

THE GUIDELINES

The ILBM Plan Guideline is a technical document that encourages dynamic processes. The assembly of the ILBM Plan Guidelines is the methodology of building up the four main chapters in the ILBM Plan i.e. Chapter 1 - Description, Chapter 2 - Evaluating, Chapter 3 - Objectives and Chapter 4 - Action Program.

Chapter 1

This chapter lists all the details of the lake. This step is similar to describing what already exists in the lake.

Chapter 2

The evaluation process of the lake's issues and problems is done in this chapter. The process is analyzed from the information and data listed in the first chapter.

Chapter 3

From the findings of the evaluation process, realistic and achievable objectives can be visualized. Recommendations for various "management measures" required (in relation to the objectives) as well as the monitoring programs throughout its implementation, will then be appropriately arranged.

Chapter 4

While the plan is prepared, the action program will be an integral product within the plan. Looping or feedback system, where all information (including experience) recorded during the management measures execution will be re-used for the next round of the management process.

Focus Areas in the Lake Management Plan preparation

Geological & Physiographical features

Access to the lake

Hydrological features

Water characteristics

Water quality

Eutrophication

Ecological Attractiveness

Nature conservation features

Economic value of ES

Stakeholders management

Agencies' involvement

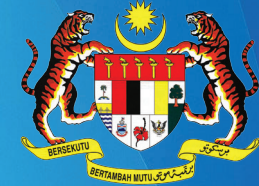
Communities' participation

Governance

Lake uses and its Resources
Development Facilities

Strengthening the pillars

In the process of building up a lake management plan, each focus area will undergo all four processes i.e. Description, Evaluation, Objectives, and Action Program.



National Hydraulic Research Institute of Malaysia (NAHRIM)
Ministry of Water, Land and Natural Resources (KATS)



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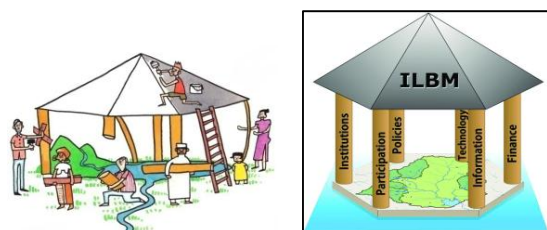
FOR INTEGRATED LAKE BASIN MANAGEMENT PLAN

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INTEGRATED LAKE BASIN MANAGEMENT (ILBM)

INTEGRATED LAKE BASIN MANAGEMENT (ILBM) is a conceptual framework that assists lake basin managers and stakeholders in achieving sustainable management of lakes and their basins. The basis of ILBM is the concept of "Lake Basin Governance" pillars: **INSTITUTION, POLICIES, PARTICIPATION, TECHNOLOGY, INFORMATION** and **FINANCE**. Normally, the pillars of governance are not properly set in foundation from the beginning, as shown in the illustration.

Six pillars of ILBM



This leads to weak governance. Thus, a properly developed management plan is required to achieve strong pillars of governance.

What is lake management?

Lake management is a unique scope of work which comprises a series of working lists that are implemented by a group of people to achieve certain decided outcomes.

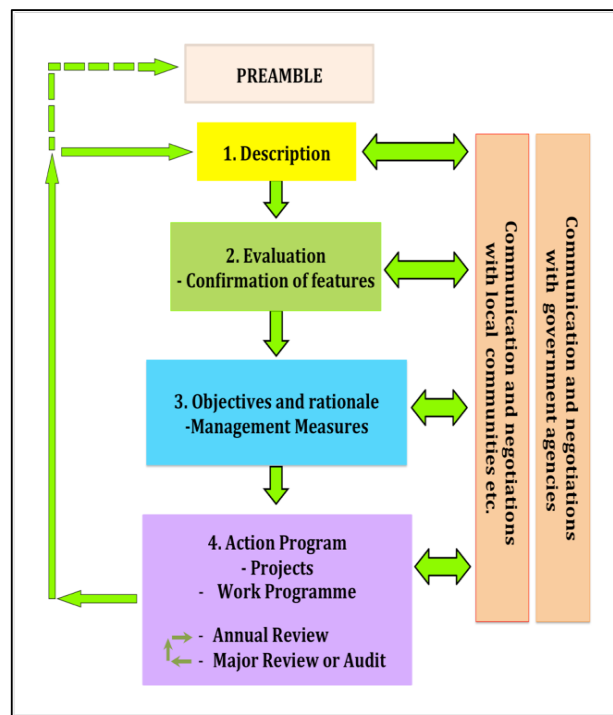
Why lakes should be managed?

From the management perspective, lakes are managed because of the following reasons:

- Lakes need to be rehabilitated and/or restored
- Enhancement of lake habitat or water quality
- Overall protection of lakes

Steps of preparing an Integrated Lake Basin Management Plan

The summarized guidelines in preparing an Integrated Lake Basin Management Plan are illustrated in the diagram below:

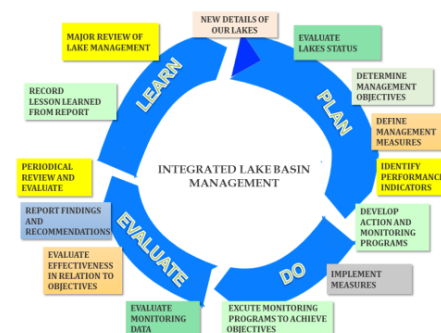


By following these processes in analyzing and detailing components of lake management issues, proper objectives and action programs can be more easily identified.

THE CYCLIC PROCESS

The **CYCLIC PROCESS** reviews the duration and the monitoring data of the management measures. The level of authority of the reviewing team is essential, and is recommended as part of the process.

Appropriate management based on the best available information is implemented to achieve the objectives. The whole process cycle of the management plan is as shown in diagram.



The whole cycle of ILBM Plan cycle

The features are monitored in order to determine the extent of which the objectives are met. When objectives are not being met, management measures will need to be re-defined. Monitoring is continued to determine if the modified management measures meet the objectives. This step is repeated for any further adjustments as necessary.