are fundamental to the maintenance of essential ecosystem services such as nutrient cycling, seed dispersal, and plant pollination – processes that underpin the long-term productivity of ecosystems and their ability to produce goods and services that ultimately affect human livelihood.

The greatest threat to biodiversity is loss of habitat, that is, extreme

changes that make habitats unable to support more than a fraction of their original processes and species. This happens with changes in land use, physical modification of rivers and/or indiscriminate withdrawal of their water, loss of coral reefs, and damage to sea floors due to trawling. Loss of habitat can also be caused by climate change, invasive alien species, overexploitation of species, and pollution.

For biodiversity to survive in the landscape there is an increasing need for decision-making and policy actions across multiple geographic scales and multiple ecological dimensions. The very nature of the issue requires it because changes in land use occur in local places, with real-world social and economic benefits, while potentially causing ecological degradation across local, state, national and global scales.

The “*ecosystem approach*” has been conceived to meet this challenge and it is considered one of the most important principles of sustainable environmental management. The *approach* consists on the application of appro-

priate scientific methodologies focused on levels of biological organisation, encompassing the essential structure, processes, functions and interactions among organisms and their environment.

Based on lessons drawn from conservation biology, the *ecosystem approach* for conservation of biodiversity at the landscape level may be considered in terms of the following operational management principles:

1. Maintain connectivity
2. Maintain integrity of aquatic systems
3. Maintain structural complexity of habitat stand
4. Maintain landscape heterogeneity
5. Manage disturbances

Successful management of biodiversity at landscape level requires multiple stakeholders to perform diverse management interventions in accordance with above-mentioned principles. Suitable interventions have already been identified and in this context it is encouraging that many parties share compatible objectives and have already engaged in pursuing them. To

some extent the challenge is to promote a cohesive and concerted approach to achieve a greater impact and reduce the risk of counter-productive measures.

Management of natural resources, according to the *ecosystem approach*, calls for increased inter-sectoral communication and

cooperation at many levels (i.e. federal, state and local) also involving civil society. This might be promoted for example by creating inter-ministerial bodies within the Government and generating networks where information and experience can be shared.

III Mainstreaming biodiversity

The economic performance of many production sectors, and the well-being of the people depending on those sectors for their livelihoods, is intricately linked to the conservation and sustainable use of biodiversity. Strengthening the mainstreaming of biodiversity into Policies, Plans and Programmes (PPPs) will ensure adherence to national priorities for sustainable development. Government departments have already embarked on the mainstreaming process and they require synthesised data of biodiversity baseline information, issues and priorities in order to conduct – for instance – Strategic Environmental Assessments (SEA) and Sustainability Assess-

ments (SA). Presently, SEA is carried out by the Sabah State Economic Planning Unit and SA by the Federal Town & Country Planning Department.

Mainstreaming means integrating or incorporating actions related to conservation and sustainable use of biodiversity into strategies relating to production sectors, such as agriculture, fisheries, forestry, tourism and mining. Mainstreaming may also refer to including biodiversity considerations in poverty reduction plans and national sustainable development plans. By mainstreaming biodiversity into PPPs, we recognize the crucial role that biodiversity plays in human well-being. Mainstreaming is about

ensuring that the importance of biodiversity is fully realised and taken in consideration within the development process in accordance with existing goals and objectives expressed in policies and plans.

Mainstreaming will allow economic sectors, development models, policies and programs to internalize biodiversity concerns. Integrating biodiversity concerns into the way sectors operate can have immediate benefits such as improving environmental quality and productivity, and can also serve as a long-term safeguard for meeting Malaysia's aspirations for sustainable development.

Basically, mainstreaming requires:

- An understanding and acceptance of the importance of a healthy environment to well-functioning production sectors.
- Mechanisms, the will and ability to identify win-win situations that benefit both biodiversity and the sustainability of a specific sector.

- An extensive strategy of communication, education and public awareness

Efforts to mainstream biodiversity into sectoral strategies need to be based on a clear understanding of how that sector impacts biodiversity, how it provides / makes use of ecosystem services and how it can help reach national policy goals relying on sector-specific tools.

Communication is a key element of sectoral mainstreaming. A strong and clear message about the importance of biodiversity for improved sector production, livelihoods, poverty reduction and national development is needed to promote biodiversity. This message will need to answer the question of "why people should care about biodiversity", and should be communicated across all levels and branches of the government, as well as to the general public.

Mainstreaming biodiversity into planning processes can be accomplished using different tools. SEA, for instance may be considered a systematic process to analyse the environmental effects of PPPs, and their alternatives. It

is now increasingly used to address all three pillars of sustainable development (i.e. environment, social and economic dimensions). Other tools for mainstreaming biodiversity include participation of biodiversity specialists in the development and implementation of long term planning tools such as sustainable development policies, plans and programmes. Mainstreaming biodiversity into production sectors requires the identification and prioritisation of “entry points” that will provide an opportunity to include biodiversity-relevant information and / or activities into sector operating processes. The main entry points to mainstream biodiversity into production sectors are the development and updating of various sectoral strategies and tools such as industry standards, codes of conduct, and certification schemes.

Finally, the *ecosystem approach*, with its provisions for societal choice, stakeholder participation, interconnectedness of ecosystems and adaptive management provides an effective guide for mainstreaming efforts. Other integrated approaches, such as Inte-

grated River Basin Management and Integrated Shoreline Management Planning (both DID), land-use planning and integrated oceans management also promote sector integration in a way that is consistent with the *ecosystem approach*.



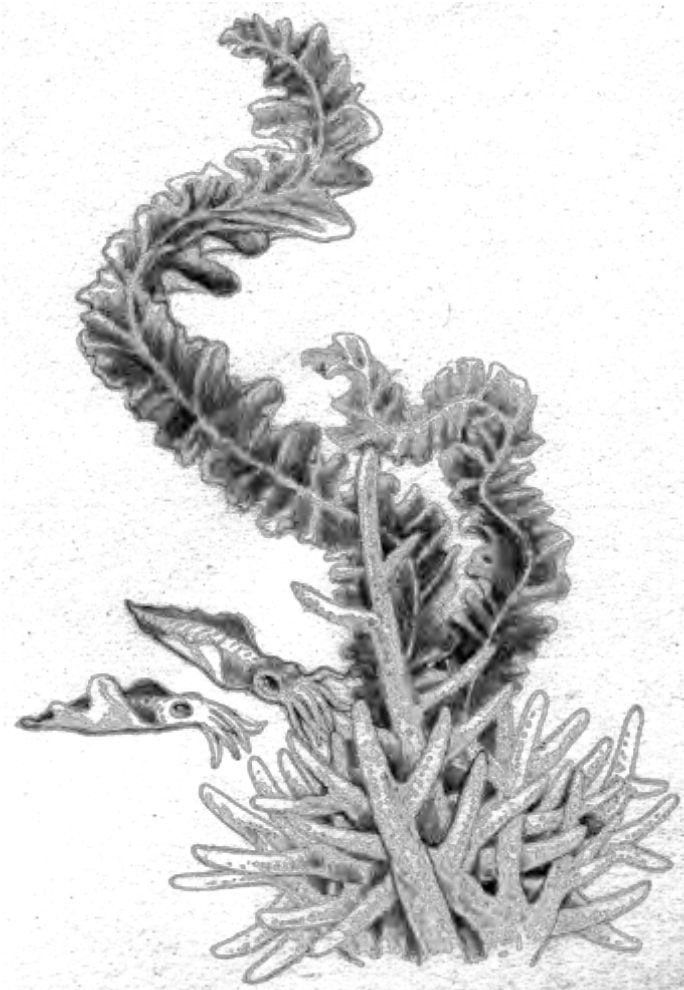
Economic concerns are of central importance to biodiversity conservation. Economic forces underlie and explain much biodiversity degradation and loss, and the application of economic instruments is useful to strengthening biodiversity conservation, sustainable use and equitable benefit sharing.

If Biodiversity Strategies and Actions Plans (BSAPs) are to be effective, they must be justifiable in economic terms. BSAPs also need to make efforts both to overcome the economic causes of biodiversity loss and to ensure that economic incentives are set in place, which encourage biodiversity conservation.

Over the last decades a range of economic tools to quantify the total economic value of biodiversity and to express it in monetary terms have been deve-

loped or refined. These tools can be useful in distinguishing between short and long-term economic costs and benefits (immediate costs of conservation

versus long-term gains), and may assist in answering who should pay the costs of conservation (developers versus local communities).





THE ROLE OF NRE

Biodiversity planning and management supported by multiple stakeholders requires mainstreaming of synthesised data on biodiversity issues and priorities relevant to planning at federal, regional, state and local levels.

The Ministry of Natural Resources and Environment has an overarching mandate for environment, natural resources and biodiversity assets and there is a clear and unique role for NRE to act as a mainstreaming *consultation and facilitation body for synthesised data on biodiversity issues and priorities* to support federal, state and local planning levels.

Promoting the *Common Vision on Biodiversity* will allow NRE and its line agencies to rally support for a shared perception of issues, priorities and required inter-agency actions throughout

the government apparatus and civil society.

For NRE it is important to promote a *Common Vision on Biodiversity* and the essential complementary contributions that agencies can make towards national goals of environmental sustainability.

This requires NRE to take the lead and act as a consultation body for synthesised, holistic data on biodiversity issues and priorities.

Following the principles and guidelines referred to here (further elaborated upon in a Synthe-

sis document and a Reference paper), and taking the necessary steps to review and update the environmental legislative framework, will ensure that national sustainable development goals with respect to natural resources and biodiversity are accepted and integrated by planners and decision-makers in the government, various production sectors and civil society.

It is also important to note that it will facilitate placing NRE in a position where it can always

report on and respond to inquiries about (among other things):

- The status of biodiversity (for national and international reporting).
- The present direction taken with respect to planning and management of natural resources and biodiversity assets.
- The extent to which provisions of national policies and plans, as well as international conventions, are adhered to.



Acknowledgement

The *Common Vision on Biodiversity* has been prepared in a consultation process between NRE, line agencies and key stakeholders to natural resource and biodiversity assets.

NRE would like to thank agencies and individuals who have offered their comments and support during the preparation of this paper.

The text is summarised from the *Reference Document for Planners, Decision-Makers & Practitioners* by Yanina Rovinski

Design and layout: Micael Junkov

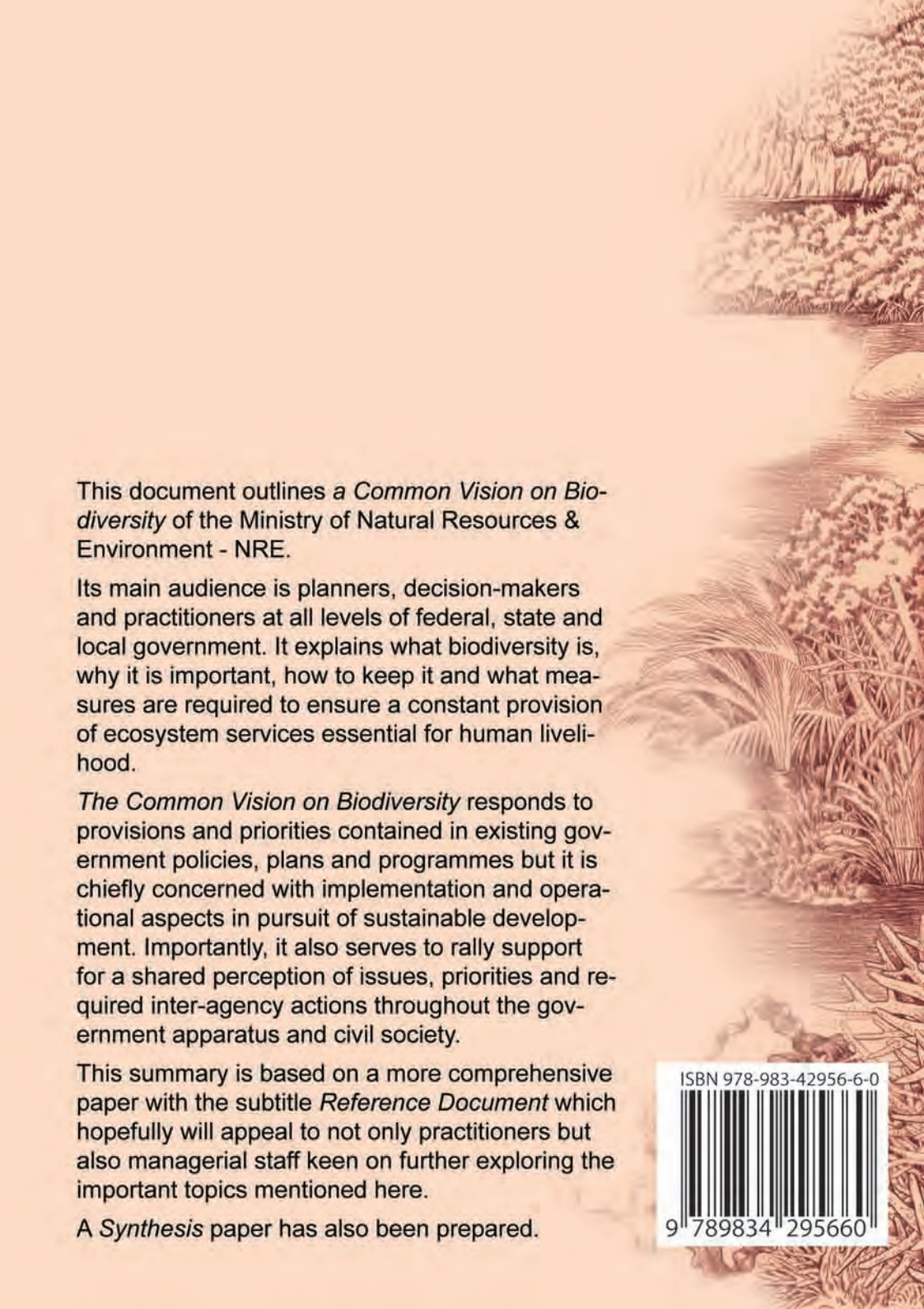
Artwork: Yew Kiang Teh

Printed by: Queenway Enterprise

This publication is published as part of the Biodiversity Component which is a joint undertaking between the Governments of Malaysia and Denmark under the Environmental Cooperation Programme.

The Component has three Sub-Components which are located at NRE, EPU and MENGO. The Component took off in November 2007 and runs until January 2010.

Funding for publication has been provided by the Danish International Development Assistance – Danida.



This document outlines a *Common Vision on Biodiversity* of the Ministry of Natural Resources & Environment - NRE.

Its main audience is planners, decision-makers and practitioners at all levels of federal, state and local government. It explains what biodiversity is, why it is important, how to keep it and what measures are required to ensure a constant provision of ecosystem services essential for human livelihood.

The Common Vision on Biodiversity responds to provisions and priorities contained in existing government policies, plans and programmes but it is chiefly concerned with implementation and operational aspects in pursuit of sustainable development. Importantly, it also serves to rally support for a shared perception of issues, priorities and required inter-agency actions throughout the government apparatus and civil society.

This summary is based on a more comprehensive paper with the subtitle *Reference Document* which hopefully will appeal to not only practitioners but also managerial staff keen on further exploring the important topics mentioned here.

A *Synthesis* paper has also been prepared.

ISBN 978-983-42956-6-0



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