ENSEARCH's Environmental Database

In the last issue of this newsletter, we congratulated our President, Ir. K. Kumarasivam on his reception of the Langkawi Award for 1997. In his award reception speech, our President announced that ENSEARCH is currently in the process of setting-up an environmental database. The database is one of the 15 Action Programmes that have been formulated in 1996 to help ENSEARCH achieve its Vision and Mission. It is one of the six identified strategies to develop ENSEARCH's national capacity in environmental protection and management.

Work on the setting-up of the database started last October and a soft launch is scheduled to be held sometime this year. The members of the team working on the database are Ir. Aw Kong Koy, Ir. Dr. Lee Jin and Miss Jennifer Thompson. Ir. Aw is the developer of the InfoMap database software (http://www.digiweb.com/~infomap) used in the project. He has volunteered to provide all the necessary technical expertise to support the construction of the database. Ir. Dr. Lee Jin, a water resources engineer and senior consultant at KTA Tenaga Sdn. Bhd., has volunteered to be the project coordinator for the database development. Jennifer Thompson is a Canadian placed at ENSEARCH for 6 months as part of an educational exchange programme.

The following are the objectives of the database:

- To be a comprehensive resource of information related to environmental issues that can be used to assist the government, the private sector and anyone carrying out work related to the environmental protection and management in Malaysia.

- To be a comprehensive resource of environmental information for use by educational institutions in their environmental education-related programmes.

- To be a comprehensive resource of environmental information for the education of the public on environmental issues and to increase the public's awareness and commitment to environmental protection and management.

The possible lists of resources which will be included in the database are:

1. Environmental terms, issues and technologies.
2. Environmental-related legislation, rules and regulations.
3. EIA reports, case studies and useful environmental data extracted from them.
4. Local and international environmental-related companies and organisations.
5. Environmental-related government organisations and research institutions.
6. Authoritative environmental-related technical papers and articles.
8. Available local and international expertise on environmental engineering and sciences.

The information in the database will be organised in a number of ways to facilitate information searches. Pertinent information will be linked hierarchically and through their logical relationships. One of the distinguishing features of the database is its unique multi-centric approach to the display of information. This feature allows all information related to any topic in the database, chosen to be in the "centre-of-view", to be displayed for instant viewing.

To ensure quality, expertise support from specialists/academics to review the compiled and contributed materials, and also to develop the information structure of the database, will be necessary. Thus, the success of the above database project depends on the support and contributions from everyone, such as:

- Government and non-governmental organisations providing information for the database.
- Organisations, companies and individuals providing funds for its development, either directly or through sponsorship of specific sections of the database. (All donations are exempted from tax).
- Specialists volunteering their services to review and build the data.

ENSEARCH believes that long-term solutions to environmental problems can only be generated by the leveraging of information through knowledge management, using a properly structured environmental information database.

If you are interested in contributing in any of the above ways or want further details, please contact the ENSEARCH Secretariat.

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TERRESTRIAL VEGETATION INTERACTION IN A BALANCED ECOSYSTEM

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Terrestrial vegetation is an important feature of the environment. Most vegetation are indigenous or native to the area in which they are found but some may be alien and troublesome. Retention or removal of natural communities and their replacement with domestic forms have numerous complications that must be considered both ecologically and economically. Ecosystems are self-contained and self-maintaining. Natural ecosystems are invariably richer in species and more stable than those artificially developed. The complexity and variability of ecosystems and their recovery capabilities make precise quantitative predictions impossible. The environmental impact of an ecosystem depends on the environmental value of the method of cultivation and the agronomic sensitivity of the area. Nevertheless, the repetition of environmental impacts has escalated in recent years, especially in Malaysia, so much so predictions are becoming more reliable.

Projects and activities usually produce adverse biological consequences of two types, direct or indirect impact, and of varying duration, short-term or long-term. Direct impacts are those that destroy, displace, or in some way adversely affect the vegetation. Whereas indirect impacts are those that destroy or disrupt habitats and ecosystems upon which a species depends. This is illustrated in Fig. 1 below:

Alteration or removal of natural vegetation has been the primary cause of habitat destruction in native plants and species extinction. Any proposed project that will alter or remove vegetation must consider the environmental impacts. The need for sustainable vegetation such as forest development is of paramount importance.

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Fig. 1: Direct and Indirect Impacts of Development on the Ecosystem