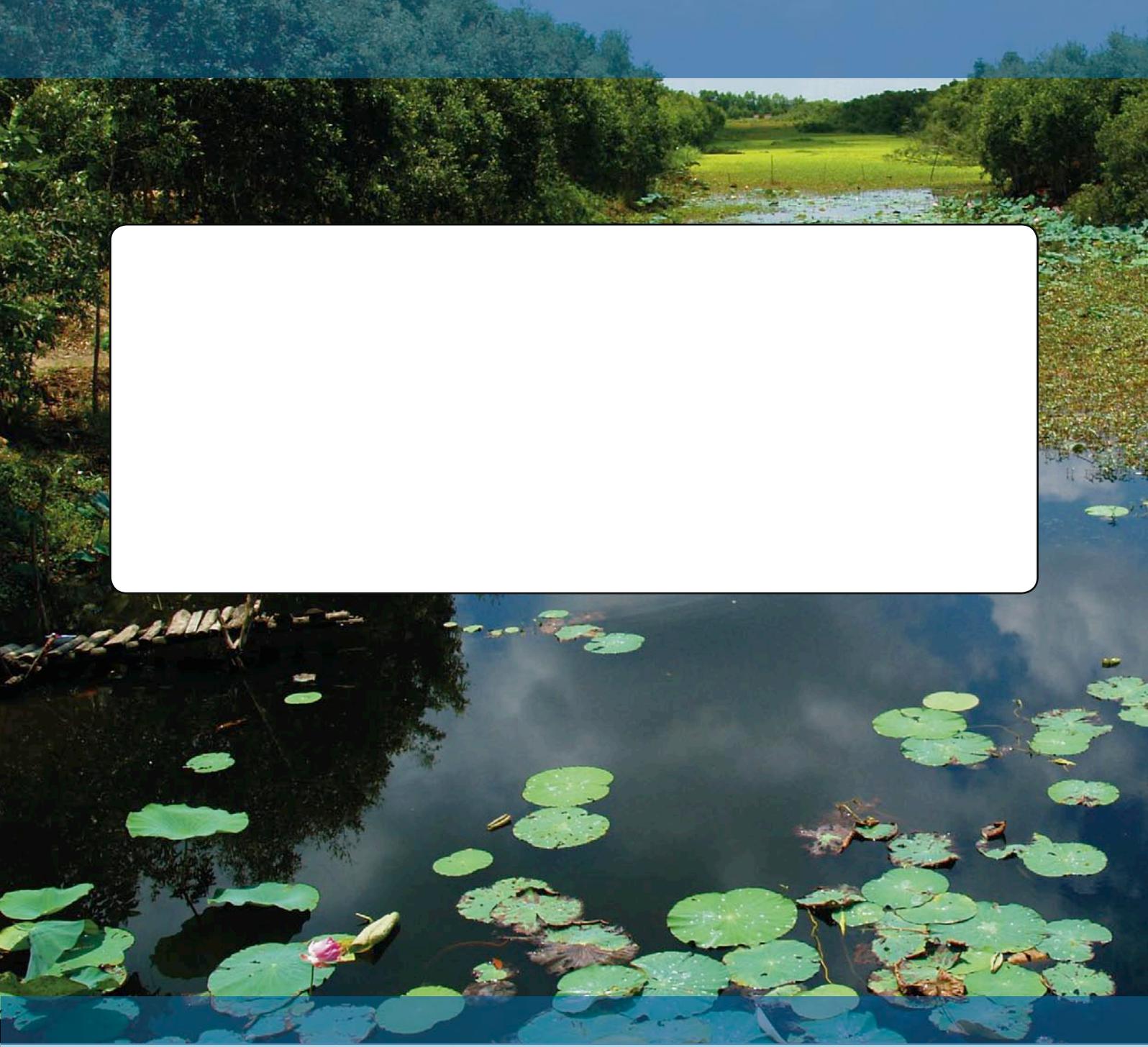
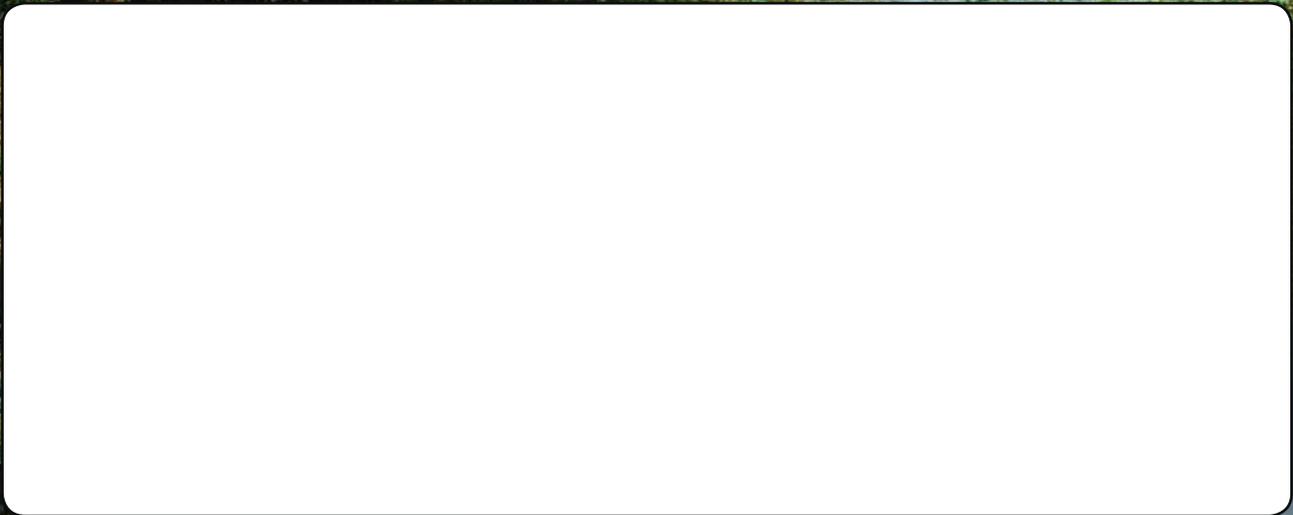




A Publication of the Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme



A JOINT UNDP - IUCN - MRC GEF-FUNDED PROGRAMME



# **Monitoring & Evaluation Systems Manual**

## **(M&E Principles)**

Vientiane

April 2005

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## PREFACE

This Manual has been prepared for the Mekong Wetlands Biodiversity Programme which is being implemented in the four riparian countries of the Lower Mekong River Basin.

To ensure that information needed to manage and adjust the programme is available early in the life of the programme, a monitoring and evaluation system is being set up to cover all levels, from provincial to Regional level across all four riparian countries.

Monitoring and evaluation for biodiversity has been defined as the gathering of data to enable detection of changes in the status, security, threats and utilisation of biological diversity. In the context of wetlands, the purpose is for its sustainable use by the communities that rely on that biodiversity for their livelihood. The complexity of biodiversity as a concept requires some different approaches to monitoring and evaluation. This is especially so for the sustainable use of wetlands, which is dependent so much upon governments and the policies and procedures that they put in place for the management of wetlands.

This manual describes the way in which an M&E system can be developed, but it is also meant to function as a specific programme resource containing information on how to plan, organize, carry out and report on the M&E activities. Considering that many of the associated staff involved in M&E may be relatively new to the subject, and may lack substantial background in the subject, this manual can also serve as a basic reference on M&E, and serve as the notes for an introductory training course.

A set of matrices and detailed Indicator datasheets specific to MWBP have been prepared but are not included in this manual. These should be reviewed at least annually. They have been initially developed specifically for Cambodia and Lao PDR and will be extended to Thailand and Vietnam as local programme staff are assigned. The preparation for these latter countries will as well provide an opportunity for review of the indicators. While every effort has been made to select indicators which are available, there has been little time to check application use of the system will prove whether it has been well prepared or not. Any part of the system that does not meet expectations should be changed or adjusted until it does. No doubt there will and should be numerous changes and improvements over the five years of programme implementation. Of course the very act of changing indicators is an indicator of learning, which itself needs to be tracked systematically.

In preparing this Manual the writers have drawn upon a wide range of other manuals and guidelines prepared by in particular multilateral agencies funding development projects across all sectors, not just in environmental management.

Many people have contributed to the development of the M&E system, particularly to identification of indicators. Staff of MWBP, persons in the Project Management Unit, as well as the National staff in Laos and in Cambodia have given much time and good ideas. Officers in Government agencies in both countries were also extensively consulted. To all these people goes a special note of appreciation. And last but not least the work of Chandavanh Dethrasavong the National short – term M&E Consultant for Lao PDR cannot pass unrecorded as she was often the sounding board for the ideas of the foreign M&E “experts”.

**Norman Welsh**

M&E Consultant

# CHAPTER 1

## MONITORING & EVALUATION

### 1.1 *Definitions*

Before discussing how to organize and conduct M&E a definition of both M&E is needed to provide a common understanding.

Monitoring helps continual self-evaluation through both formal and informal systems. It is the process of continuously collecting information about the progress of the programme. Collecting the information is a normal part of day-to-day work. The purpose of doing that is to help you decide whether activities are being implemented as planned. The information is then used to make decisions about improving the management and implementation of the programme.

Evaluation in its broadest sense means “to assess or judge the worth or value of something”. In the project context it is a process to measure the outcomes, impacts and effectiveness of a programme, in order to use lessons learned. You do this by determining the achievement of goals and objectives. Programme evaluations are separately scheduled activities performed at specific intervals (for example in the middle or at the end of a programme).

Therefore whilst M&E are related, there are also some differences, as shown in the table below:

	<b>Monitoring</b>	<b>Evaluation</b>
When is it done?	Continuous	At fixed points
What information is collected?	Directly available information about outputs	More detailed information; may be harder to get
With what purpose?	To check that activities are being implemented as planned	To see whether the goals and objectives are being reached
Who does it?	Programme staff as part of their day to day work	Internal, or external team with specialist knowledge, assisted by programme staff
How is the result used?	To improve quality of implementation and adjust planning. As input to evaluation.	To judge the impact on the target population, adjust objectives; decide about the future of the programme.

**Table 1: Comparison of Monitoring & Evaluation**

## 1.2 What is the Purpose of Monitoring and Evaluation?

M& E is a **management tool** for those who manage anything from a small project component to the entire project. The purpose of using M&E is to improve the project implementation in order to both achieve and enhance the impacts of the project.

A good M&E system will help in the following:

- Clarify what impact the project is expected to have
- Decide how progress and impact will be assessed
- Gather and analyse the necessary information for tracking progress and impact, and
- Explain the reasons for success and failure, and agree on how to use this information to improve future actions

Effective M&E can:

- Provide managers with information needed for day-to-day decisions
- Provide key stakeholders with information to guide the project strategy
- Provide early warnings of problems
- Help empower primary stakeholders, especially beneficiaries, and involve them more
- Build understanding and capacity amongst those involved
- Assess progress and so build accountability

In summary a good effective M&E system is a tool for **managing for impact**.

However it is not a tool that replaces the other specific management functions of planning, leading, organising and controlling.

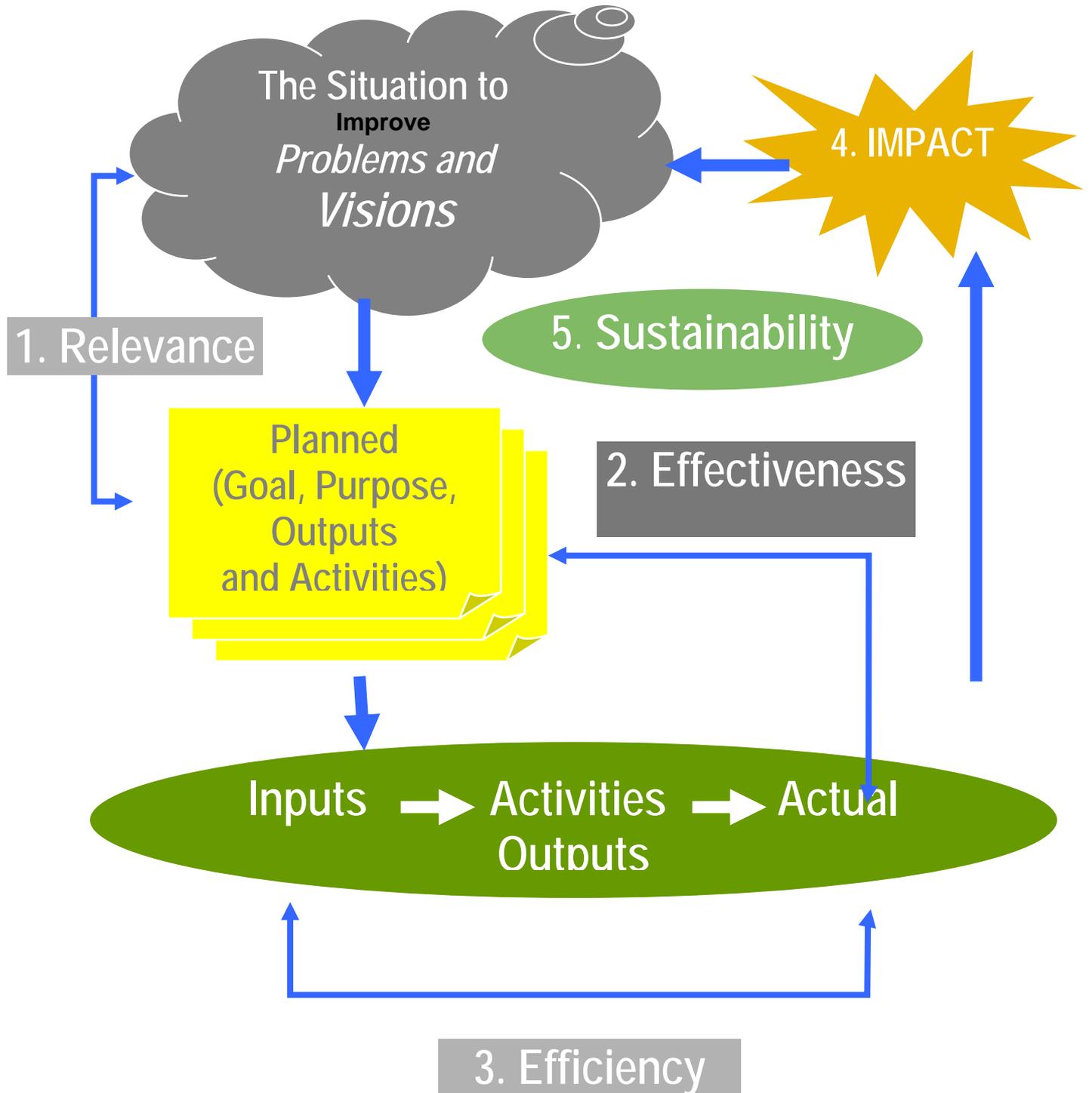
Evaluators of projects frequently have five standard questions that need to be answered. The M&E system thus should be designed to provide answers to those questions;

- **Relevance:** (i) did the project address priority problems faced by the target areas and communities, (ii) was the project consistent with policies of both donors and recipient governments (or agencies);
- **Effectiveness:** have activities, outputs and outcomes been achieved;
- **Efficiency:** were inputs (staff, time, money, equipment) used in the best possible way to achieve outputs; could implementation been improved/ was there a better way of doing things;
- **Impact:** what has been the contribution of the project been to the higher level development goals; did the project have any negative or unforeseen consequences;

- **Sustainability:** have the necessary systems been put in place to ensure the project itself and more particularly the project benefits continue once the project and its (foreign) funding has ended.

These are summarised in the following diagram.

# Five Key Questions for Evaluation



### 1.3 Linking Monitoring and Evaluation With Other Project Phases

M& E is not a stand alone activity, but is integrally linked to other phases of the project cycle.

The starting point for project implementation is the project design which is built up through a process of situation analyses – problem identification, stakeholder identification, organisation analysis, strategy formulation and identification and selection of implementation options. These analyses are then encapsulated into the Logical Framework Matrix. Since the LFM has “Indicators” built into it, there is an “automatic” connection between project design and the M&E system. Hence this approach to M&E is known as the “**logical framework approach**”

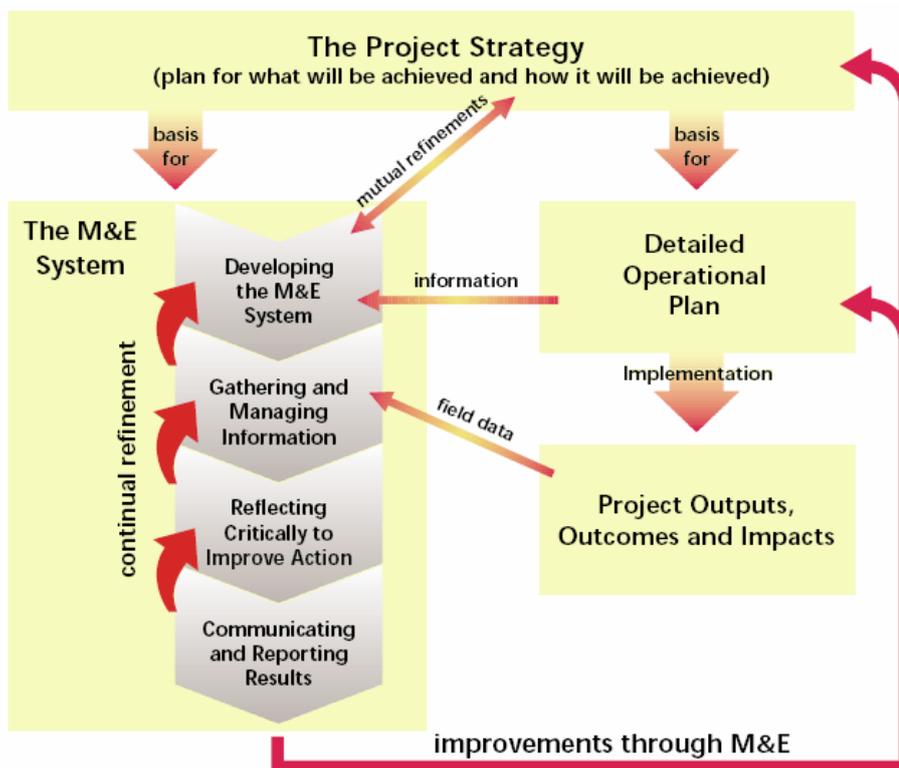
The LFM is then the basis for preparation of the Annual Workplan and Budget, and it is at this point that **Milestones** should be included. Also any activities necessary to undertake M&E are scheduled and budgeted, especially any surveys, and training for building capacity to conduct M&E included.

M&E is a dynamic process and one of the purposes in having an M&E system is to allow for changes in project implementation. This it is usually at the time of preparation of the AWPB that changes are made, and even the LFM can be modified if the project uses “adaptive management”.

At the conclusion of the project, M&E also has a vital role to play. This is perhaps the most obvious point in the project cycle for M&E and is what poorly implemented projects might focus upon more. Project completion reports often will detail just project accomplishments (outputs) but they should also present outcomes and impacts to that point. And the causes of constraints should be able to be identified, explained and possibly remedial action taken. But when a well designed M&E system has been put in place, these actions can be taken during implementation. And also then a system will be in place so that the longer term benefits and impacts will be able to be measured several years later.

One other stage at which it is common to recognise and undertake the M&E role is in mid-term evaluations. Such events are often used by donors to review progress and to adjust the project documentation and its direction. Again a good M&E system will have been producing information concerning progress – the outcomes and even the impacts to date, as well as the more obvious monitoring data.

The diagram below illustrates how the M&E system is linked into the strategy and operation of a project.



#### 1.4 When is Monitoring and Evaluation Done?

As explained in an earlier section, monitoring is done continuously by implementing staff. Field staff (extension workers, trainers, etc.) report on their activities on a regular basis. Again a well designed M&E system will have tools and forms that can be used for various parts of the monitoring process.

Evaluation however is somewhat different, being done periodically, and the decision when to do evaluations is really up to project management. Given that the project donors often have their own requirements, the following evaluation schedule is suggested as appropriate for a 4-year project life. This sort of schedule allows staff at all levels, and especially National staff, to build their experience in organizing and undertaking evaluations, and will provide valuable information ahead of the midterm and end-of-project reviews.

When What	Year 1 (2005-6)	Year 2 (2006-7)	Year 3 (2007-8)	Year 4 (2008-9)
Internal evaluation	✓	✓	✓	✓
External mid-term review		✓		
External evaluation				✓

**Table 2: Evaluation Schedule for a Project**

## CHAPTER 2

### INDICATORS

#### 2.1 Introduction

When we prepare a plan to implement a project, we can look at this as the *theory* of what we want to do. Once we start the implementation of the project in practice, there will be problems and issues arising. So in *practice* most of the time it will be impossible to do exactly what we said we would do in theory. To be able to see in practice whether the project is achieving what it said it would achieve in theory, or how far it has deviated, it requires indicators.

**Indicators** are realistic and measurable criteria of project progress. They should be defined before the project starts, and allow us to monitor or evaluate whether a project does what it said it would do. In project planning; indicators form the link between theory and practice. Indicators are either *quantitative*, or *qualitative*.

**Quantitative Indicators** can be expressed as a number. For example, the number of people attending a training, the weight of fish caught, the average rice harvest per hectare, the cost of transport to market

**Qualitative Indicators** on the other hand, indicate the quality of something, and they cannot normally be expressed as a number. For example, 'Women's participation in decision making in the Village Development Committee', or 'improved working relations among staff'.

**Proxy Indicators** Since qualitative indicators are hard to measure directly, we often measure something else instead. For example, instead of measuring 'improved participation' directly, we look at the number of meetings organized by the VDC, how many people attended, how many women were there, what decisions were made, and who made them. This kind of information then gives us an idea of the increase in participation in decision making. (The indicators we measure instead of the qualitative information are then called 'proxy indicators' or 'indirect indicators').

#### 2.2 Selecting Indicators

A number of methods for developing indicators have been described in the M&E manuals prepared by various funding agencies. But whatever system is chosen, it helps to go through a structured procedure. The Table below provides a general framework that can be used.

Stage	Type of Indicator	Sources of data	Who collects data
<b>Monitoring</b> (measures planned outputs against actual outputs)	Focus on outputs Mostly quantitative, and easily available as part of daily work	Progress reports Field visits Observation	<u>Project staff</u> (field staff, supervisors etc. as part of daily work)
<b>Evaluation</b> (measures effect, or impact)	Focus on goal and objectives. Often qualitative, and needs special effort to collect	Reports, plans Surveys Observation	<u>Evaluation team</u> (team members come from the project, often assisted by external evaluators)

**Table 3: Summary of indicator characteristics for M&E**

One of the M&E systems that is popular with project managers is that of the International Fund for Agricultural Development (IFAD), which develops an **M&E Matrix** which is itself based upon the LFM; this is known as the **Logical Framework Approach** to monitoring and evaluation. This methodology is briefly described below.

The critical step in this approach is to work with **performance questions** which will not only allow selection of indicators that show objectives are being met, but also can explain *why* and if this is in fact attributable to the project activities. Performance questions do not have to be complicated. The most basic types of questions to be asked are shown in the box below for each level of LFM hierarchy.

<b>Activities:</b> what have we actually done
<b>Outputs:</b> what have we delivered (produced) as a result of project activities
<b>Outcomes:</b> what has been achieved as a results of the outputs
<b>Impacts:</b> what has been achieved as a result of the outcomes; what contribution is being made to the overall goals; are there unanticipated positive or negative impacts
<b>Lessons:</b> what has been learned from the project that can contribute to improved project Implementation or to building relevant fields of knowledge

You can then determine what sort of information is needed to answer these questions. For activities and outputs, the question can probably be answered with a simple, reliable indicator. But when you move to outcomes and impacts a single indicator may not in itself provide enough information.

The type of information you need at the higher levels is generally about **change** brought about through project activities. Often it is comparative, a **with/without project**, or a **before/after project** situation. It might include questions such as:

- Presence (or absence) of something eg number of giant catfish in a specified part of the river
- Extent of an activity or coverage eg number of families with rice

- sufficiency since following IPM methods
- Level of use of some service eg frequency of using a credit fund for small business
- Type of access to a change eg are poorer families included in community fisheries
- Quality of some change eg does a seed bank distribute improved varieties that are free from impurities
- Relevance of some change eg does new legislation reduce illegal trafficking in Siamese crocodiles
- Effort required to do something eg number of days labour to plant 1 ha of trees

Having gone through the all the steps to select indicators, some important final checks need to be made, namely:

Does each output, outcome and impact have at least one indicator?

Does each indicator measure some important aspect that no other indicator measures? (a few good indicators are better than a lot that have no focus);

Does each indicator meet the five criteria given - **ROARS** or **SMART**? (see box below).

#### Characteristics of a Good Indicator

Relevant - it measures an important part of an objective or output;

Objective - if two people measure the same indicator using the same tool, they should get the same result. The indicator should be based on fact, rather than feelings or impressions (another way to say this is to say that it should be Measurable);

Available - indicators should be based on data that is readily available, or on data that can be collected with reasonable extra effort as part of the implementation of the (sub-)project.

Realistic - it should not be too difficult or too expensive to collect the information (related to the next one in the list);

Specific - the measured changes should be attributable to the project, and they should be expressed in precise terms

An easy way to remember this is to say that each indicator '**ROARS**' (like a lion).

#### Good Indicators are SMART

Specific - the measured changes should be expressed in precise terms and suggest actions that can be taken to assess them

Measurable - indicators should be related to things that can be measured in an unambiguous way

Achievable – indicators should be reasonable and possible to reach, and therefore sensitive to changes the project might make

Replicable - measurements should be the same when made by different people using the same method

Timebound – there should be a time limit within which changes are expected and measured

In summary, indicators should be limited in number (you CAN have too many), comprise a mix of both quantitative and qualitative, be practical to collect and not dependent upon experts, and most importantly, tell us something about the project.

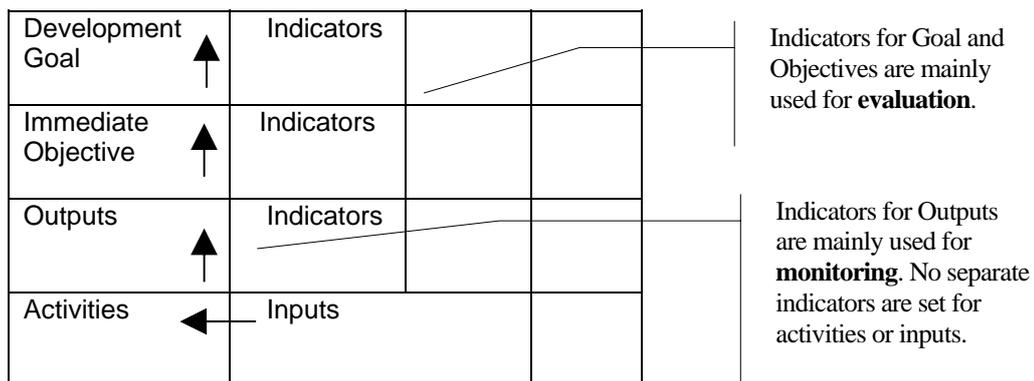
The selection of indicators is critical, and there is clearly a range of criteria for their selection. However these are just guides, in the end project managers must make decisions and select indicators that will serve them well by providing information to better manage the project in order to achieve its objectives.

### 2.3 Indicators for Monitoring or Evaluation

In the logic that is contained in the logframe, inputs are used to implement activities, activities produce specific outputs, the outputs contribute to the immediate objective, and the immediate objective contributes to the goal. This is shown schematically in the drawing below.

In the context of M&E we might vary to the terms so that inputs produce outputs, outputs lead to outcomes and outcomes result in impacts.

**Schematic Logic of the LFA**  
(start at the bottom)



Monitoring should tell us whether activities are being implemented as planned, and whether the outputs that result from the activities are being produced. This means that monitoring concentrates on the indicators set for outputs, and tells us about the **quantity, quality** and **timeliness** of project outputs as well as the **disbursement of funds** used to achieve the outputs.

Evaluation tells us what the effects of the project are, and so concentrates more on indicators set at the objective level (although monitoring information can be input for evaluation as well).

The indicators written in the logframe at the time of project design usually are the same as the indicators used for monitoring and evaluation. But in the case of MWBP, the indicators are being refined to better reflect the programme activities and the way of measuring the success of implementation. It is an evolving process, not a static thing.

## 2.4 The Monitoring & Evaluation Matrix

The foregoing discussions on indicators and on performance questions are part of the process of developing the M&E system. But to make the M&E operational requires considerable detail. What needs to be done can be summarised in a matrix, and in the sections following this is outlined and described.

The framework presented below is based upon the IFAD Manual for M&E in their projects. It provides a logical and comprehensive approach to development of the M&E system, but does assume a sound knowledge of the project LFM as the starting point.

The Matrix combines three features – (i) the development of a set of indicators (ii) the information needs of the indicators, and (iii) the use of the information gathered.

Whilst many projects have a set of indicators built into the LFM, using this Matrix it is easy to revise the Indicators, and it can be done as an exercise involving many of the stakeholders at an early stage in the project implementation.

Hierarchy Level	Performance question	Information Needs	Indicator	Baseline Information	Data gathering Methods	Required Forms, Training	Analysis; Reporting etc
Impacts							
Outcomes							
Outputs							

- Column 1      Hierarchy level  
This is the LFM level in the Narrative Statement column
- Column 2      Performance question  
Make an initial choice, assess its feasibility, accept/reject
- Column 3      Information needs  
Identify the information needs for which you will collect data
- Column 4      Indicator Name
- Column 5      Baseline information  
Do you intend making comparisons? Decide what baseline data is required, if it is already available or needs collecting, when etc
- Column 6      Data gathering methods  
Decide what method will be used to collect data, who will do it, frequency etc
- Column 7      Practical support for data collection  
Required forms, staff training, responsibilities
- Column 8      Analysis, reporting  
How will data be analysed, who will it be reported, to whom, what action will be taken

## CHAPTER 3

### INFORMATION: COLLECTION, MANAGEMENT, REPORTING

#### 3.1 Information Needs of Project Stakeholders

Most projects collect data!!

However too much data is either of little value or is not used properly. The **data** needs to be synthesised and analysed to provide it with meaning so that it becomes **information**. This then becomes **knowledge** when it is related to a concrete situation ie a project.

The M&E system must be designed to provide information and this is best done when those needs are understood. Part of that understanding relates to communication of the information – to whom does it go, in what form, at what time etc.

The information needs of the various stakeholders of any project, and the use to which they put the information, is related to the roles that they have. Some of these uses are for the following:

- Creating awareness and understanding of physical progress
- Tracking receipt and disbursement of funds
- Improving and/or adjusting implementation
- For application to other (similar) situations
- Enabling training needs to be identified and programs undertaken, and
- For dissemination to communities

The level of detail and the priority of the need varies but the primary users of the M&E system will be the “project management unit”, including both the National implementation agency and the International “technical assistance team”, as well as the funding agency eg UNDP, ADB, USAID and similar.

It is also important to recognise what information is already available within the different riparian countries and in the associated agencies and to make use of it as far as possible when developing the M&E system. It is not necessary to have a unique (or even perfect) system and have the project spending considerable time collecting primary data. Sometimes data from other sources can be used by small adjustments to the Indicators, and opportunity may even present itself to negotiate with other agencies to add to their collection methods, for example some additional questions to household surveys.

#### 3.2 Data Collection Methods

Before any information can be managed, it must be collected which is effectively the first stage of information management. The actual methods of collecting data them must be determined once having decided upon Indicators. This involves several decisions including the type of data that best relates to the indicator, the frequency of collection, collectors, how will it be collected, matters discussed in sections following.

Data for monitoring (inputs and outputs) is basically collected as part of everyday activities, and the choices are limited. But for evaluation the choice is more complex. Finally it comes down to either very structured (**formal**) or less structured (**informal**). Some characteristics of these are given below:

Structured (formal) Data Collection	Less Structured (informal) Data Collection
<p>Used for collecting large amounts of quantitative information            Collection takes long time &amp; resources            Easily analysed by computer            Needs knowledge of statistical methods            Little stakeholder involvement</p> <p>Example: census, household surveys</p>	<p>Used to collect qualitative data to understand a situation            Usually in small amounts            Stakeholder involvement encouraged            Takes few staff and resources            Staff need training            Not normally statistically analysed</p> <p>Example: focus groups, case studies</p>

In making the selection of data to collect a number of factors need to be considered:

- frequency of collection
- method of collection
- ease/difficulty of collection
- sampling size
- accuracy needed
- reliability
- validity
- direct costs
- number of collectors and the capabilities needed
- purpose/use of data collected

There are three frequently used methods of data collection for evaluation, and they may be used singly or in combination:

- review of existing materials such as project reports and government statistics
- direct observation(in the field), and
- interviews with concerned people such as community members and government officials

In (almost) every evaluation, a **review of existing project** materials should be the starting point; such materials might include:

- original project proposal
- regular reports – monthly, annual, special etc
- budget and financial reports
- organisation chart,
- reports of meetings, and
- previous M&E reports

The review should also include (i) collecting official data from agencies such as

“National Statistics Offices”, relevant Ministries and Departments, and (ii) reading material from other projects including NGOs

**Interviewing** is one of the main tools used in data collection, and can be either structured or unstructured. There are four basic types of interview to select from:

- individual (or household) interview with people selected because of some specific involvement in the project
- key informant interview with person(s) who have a special knowledge of the subject
- group interviews or discussions for more general (community) level information
- focus group discussions with small groups on specific topics

**Direct observation** means systematically observing events, people, plants, animals, watercourses, indeed anything that relates to the project, and carefully recording what is seen. Observation is a good way to cross-check information obtained during interviews, group discussions and similar activities. Direct observation is important when conducting a mid-term review or an *ex-post* project evaluation.

When making observations, there should be a plan – decide what you might want to observe, for example:

sites – physical characteristics such as size, materials used in construction, activity (business)

dress of people which might indicate status, ethnicity, wealth

Use photographs, record sounds and make measurements; these are part of direct observation. With the range of audio-visual equipment available at relatively cheap cost and the software for processing, this is now a cheap and effective method.

Field visits also afford opportunity to make direct observation even if not always planned or scheduled. Often situations arise where valuable information can be gleaned. But remember that observations should never be used alone, but should be cross-checked using other more structured data gathering methods.

Data collection just does not happen!! It must be planned – questionnaires and interview guides need to be prepared, materials collected, staff briefed (or trained if need be), schedules set up. And as part of the planning, decisions need to be made on how data is recorded both during collection and subsequently. And the method of analysis also must be determined in the preparation stage

The development of questionnaires is a subject in itself and is not dealt with in this Manual; there are many good references available. But two things important aspects are; (i) to structure the questionnaire so that it has built in checks on reliability of answers, and (ii) use a coding system that facilitates data entry into a computer.

Stakeholders, and especially beneficiaries, may be used as informants in providing information. This often requires them to give opinions on how projects have affected them, in which case the methods used in Participatory Rural Appraisals (PRA) are often quite appropriate. One of the best readily available manuals on PRA is the SEAGA Manual produced by FAO.

### 3.3 Data Storage

In storing information two key questions need answering:

- what information needs to be stored
- who needs access to the information and when or how frequently

Some projects use a comprehensive and interactive **database** specifically designed for the purpose – ideally one that records all physical and financial activities of the programme, both planned and actual. It may also include data on staffing, on training, be a stock record; the database becomes the primary repository of all project records. In so doing, information can be collated and stored so that it is not only readily retrievable but also can be sorted and presented in a number of formats and incorporated into regular reports.

The M&E system data itself can thus be incorporated into the database system as one of its components.

The database system provides a continual tracking of the programme inputs and outputs. It also includes **Milestones** which are determined at the time of the preparation of the Annual Workplan and Budget and included in the database at that time. The Milestones are an integral part of the M&E system and represent some of the indicators for the monitoring part. But Milestones as checkpoints during implementation also serve other purposes, such as helping staff follow their own performance.

### 3.4 Data Analysis and Presentation

Analysis of the data will depend on the nature of the data collected. Where it is quantified, statistical analysis is possible. The sort of analysis that might be undertaken would be for associations and relationships, for trends, for significant changes, even the more simple calculations such as average (or mean), maximum/minimum and range can be invaluable despite their simplicity.

Too often there is costly and detailed collection of data without the same attention given to analysis so that the lessons contained in it are just not noted. The methods of analysis should be identified as part of the process of preparing to gather data.

Just as important as analysis is the presentation of data. The maxim is to keep it simple and focus on a single message i.e. do not try to show too much in any one presentation. Tables are a simple means of presentation, more visually pleasing and often clearer are pie charts, columns and graphs. Diagrams and flow charts are other effective ways of depicting data.

And well selected photographs, even multimedia presentations can be used to great effect to show the impacts of projects.

### 3.5 Reporting and Communicating M&E Information

The M&E reporting system is concerned with the collection, analysis and storage of data. Communicating information on the other hand concerns the findings of the M&E process and is for action and accountability.

Where the M&E system incorporates reporting on completion of Milestones this is normally adequate for the monitoring of actual activities versus planned activities. For evaluation however something more is needed, and many projects fail to integrate progress reports on the achievement of their objectives into regular report formats, instead leaving it until the project completion report. Preferably, an annual report should be made. Annual Reports have tended to be concerned with recording the activities undertaken, and the funds spent ie it is more a monitoring report. However it can be more, and it should be reporting on changes in status from the previous period and highlighting any issues arising from the review. But it should also discuss impacts to date, for example where annual household income is collected it is easy to see if changes are occurring.

To whom should M&E information be communicated. Once again there has been a “tradition” – the regular reports are given to the funding agency, and to the implementation partners. And where a project management consulting company is involved they would also receive a copy. The broader community – the stakeholders with most at stake – rarely are the recipients of detailed reports on progress. They may get snippets, perhaps results of trials and demonstrations, and of course they do have their own ideas of success. But they have probably never had the expected impacts explained. For example, if the project is to impact upon poverty, it would be easy to call a meeting of affected communities and discuss the findings of the latest household income survey. Project management might even benefit from the feedback that communities would give.

When projects are truly “participatory” that does not just mean having communities do things, it also means taking communities into your confidence and sharing information with them, information that could lead to even better outcomes for the supposed beneficiaries.

## CHAPTER 4

### IMPLEMENTING THE M&E SYSTEM

#### 4.1 The Steps in Setting up an M&E System

Having designed the M&E system, including how to deal with data collected and the reporting needed, the final step is to implement the system. In general terms, a number of stages can be identified, and what is done varies somewhat depending on whether it is for monitoring or for evaluation. These differences are explained in the table below.

Stage	Monitoring	Evaluation
<b>Planning</b>	Decide what information is needed (indicators), and who needs it; Decide how often the information should be collected; Decide how you can get it (MOV), and any implications for budget or planning; Decide who should be responsible for collecting it;	Setting the objectives for the evaluation; Decide what information is needed; Consider how it can be collected; Decide questions for a survey; Decide geographic area; Decide sample size; Determine no. of people and amount of time needed; Study logical framework; Draw up evaluation team TOR
<b>Preparation</b>	Design and test any data collection records; Train staff who is responsible for monitoring; Inform project staff of the monitoring system.	Design data collection tools (survey forms, interview guidelines,...); Decide how to select the sample; Pretest and revise data collection tools; Train evaluation staff; Make arrangements for evaluation in villages
<b>Data Collection</b>	Collect the agreed upon information on a routine basis; Monitor the functioning of the system;	Collect and study existing information (reports, proposals,...); Select households / sites/ ...; Conduct the interviews / observations / ...; Start data processing.
<b>Analysis and Check</b>	Compare collected data with agreed indicators, and note differences; Identify any other issues; Look for cause of any problems, and identify options for action	Tabulate data; Interpret the results and draw conclusions; Decide on recommendations; Check analysis with key informants
<b>Reporting of Results</b>	Document data and findings; Provide feedback to project management and implementers	Summarize data in tables and graphs; Write the final report.
<b>Use of Results</b>	Use results to improve management and implementation of project.	Define priorities; Plan the implementation of priority actions / changes / ...

**Table 4: Stages in the M&E Process**

## **4.2 Implementing the M&E System**

With the framework for the M&E system developed, and if an Indicator Matrix has been drafted, the first steps have been taken towards implementing an M&E system for a project. Often in the routine administrative systems, for example the financial system, many of the elements needed for monitoring are in place as well.

But each project is specific, and almost certainly, training for national staff is necessary if the M&E system is to be successfully implemented. Often this will include general theoretical training, as well as project specific M&E training ie who does what, when, how, data collection and analysis methods and report writing.

## **4.3 Resources for Implementing M&E**

Resources are needed for implementing M&E activities. These are both human resources and financial resources. And some material resources will also be necessary, although many of these things are likely to be available in a project for use in other activities as well as in M&E eg GPS instruments.

At the time of the designing of the M&E System resource needs can only be discussed in general terms until Indicators are finalised and the methods of measurement agreed upon.

### **4.3.1 Human Resources**

It is important to identify a person in the Project office who serves as the Coordinator for all M&E activities. Often a project will have an International Consultant to set up the system, assisted by a National Consultant (if it is an ADB funded project). But it is most important that the National implementation agency has a designated M&E officer to liaise with staff in other offices, especially when the project is implemented in several provinces (or similar administrative units).

During the preparatory phase for implementing M&E system, informants will need to be identified, for example households should be selected to collect income and expenditure data. Also key contacts amongst the various stakeholders should be identified, for example in Government agencies and NGOs.

Under the data collection methods proposed, in some instances, consultants will be contracted. Again these needs will only become clear as the design of the system is finalised.

### **4.3.2 Financial Resources**

M&E should have a separate budget. Some projects have a specific budget for M&E activities, in others a specified per cent of total budget might be set aside, whilst in others nothing is provided and all activities must be funded from "regular" budget.

A number of items that should be included in a budget are listed below:

- Field data collection – fees and per diems for enumerators
- Incentive payments for informal data collectors/informants
- Travel expenses for project staff engaged in M&E activities

- Fees, per diems and expenses for mid term review
- Materials
- Fees, per diems and expenses for *ex-post* evaluation

## CHAPTER 5

### M & E IN MWBP

#### 5.1 Monitoring and Evaluation Approach in MWBP

MWBP is a project with several and diverse stakeholders, and each stakeholder has its own experiences and expertise with M&E systems. In developing the M&E system for MWBP, the challenge then is to build upon the current situation of the stakeholders and arrive at something that meets the needs of all, and is within their capacity to undertake.

For a biodiversity project such as MWBP the selection of indicators must be meaningful at all three levels of the programme, and must:

- Point as directly as possible to the state of biodiversity
- Allow for identification of the effects of “background” processes such as weather, natural variation, catastrophic events (floods, fires)
- Be easy for non-specialists to collect data
- Be consistent with National level indicators
- Reveal meaningful trends

There is a difference between measuring the biodiversity status and measuring the impact of projects on biodiversity. For these situations, some indicators can be the same, but others will be different. For example a change in numbers of threatened species could be due to non viable populations dying out, not due to poor management so a second indicator might be needed to clarify the first.

The situation is however more complicated since the primary stakeholders each have access to a different range of information which can, and should be, utilised as much as possible. For example in each of the countries, the government has both planning and statistics offices which gather quantitative data on the countries socio-economic situation and that includes the wetlands although usually it is disaggregated by administrative units rather than by ecological units. In addition more technical data is available, for example Cambodia is regularly collecting information on Community Managed Fisheries Groups. The M& E system of MWBP tries to incorporate this information and in the future to have some integration of the data collection systems.

The M&E approach is based upon a number of considerations as discussed in the preceding sections. In essence it is the **logical framework approach**. It is also a **participatory** approach involving stakeholders as is appropriate. But at the initial stage of the development of the M&E system, the beneficiaries have little involvement. Indeed the communities in the demonstration areas have so far not had much to do with the programme and so are not in a position to contribute to the M&E system. But through time that will change and they will become more active participants and more than just sources of information.

Another key part of the approach is that it is **learning oriented**. Lessons learned through the application of the M&E system are considered and used in adjusting the activities especially at the time of preparation of Annual Workplans. But in fact the

use of the M&E system itself is a learning exercise, and experience gained will show the need for adjustment in the Indicators, in the means of measurement and perhaps in the timing.

The third feature is that the M&E system is compatible with a comprehensive and interactive **database** has been designed for MWBP. This database records all physical and financial activities of the programme, both planned and actual. This then should become the **monitoring** component of the M&E system, ie the tracking of the programme inputs and outputs. The database includes provision for the inclusion of **Milestones** which can be regarded for the monitoring activities as the equivalent of **Indicators** for evaluation (for the outcomes and impacts of the programme). The Milestones are determined at the time of the preparation of the Annual Workplan and Budget and included in the database at that time.

## **5.2 Experience of Project Stakeholders with M&E**

### **5.2.1 National Programme Partners**

For the development and functioning of the M&E system of MWBP it is helpful to know the experience that National programme partners have in M&E. This is especially so in the area of collecting, analysing and using data for improving the management of project implementation to achieve results.

In discussions it is apparent that the understanding of M&E is not at an advanced level, and in particular the concept of “results oriented M&E”. The understanding of monitoring of inputs and of outputs is much better and certainly within capacity to be undertaken.

The key stakeholders in each country are the National Programme Office, the “counterpart” agency and the Provincial Programme Office (Wetland Demonstration Programme Office). From the programme side many staff are already experienced professionals who have had exposure to M&E systems previously. On the other hand the staff of the associated government agencies are often less knowledgeable and it seems that their level of knowledge can be directly related to the distance from the national capital. However each country is different and it is worth noting that in Thailand the government has instituted a system of “key performance indicators” across the spectrum of all its activities. As well all countries already have initiatives underway that are collecting data useful to the M&E system of MWBP although often facing problems such as insufficient budget and lack of staff. Poverty assessments and data gathering related to the UNDP Millenium Development Goals are an example of relevant government data. The challenge really is one of finding ways to make use of this data and in the future of integrating the different data systems to use the same Indicator.

A series of training courses will be needed to have all associated staff capable of playing their M&E roles; this training is detailed in another section.

### **5.2.2 Wetlands Communities**

Any discussion on project stakeholders must also take into consideration the communities within the wetlands in general and within the demonstration areas in particular. It is fair to say that with few exceptions these communities have little knowledge or experience with M&E systems. What experience and knowledge they do have will have come through involvement with other development projects. Furthermore, at this point in the programme implementation, they are not really

aware of the programme and its objectives thus making it difficult to have any opinions on how success (or failure) might be measured.

### 5.3 Participation

Current theories on development are strong on participation. In the context of M&E this should include stakeholders identifying both the Indicators and the methods for collecting information about them. The stakeholders are then also included in the data gathering and assessment processes. In MWBP that ideal scenario is not practical, at least at the time of the M&E Manual being prepared. Particularly it is true for the wetlands communities although even the National programme partners are limited in their ability to contribute.

Initially the stakeholders can be **involved**, albeit in a limited way. For example, they can be data collectors under supervision, and they can be informants providing both “hard data” and especially opinions and experiences. But with time the involvement should increase with inputs to things like development of wetland management plans and to the ways of measuring the achievement of objectives.

### 5.4 Capacity Building Needs

All staff of MWBP will be involved in the implementation of the M&E system, as will many of the government counterpart staff. Training in M&E will be an important activity, and will need a systematic approach under the direction of the RWTC working closely with the EMO.

During the preparation of the M&E framework and the identification of Indications consultations with national and provincial IUCN programme and project officers and community participants. These revealed, with some exceptions, an as-yet limited knowledge of monitoring and evaluation fundamentals and little practical experience in applying M&E as an integral management tool. Specifically, it was apparent that M&E has not been widely applied and is not well understood in the management context with respect to both project planning and adaptive management. For this reason, it will be important to design and deliver training courses to well-defined target audiences to increase understanding of M&E and its usefulness as a core management tool. Recognizing that different audiences have different roles in the project some preliminary recommendations for target audiences and training topics are presented in the following Table. It is envisaged that target audiences and training topics will be refined to reflect feedback from IUCN staff and national counterparts. Scheduling of training courses early in project implementation will be advantageous in terms of ensuring well-informed inputs to refining the design of the project M&E at the national and provincial levels.

The training can most effectively be delivered as a series of short courses focusing on one or two topics, rather than a single intensive and all embracing course.

<b>Target Audience</b>	<b>Training Topics</b>
National IUCN Office	Results-based management Integrating M&E into project design, planning and implementation Application of monitoring in day-to-day operations Planning ahead for internal and external evaluations
National Counterparts	Integrating M&E into project planning, management and oversight
Provincial IUCN Office	Results-based management Fundamentals of M&E Integration of M&E into activity planning and implementation Application of monitoring in day-to-day operations Data collection, information synthesis, evaluation of results and feedback to activity planning
Project Officers and Extension Staff	Fundamentals of M&E Data collection, information synthesis, evaluation of results and feedback to activity planning
Provincial Steering Committee	Fundamentals of participatory M&E Integration of M&E into activity planning and implementation Information needs and uses
Community Officials	Fundamentals of participatory M&E Integration of M&E into activity planning and implementation Information needs and uses
Community Participants	Fundamentals of participatory M&E Information needs and uses Practical applications of lessons learned

### **Preliminary Training Recommendations**

#### **5.5 Implementing the M&E System in MWBP**

With the framework for the M&E system being developed, and the Indicator Matrix drafted, the first steps have been taken towards implementing an M&E system in MWBP. In addition the Programme database contains many of the elements needed for monitoring, especially the setting of Milestones in the Activity Plans.

Over the coming months (2005), a number of activities will need to be undertaken to finalise the M&E system and make it operational. This will include a number of associated training activities. These are summarised in the Table below.

It should be noted that to date development of the M&E System has been for Laos and Cambodia only. The work for Vietnam and Thailand should be done early in 2005 (by May).

<b>Activities</b>	<b>Timing</b>	<b>Associated Training</b>
Complete the M&E system details - finalise the selection of indicators, complete the preparation of Indicator Data Sheets	January - April 2005	-
Have all PMU specialists comment upon the Indicators relevant to their activities in terms of relevance and "doability"	February 2005	Information needs and uses Integrating M&E into project design, planning and implementation
Plan M&E training program and commence courses	March 2005	-
Conduct an initial M&E Workshop for senior National staff (initially NWPC and IUCN Co-managers and Technical Advisors) explaining the system and their responsibilities in it	April 2005	Integrating M&E into project design, planning and implementation Application of monitoring in day-to-day operations
Undertake detailed planning for collection of data needed to determine "Baseline Status"	May 2005	Data collection, information synthesis, evaluation of results and feedback to activity planning
Collect "Baseline Status" data, and analyse it	June 2005	-
Develop Indicators for Thailand and Vietnam	May 2005	Fundamentals of M&E Integration of M&E into activity planning and implementation
Commence regular data collection and reporting on Indicators	June 2005	Results-based management
Use M&E information for adaptive management and preparation of 2006 Annual Workplan	October 2005	Integration of M&E into activity planning and implementation
Full implementation of M&E system	January 2006	Various and on-going

## Implementing the M&E System

### 5.6 Resources for Implementing the M&E System

Resources are needed for implementing the M&E activities. These are both human resources and financial resources. And some material resources will also be necessary, although many of these things are likely to be available in the Programme for use in other activities as well as in M&E eg GPS instruments

At the time of the designing of the M&E System resource needs can only be discussed in general terms until Indicators are finalised and the methods of measurement agreed upon.

#### 2.6.1 Human Resources

It will be important to identify a person in the PMU who serves as the Coordinator for all M&E activities. Presently it is the intention to assign that responsibility to the Wetlands Ecosystem management Officer who will be assisted by the Programme Administrator.

Likewise in the National office a person needs to be designated, and whilst nominally it should be the NWPC, to be more practical, the NWCTC is the person who will be most involved in the activities, especially collection much of the data. And at the Demonstration Area level, it is proposed that the Technical Officer be responsible.

During the preparatory phase for implementing M&E system, informants will need to be identified, for example households should be selected to collect income and expenditure data. Also key contacts amongst the various stakeholders should be identified, for example in Government agencies and NGOs.

Under the data collection methods proposed, in some instances, consultants will be contracted. Again these needs will only become clear as the design of the system is finalised.

#### 5.6.2 Financial Resources

M & E should have a separate budget. Whilst no estimate has been made, pending finalisation of the M&E system, it is noted that the MWBP budget sets aside an amount of 5% for M&E activities. A number of items that should be included in a budget are listed below:

- Field data collection – fees and per diems for enumerators
- Incentive payments for informal data collectors/informants
- Travel expenses for MWBP staff engaged in M&E activities
- Fees, per diems and expenses for mid term review (end of Enabling Phase)
- Materials
- Fees, per diems and expenses for *ex-post* evaluation

## **GLOSSARY OF TERMS**

<b>Activity</b>	Actions taken or work performed in a project through which project inputs are applied to produce specific outputs
<b>Assumption</b>	A factor identified as influencing the project results, and over which the implementing team has some influence and control
<b>Baseline</b>	The existing (or initial) state in a project which serves as reference point against which changes are measured, usually expressed quantitatively
<b>Baseline Survey</b>	A survey undertaken to determine the baseline (state)
<b>Beneficiaries</b>	Individuals, groups, and/or organisations whose situation is supposed to improve through the project activities
<b>Benchmark</b>	Reference points or standards (best practice) against which performance can be compared (also sometimes referred to as key performance indicator)
<b>Effectiveness</b>	A measure of the extent to which a project attains its planned results
<b>Efficiency</b>	A measure of the extent to which a project converts its inputs into outputs; usually done as an economic analysis comparing benefits received against the costs incurred
<b>Evaluation</b>	A systematic exercise that assesses the results of a project's activities in terms of efficiency, effectiveness, relevance, sustainability and impact; by selectively giving answers to specific questions it should provide information that is credible and useful and is also a guide to management
<b>Goal</b>	Goals are the longer term project objectives, often related to national development objectives to which the project can contribute to but not directly influence
<b>Impact</b>	The long term effects of a project on the stakeholders
<b>Indicator</b>	Quantitative or qualitative variable used to measure project results (achievements, change or performance)

<b>Input</b>	The financial, human or physical resources used to conduct activities to produce the intended results in a project
<b>Livelihood</b>	The integration of the various factors that comprise the “quality of life” – financial, social, natural, physical, human
<b>Logical Framework Approach (LFA)</b>	An analytical tool for project identification and development that involves problem analysis, stakeholder analysis, development of a hierarchy of objectives, and selection of a preferred implementation strategy.
<b>Logical Framework Matrix (LFM)</b>	A table (matrix) usually presented as 4 x 4 that summarises the project following the analysis undertaken in the LFA, and specifically showing the strategic elements, their relationships, and the external factors that might influence the success or failure of the project
<b>Milestone</b>	Project activities (or results) that necessarily must be accomplished but in themselves do not necessarily directly influence outcomes
<b>Monitoring</b>	The regular collection and analysis of information that provides managers with feedback and early indications of progress or lack thereof towards project objectives
<b>Objectives (goals)</b>	A specific statement of the desired accomplishments/results of the project; sometimes referred to as the “development objective”
<b>Outcome</b>	The actual (or intended) change that the project seeks to support – it is a change in conditions that comes between the immediate outputs and the long – term impacts
<b>Output</b>	Tangible results that are produced at the completion of activities, through the sound application of the inputs; managers have a high degree of influence over outputs
<b>Purpose</b>	A term used in the LFM that results from the outputs being achieved; sometimes called the “immediate project objective”

<b>Relevance</b>	The extent to which the objectives remain valid and consistent with the target group's priorities and the donor and recipient's policies
<b>Reliability</b>	Consistency and dependability of data collected under repeated use of the collection procedure under the same conditions
<b>Results</b>	A broad, general term used to denote the measurable effects of project activities
<b>Risks</b>	A factor identified as influencing the project results, but over which the implementing team has little influence (compare with assumption); it is the combination that an event will occur and the seriousness of effect if it does happen
<b>Side Effects</b>	The unintended or unplanned results of a project
<b>Stakeholder</b>	People, groups or organisations who have a direct or an indirect role and/or interest, and can be affected either positively or negatively by the project
<b>Sustainable</b>	<b>a)</b> The situation wherein the (positive) effects of a project will persist for an extended period after the external assistance ceases; <b>(b)</b> the meeting
<b>Sustainability</b>	of the economic, environmental and social needs of the present without compromising the ability of future generations to meet their own needs
<b>Validity</b>	The extent to which a measurement accurately measures what it is supposed to measure

## SELECTED READING

During the preparation of this M&E Manual, a number of relevant publications available from the various development organisations were identified and consulted. The following list is by no means comprehensive but does represent useful sources of information that can be consulted by people interested in M&E principles and their application to projects.

A brief comment is made on the nature and target of each publication cited.

Most of these publications can be downloaded (free) on the agency INTERNET site.

### **UNDP – GEF (2004) Biodiversity Program Study 2004**

This presents the results of GEF review of M&E in all their projects. Whilst not a manual on M&E in itself it contains pertinent recommendations on how M&E can and should be effectively incorporated into programmes and projects

### **World Bank (2004) Monitoring & Evaluation: Some Tools, Methods and Approaches**

This is a brief “how to” manual presenting some important principles for M&E systems

### **UNDP (2002) Monitoring and Evaluating for Results**

UNDP specific but contains a very good and detailed description of terms used in the UNDP project management processes

### **UNODC (2003) A Manual on Monitoring and Evaluation for Alternative Development Projects**

A “how to” manual that contains both theory and practical sections prepared specifically for people working in the UN narcotics control programme.

### **IFAD (2000) A Guide for Project M&E**

A comprehensive Manual that works through M&E firstly from a theoretical standpoint and then puts it into the MATRIX. It is well illustrated with examples to show how the principles are put into practice. Principles. But it is much more than just M&E and is effectively a manual on project information management.

### **IFAD (2000) Agricultural Support Project to SEILA: M&E Manual**

This is a “how – to ” Manual prepared for an IFAD project in Cambodia. It was prepared before the larger IFAD Guide was published but contains many of the same ideas. It comes complete with forms in which data can be recorded and an easy to follow guide for setting all files on a computer.

### **World Bank (1998) Guidelines for Monitoring & Evaluation of Biodiversity Projects**

This is very specific for “biodiversity” and if you are working on such a project is very handy because it focuses on the key issues.

**Oxfam & Novib (1999)    Impact Assessments for Development Agencies. Learning to Value Change**

A comprehensive guide, perhaps better suited to the types of project that NGOs implement

**Institute of Tropical Medicine of Antwerp (2000)**

**Comprehensive Participatory Planning and Evaluation**

Amongst the various references available, and there are as many as there are donor organisations, this is one that gives more attention to “participation” and planning as part of an M&E process

**IUCN                                    Managing Evaluations – A Guide for IUCN Programme and Project Managers**

This Handbook was written to assist managers in planning, commissioning and implementing high quality evaluations.

In addition IUCN website has amongst its themes “Evaluation”, and the site contains lists of references plus much other useful material.



## Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme

The Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme (MWBP) is a joint programme of the four riparian governments of the Lower Mekong Basin – Cambodia, Lao PDR, Thailand and Viet Nam – managed by the United Nations Development Programme (UNDP), the World Conservation Union (IUCN) and the Mekong River Commission (MRC), in collaboration with other key stakeholders. With funding from the Global Environment Facility (GEF), UNDP, the Royal Netherlands Government, MRCS, the Water and Nature Initiative (WANI) and other donors, the programme addresses the most critical issues for the conservation and sustainable use of natural resources in the Mekong wetlands. MWBP aims to strengthen the capacity of organisations and people to develop sustainable livelihoods and manage wetland biodiversity resources wisely. It is a five-year (2004-2009) intervention at three levels – regional, national and local – with demonstration wetland areas in each of the four countries: in the Songkhram river basin, Thailand; in Attapeu province in southern Lao PDR; in Stung Treng, Cambodia; and in the Plain of Reeds in the Mekong Delta, Viet Nam. The programme aims to:

- Improve coordination for wetland planning from regional to local levels
- Strengthen policy and economic environments for wetland conservation
- Generate and share information
- Train and build capacity for the wise use of wetlands
- Create alternative options for sustainable natural resource use and improve livelihoods

MWBP is a partnership between governments, aid agencies and NGOs, and provides a framework for complementary work for wetland conservation and sustainable livelihoods in the Lower Mekong Basin.

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