



TRAINING MANUAL 5 ISWM PROJECT DESIGN AND MANAGEMENT

MODULE 5-4: ISWM SYSTEM MANAGEMENT/ ADMINISTRATION

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ISWM System Management/Administration

This module provides an overview of ISWM system management/administration. The overall approach is that ISWM system management/administration should reflect “output-based” approaches. That is, that management should establish the results desired for ISWM system and should shift focus from managing inputs to managing the achievement of those results.

The intended audience for this module is senior management with responsibility for ISWM systems as a whole. Although some of the topics introduced in this module are similar to some of those introduced in the companion module “ISWM Operations Management”, the way these topics are addressed by ISWM system managers/administrators varies considerably as compared to the way they are addressed by operations managers. The two modules are therefore complementary between the different audiences for whom they are targeted.

It is intended that delivery of this module will be undertaken in such a way as to encourage interaction and discussion among training participants, and between the participants and the instructor. Throughout, the instructor should introduce subject matter and should ask participants how they would apply the concepts that have been introduced, what experiences they have had with similar initiatives to those that are discussed and how they might be improved in light of experience, and relevant examples they may have that illustrate points made from their own experience.



OBJECTIVE

The Objective Of This Module Is To Facilitate Capacity Development In “Output-Based” Approaches To ISWM Systems Management/Administration.

This approach improves focus, coordination and performance in complex projects with many stakeholders and multiple decision-makers.

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Objective

The objective of the module is to provide a basic training to those who are responsible for ISWM systems management/administration.

Implementation of ISWM systems presents particular management challenges. New relationships between stakeholders may be required, together with new policy, legal and institutional structures, new financial frameworks and new technologies. The performance of one component of an ISWM system may depend on the performance of another over which a manager may have limited influence. As with any new approach to solving problems, expectations of success may be high. Within this environment, effective management is critical to the success; ineffective management will lead to confusion and disappointment.

The “output-based” approach to managing ISWM systems has emerged as an effective framework through which to achieve ISWM objectives. The approach is based on the concept of *managing for results*. In this approach, desired ISWM results and timing are established at the outset of an initiative, and activities are oriented to achieving these specific results within the established timing; progress is monitored, and activities adjusted as necessary to ensure results are met. This approach contrasts with traditional models of managing activities, which may achieve much action but which do not necessarily lead to desired or timely results, and may not achieve coordinated results across different stakeholders with varying motivations and interests.

Managing for results requires a new way of thinking about activities, and a new way of managing activities. In particular, it requires consideration of *inputs and outputs*, actions targetted at *maximizing performance*, and a focus on *reporting* not simply what has been done, but what has been achieved.

The implementation of output-based approaches to ISWM is greatly facilitated by the use of simple management and administrative templates and formats. In addition to providing an understanding of output-based approaches to ISWM and how to implement them, this training module also provides sample templates and formats that can be used to assist in implementing output-based ISWM.

The module can be presented in conjunction with its companion module “Output-Based Approach To ISWM Operations Management”, or can be presented on a “stand-alone” basis. The companion module “Output-Based Approach To ISWM Operations Management” addresses management and administrative issues in the context of ISWM operational goals associated with an ISWM line operations and functions. The present module focuses on the application of the “output-based” approach to strategic ISWM objectives across the range of activities within an ISWM project or programme.

WHAT ARE THE BENEFITS OF OUTPUT-BASED ISWM MANAGEMENT APPROACHES?

An Output-Based Approach To ISWM System Management/Administration Brings The Following Benefits:

- **Accountability is explicitly linked to results, not simply actions**
- **Emphasis is placed on efficiency and innovation in achieving results**
- **It provides opportunity to benefit from private sector participation**

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What Are The Benefits Of Output-Based ISWM Management Approaches?

Traditionally, implementation of ISWM projects has been marked by a “disconnect” between project design that establishes goals and results desired, and project implementation that focuses on activities/processes necessary to achieve goals and results. In theory, a focus on activities/processes at the project implementation level should lead seamlessly to the efficient and timely achievement of results. In practice, this has frequently not happened as implementing entities have wrestled with day-to-day complexities that arise in ISWM projects. ISWM projects have often not met desired results in a timely or efficient manner. “Output-based” approaches to ISWM management are intended to address these problems.

The hallmark of output-based ISWM management approaches is that *accountability is explicitly linked to results, not simply actions*. For those responsible for managing and administering ISWM projects, it is therefore not sufficient to simply undertake actions because they may have been previously determined to be required. Rather, ISWM system managers/administrators are required to think concretely about the results that the actions are intended to achieve, and therefore whether the consequence of the actions they undertake will be to achieve the results that are intended.

A consequence of this approach is that *emphasis is placed on efficiency and innovation in achieving results*. Because the measure of success is the achievement of results, a greater emphasis is placed on efficient and innovative means of achieving results. In METAP countries, where public sector funds for solid waste management are in short supply, this provides an appropriate basis for the most efficient use of the funds that are available.

Linked to this, “output-based” management approaches provide a framework for public sector ISWM system managers and administrators to consider *opportunity to benefit from private sector participation*. The focus in this respect is, again, the most efficient way of delivering public sector services. Where public sector delivery of ISWM services can be competitive with public sector activity, public sector ISWM system managers and administrators are encouraged to re-evaluate their relationship to the private sector and to think in terms of how private sector participation can be structured to achieve results more efficiently and effectively than may presently be the case.



TRANSITION FROM PROJECT DESIGN TO MANAGING IMPLEMENTATION

Transition From Project Design To Project Implementation Requires:

- Prioritising objectives
- Allocating responsibilities
- Manageable work programmes

Start by defining results and their priority

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Transition From Project Design To Managing Implementation

ISWM project design sets out what needs to be done and the overall resources, approaches and timing necessary to do these things. Effective implementation of ISWM project designs may require years to achieve, however, and over this time is influenced by many factors that cannot be foreseen by project designers.

Managing the transition from project design to project implementation should “begin at the end, and work backwards”. “The end” is defined by the results that are to be achieved; within the context of what has been established in project design, implementation should begin by confirming or establishing, as appropriate, the *priorised objectives*. Once this is done, the means to achieving objectives can be verified or adjusted, as appropriate, as compared with what was initially designed. From this, it is possible to *allocate responsibilities* and to develop *manageable work programmes* that are targeted specifically at achieving confirmed/established prioritised objectives.



WHAT ARE “RESULTS“?

In Output-Based Management Systems, Results Are Measured At 3 Levels:

- **Outputs** Results achieved from activities targeted at a common objective
- **Outcomes** Results achieved as a consequence of combinations of outputs
- **Impacts** Results achieved as a consequence of a combination of outcomes

Results intended at each level should be established in advance of activity implementation

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What Are “Results“?

“Output-based” results are defined at 3 levels to reflect the achievement of objectives associated with ISWM activities, ISWM projects or programmes, and the linkage of ISWM to other policy or programme objectives of government.

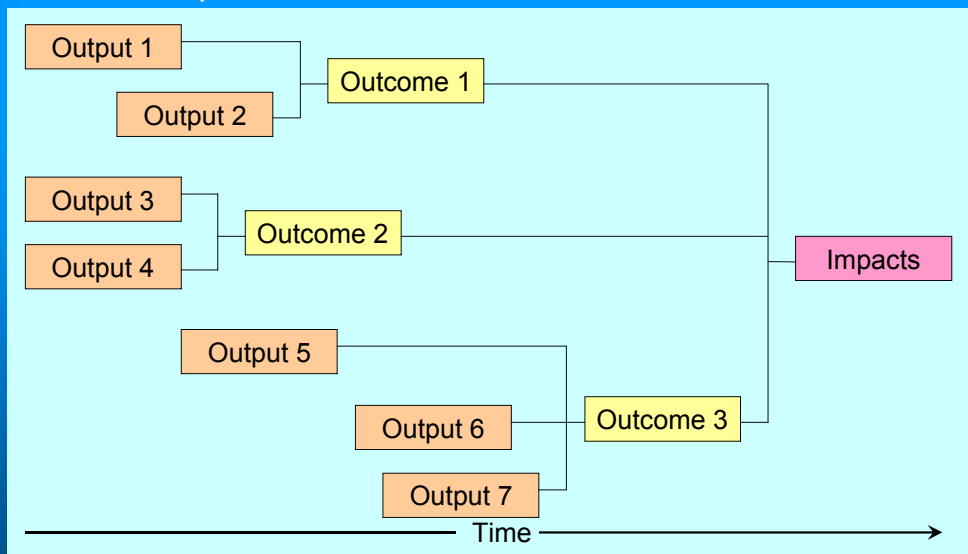
ISWM “outputs” are the results of activities targeted at common objectives. As part of an ISWM investment project, for example, each group of activities (for example siting, design, construction etc) associated with establishing a new landfill site would have an “*output*” that is scheduled to be achieved within a certain time frame.

ISWM “outcomes” are the results of combinations of outputs. In the establishment of a new landfill site as part of an ISWM investment project, the successful siting of the landfill might constitute one “output”, and the completion of design and construction might constitute other “outputs”. The “*outcome*” of achieving all these outputs is the establishment of the landfill.

ISWM “impacts” are the results of combinations of outcomes. Implementation of an ISWM investment project might entail not only a new landfill, but a compost plant and the creation of an appropriate legal, institutional and cost recovery framework. Achievement of each of these would be “outcomes”, which together create the desired ISWM system, the “*impacts*” of which may be defined to include creation of resources (for example, compost), protection of human health and the environment from the impacts of waste (for example, the landfill and the effective removal of waste from communities), increased employment (from people working in the ISWM system and from using resources created from the system) and reduced desertification (from application of the compost).

Intended *results should be identified at each level before activities are initiated*, since activities themselves should be specifically designed to achieve the stated results.

OUTPUTS, OUTCOMES AND IMPACTS



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Outputs, Outcomes and Impacts

This slide illustrates the conceptual linkage between outputs, outcomes and impacts.

The time element is important. *Outputs* are achieved over different time periods: some will be started before others, some will be undertaken in parallel and some will not be started until some outcomes have been achieved. This is appropriate, since it reflects the setting and execution of priorities, and may also reflect that it is not possible to achieve some output-level results until others have been achieved first; for example, design/construction of a landfill (which might be one output) requires that a site for the landfill (which might be another output) be established first.

Additional results will need to be developed at the working level in support of outputs. For example, if the output result is “identification of a landfill site” a series of working level results will need to be achieved in support of achieving the desired output. These working level results are termed “progress results”, and are discussed further in Slide 8 and Slide 14.

Outcomes require the achievement of their associated output-level results. Some outcomes will be achieved sooner than others, and this is appropriate since it also reflects the setting and execution of priorities on a phased basis.

All *impacts* will be achieved only when all outcomes have been achieved, although some impacts may be achieved before that as a result of completion of some outcomes. Impact-level results are broad and may be subject to influences beyond the scope of an ISWM initiative. For example, if one of the impact-level results of an ISWM project is to assist in combating desertification as a result of the application of compost, there are factors beyond the ISWM project that will influence whether this in fact happens – for example, a change to wetter weather patterns or decisions by government agencies to combat desertification.



KEY ISSUES IN MANAGING FOR RESULTS

Managing For Results Requires:

- Coordinating inputs to achieve desired outputs
- Managing risks and problems
- Maximising performance
- Monitoring and evaluation
- Flexibility to address new situations
- Stakeholder coordination
- Reporting

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Key Issues In Managing For Results

Implementation of ISWM projects and programmes requires the application of established management and administrative techniques to the ISWM system context. However, ISWM projects and programmes at either the national or at the local level are unlike many other types of project or programme in terms of the nature and diversity of stakeholders (including the public), the nature of the linkages between policy, finance, institutional and technical components, and the relationship of public awareness/behaviour to the viability of technical solutions. While ISWM system management and administration may therefore require the application of established techniques, the ways in which these are applied and the high importance of some of these to project/programme success distinguishes ISWM from other types of project and programme.

This slide identifies major issues in managing for results in ISWM projects and programs. Two themes run through these issues:

- Within work units, the high importance of planning for achievement of results and follow-through to achieve those results over time.
- Across work units (and stakeholders), the high importance of communication and coordination.

The balance of this module will elaborate on the issues identified in this slide. Where appropriate, templates are provided to facilitate the application of the messages in this module to actual ISWM project and programme situations.



MANAGING INPUTS TO ACHIEVE OUTPUTS

Key Inputs For Achieving ISWM Outputs Include:

- Organisation
- Expertise
- Time
- Money

Effective ISWM system management and administration depends on how well these are managed

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Managing Inputs To Achieve Outputs

Organisation is the first key to effective ISWM system management and administration. Whether ISWM projects are at a national or at a local level, they involve many stakeholders and different institutions. The organisational framework for ISWM system management and administration should therefore provide for both coordination and communication between stakeholders. A coordinating committee might be established under the leadership of a senior decision-maker in the relevant lead Ministry or local entity department; ideally, this will report to the most senior level appropriate (for example, in national projects the Cabinet of Ministers, and at a local level to the mayor or to the Governor) who will be called upon to provide leadership when committee stakeholders are in disagreement.

Qualified *expertise* at all levels is essential to achieving timely and effective ISWM results. New staff may be required, and capacity building and training in relevant aspects of ISWM may be appropriate. External expertise should also be used to advise and assist in implementation, within the context of explicit Terms of Reference and accountability mechanisms (for example, withholding payment until full delivery of services has been achieved). Qualified expertise may be costly – but the cost of poor decisions by inadequately qualified individuals will be much more costly.

Time and *money* should be budgetted according to the results to be achieved. Rapid ISWM progress can be achieved when time and money are properly allocated to qualified expertise that is appropriately organised to achieve results.

Inputs to ISWM project/programme implementation should be coordinated and organised through annual workplans. Each entity with ISWM project or programme responsibilities should develop its own workplan and should coordinate activities with other entities through the coordination mechanisms that have been established (e.g. coordinating committee). Results to be achieved over the year should be identified by all work units, and should be linked directly to achievement of “outputs”; if a proposed activity does not contribute adequately to an “output”, the activity should be dropped or amended. For all activities, the timing, budget and expertise necessary to achieve intended annual results should be identified, and communication/coordination meetings with other relevant entities should be scheduled in the annual work plan in agreement with those entities.



ANNUAL WORKPLANS

Template For Summary of ISWM Annual Workplan

Progress Result	Indicator	Activity	Timing				Expertise	Budget
			Q1	Q2	Q3	Q4		

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Annual Workplans

This template provides a format for summarising the key information necessary to include in an effective ISWM workplan. Text should also be prepared to provide detail to the summary information.

The “*Progress Result*” column should identify the results that are desired in the year to which the workplan applies. Each progress result should contribute towards a previously identified output. For example, if a landfill is to be operationalised (“outcome” level result) as part of a wider ISWM project, one of the “outputs” to contribute to the landfill would be to site the landfill. The siting of the landfill would itself require a series of “progress results” each of which contribute to the output; for example, completion of technical screening, acceptable environmental impact assessment, holding of effective community meetings etc. “Progress results” are therefore the results from discrete units of work that together contribute to achieving an “output” The adjacent “*indicator*” column should identify how achievement of the progress result will be determined; for example, if the intended progress result is “effective community meetings” it will be necessary to define what constitutes “effective”. The “*activity*” column summarises what will be done to achieve the progress result; several activities may be necessary to achieve a progress result. A line item for coordination meetings with others should be included in this column. The “*timing*” column shows the overall timing of each activity (shown in Quarters in the template). The “*expertise*” column identifies who will do the work, including consulting needs, and can also be used to identify capacity building that is required. The “*budget*” column summarises the cost of achieving each progress result.

As work is undertaken through the year, progress towards achieving “progress results” should be monitored and adjustments made to work programs as necessary.



MANAGING RISKS AND PROBLEMS

Risks Are Predictable, Most Potential Problems Are Preventable And Remaining Problems Are Manageable:

- **Implementation of ISWM systems should be accompanied by a Risk Management Strategy**
- **The Risk Management Strategy should inform implementation activities in order to avoid potential problems and should be used in managing problems that do occur**

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Managing Risks and Problems

There are risks associated with any result targeted by an ISWM project or programme. Generally, these risks can be identified before beginning implementation of an ISWM initiative. Having identified risks it is then possible to identify measures to ensure that the risks do not manifest themselves as problems in the implementation of activities to meet goals. At the outset of ISWM system implementation it is therefore helpful to document the risks associated with meeting the goals that have been established, and to identify the “risk management” measures that should be taken in implementation to ensure the risk does not become an actual problem. This document constitutes a *Risk Management Strategy*, and is very helpful in the design of initiatives to meet identified goals.

The design of activities to meet identified goals should be informed by the Risk Management Strategy. ISWM system managers should consult the Risk Management Strategy and familiarise themselves with both the risks that have been identified in connection with the goals they wish to achieve, and the risk management measures that can be taken to ensure that the identified risks do not become problems. They should then ensure that the design of activities incorporates the “risk management” measures identified in the Risk Management Strategy.

As an example, a new landfill may be planned as part of an ISWM system (“outcome” result). One of the outputs in support of this outcome may be the design and implementation of an environmentally sound system for managing leachate and landfill gas. Risks that might be identified associated with this output might include: “models for estimating leachate and landfill gas generation rates are subject to a significant level of uncertainty”; the consequence of this risk is that estimates of leachate and landfill gas generation may significantly under-estimate actual generation of these pollutants. The risk management measure associated with this risk might therefore be to provide for leachate and landfill gas management capacity at the upper end of a predicted range in recognition that a failure to adequately manage leachate and landfill gas can lead to serious environmental and community impacts. This risk management measure would then be carried forward to the activity of designing leachate and landfill gas management system to meet the intended output-result of an environmentally sound system for managing leachate and landfill gas.

RISK MANAGEMENT STRATEGY

Summary Template For Risk Management Strategy

Intended Output Result	Risks	Risk Management Measures	Notes

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Risk Management Strategy

The “Summary Template For Risk Management Strategy” can be used for summarising risks and risk management measures associated with intended output results. This template covers only one intended output result; the template should be extended to address all intended output results. For some intended output results there may be only 1 or 2 identified risks; for other intended output results there may be many identified risks. The template includes a notes column so that any specific additional information associated with either a risk or a risk management measure can be identified.



MAXIMISING PERFORMANCE

Encouraging And Rewarding Good Performance

- Recognition at work and the community
- Dignity
- Initiative
- Training
- Money

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Maximising Performance

High quality performance by work teams is essential to timely achievement of ISWM results. Approaches to maximising performance – and their effectiveness and consequences - are highly conditioned by both: (i) organisational constraints, requirements and culture; and (ii) social norms. The public sector typically has less flexibility in these regards than the private sector. The items identified in this slide should therefore be applied having regard to what is realistic and feasible within the organisation and the wider community.

One approach to maximising performance is to encourage and reward good performance. Many approaches are possible. *Recognition at work* is often an effective mechanism for encouraging good performance, and recognition is itself a reward. For all staff, recognition can take the form of congratulations within a work unit for a job well done, and for professionals may also take the form of opportunities to be recognised by peers through making professional presentations and similar types of activity. *Recognition in the community* may be appropriate for non-professional staff for whom there may be limited opportunities to motivate or reward good performance; annual awards or citations can be given, for example, to top-performers and these can be advertised within the community.

Many staff, particularly non-professional, may consider working in the solid waste management sector demeaning, and this is very demotivating. In Alexandria, this problem was solved through providing workers with visible and attractive uniforms. Addressing the *dignity* of workers and the work they do in this way elevated the social perception of workers from very low to very high, and encouraged workers to take pride in the work they do.

Professional staff may be highly trained and enthusiastic about the work they do. Within the scope of project or programme objectives and appropriate management oversight, they can be encouraged to show and take *initiative* consistent with their capacity for good judgement. Linked to this, *training* is essential to maximising performance of both professional and non-professional staff.

Money, in the form of a bonus, can be an appropriate reward for good performance but is seldom an effective longer term incentive for performance within the public sector, although if people working in the waste management sector are paid less than people they regard as their peers this can also be demotivating.



MAXIMISING PERFORMANCE Cont.

Discouraging Poor ISWM Performance:

- Defining of performance requirements
- Identification and application of tangible consequences for poor performance
- Accountability

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Discouraging Poor Performance

Discouraging poor ISWM performance at the level of the individual, the institution and the contractor begins with *defining performance requirements*: if these are not clearly defined there is no benchmark against which to manage or evaluate performance. As with other aspects of the output-based approach to ISWM, defining performance requirements should be initially done with respect to intended results, and not simply the activities to be undertaken. For a street sweeper, for example, this can be done in terms of specifying that the sweeper must maintain a defined length of street in a clean manner, while for an institutional entity this can be done in terms of the purpose of that entity (for example, “full collection of solid waste management cost recovery monies” might be defined for the financial unit of a municipality) and for a contractor this can be done in terms of the contract they are hired to perform.

The definition of performance requirements is meaningful only if it is accompanied by the *identification and application of tangible consequences for poor performance*. There are a range of possible “punishments” for failure to perform. However, any of these can only be effective if they are applied; punishments that are identified for poor performance but which are not applied quickly undermine efforts to maximise performance.

Accountability is closely linked to these issues. Employees, institutional entities and contractors are accountable for their performance. Those who are charged with oversight and management functions are accountable for ensuring that appropriate actions are taken to address poor ISWM performance.

The application of measures to both encourage/reward good performance and to discourage poor performance must be undertaken with judgement and fairness. If the application of measures to encourage/reward good performance or to discourage poor performance are – or are perceived to be – influenced by favouritism or poor judgement then any efforts to maximise performance are likely to lose credibility. In particular, failures that are caused by circumstances beyond the control of those who have “failed” should not necessarily result in the application of consequences. Rewards/encouragements for good performance should be accompanied by a brief rationale that justifies the reward/encouragement.



MONITORING AND EVALUATION

ISWM Project/Programme Monitoring Should Be Undertaken:

- With respect to whether initiatives are being implemented as intended
- Based on objectively verifiable information and data
- Based on previously defined indicators

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Monitoring And Evaluation

The purpose of monitoring is to provide feedback to implementing agencies on *whether initiatives are being implemented as intended*. This should relate to both the results that are intended from ISWM initiatives and the actions through which those results will be achieved.

Monitoring is factual and is *based on objectively verifiable information and data* – that is, information and data available to any individual that performs the monitoring function. Depending on the ISWM initiatives that are being undertaken, the types of results-related monitoring that might be appropriate may include, for example, the quantity (tonnes) of recyclable material that is being collected as a consequence of new initiatives, or the number of individuals that attend a community meeting on closure of old dumps. The types of activity-related monitoring that might be appropriate may include, for example, information on whether activities that are intended to have been implemented have in fact been implemented and implemented effectively.

Monitoring should be undertaken *based on previously defined indicators*, and particularly those identified in Annual Workplans, see Slide 8. Indicators are intended to provide an impression of whether progress to results is being achieved or whether activities are being adequately undertaken since it is impractical to undertake an in-depth review of all aspects of an ISWM project every time it is helpful to know whether progress is being made to intended goals. Monitoring indicators should therefore be indicative of those aspects of the ISWM project/programme that they are intended to provide information on, but should also be simple and inexpensive to implement. Ideally, monitoring indicators will be selected that allow staff to collect the appropriate monitoring information in the course of their day-to-day duties.

The frequency with which monitoring data and information is required should also be considered by ISWM system managers and administrators. Generally, monitoring information will not need to be compiled more than once per quarter, but some information may be compiled less frequently. The collection of monitoring data should be integrated into the day-to-day activities of staff; if monitoring data is compiled in this way over time, the compilation of monitoring data is easy and inexpensive.

Monitoring indicators at the level of the ISWM project/programme as a whole should be defined in project design. However, ISWM system managers and administrators should add to these, as appropriate, in support of the effective implementation of their own activities.

MONITORING AND EVALUATION Cont.

Summary Template For Monitoring Progress on ISWM Projects

Intended Output Result	Intended Progress Results	Indicators of Progress Result	Actual Progress Result	Variance From Intended Progress Result	Work Remaining To Achieve Progress Result

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Monitoring and Evaluation Cont.

The “Summary Template For Monitoring Progress On ISWM Projects” provides a basis for ISWM system managers/administrators to coordinate monitoring among different work units. The template can be replicated for each output associated with implementation of an ISWM project, and rows can be added to the template as necessary. The data in the template should be updated on a regular basis (for example, quarterly). The use of this template, elaborated with text as necessary, is very helpful in communicating progress on ISWM projects and is particularly helpful in coordinating ISWM activities undertaken by different work units and different entities (for example, different ministries).

“Intended output results” refers to the project/programme output-level result that is targeted in support of an outcome; for example, the intended output-level result might be “stakeholder support” associated with the outcome-level result of “adoption of national ISWM strategy”. In order to achieve the output result of “stakeholder support”, intended progress results will need to be achieved; in this example, these results might include (i) preparation and dissemination to stakeholders of an ISWM issues paper; (ii) holding of a stakeholder meeting; and (iii) identification and resolution of stakeholder concerns; these intended progress results would be entered into the “intended progress results column”.

The “Indicators of Progress Result” column will identify how it will be determined whether the progress result has been achieved. In this example, indicators might include: (i) ISWM issues paper prepared and disseminated; (ii) major industry, government and NGO stakeholders attend meeting; and (iii) report prepared identifying and resolving stakeholder concerns.

Brief information on what has been achieved in support of the intended progress result will be included in the “Actual Progress Result” column; for example, “ISWM issues paper prepared and disseminated”. However, perhaps not all stakeholders attended the meeting and this would be recorded in this column against the second of the “intended progress results”. And since not all stakeholders attended the meeting it is likely that not all stakeholder concerns were identified and resolved, and this would also be recorded in this column.

The “Work Remaining To Achieve Progress Result” records whether or not the intended progress result has been achieved, and the work that remains to be done to achieve the progress result. In the example provided, the “preparation and dissemination to stakeholders of an ISWM issues paper” has been achieved and no further work remains. However, this column can also record that remaining key stakeholders need to be consulted regarding ISWM initiatives and their concerns need to be addressed.



MONITORING AND EVALUATION Cont.

ISWM Project/Programme Evaluation Should Be Undertaken:

- With respect to whether results are being achieved
- Using data and information gathered by monitoring initiatives
- To facilitate stakeholder coordination
- To identify where and how initiatives can be strengthened

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Evaluation

Evaluation is concerned with *whether ISWM results that are intended are in fact being achieved*.

Evaluation uses the information gathered through monitoring. However, whereas monitoring is factual, evaluation is analytical. At the level of individual work units the link between work that is undertaken and the results of that work is often direct and straightforward. At higher levels of ISWM project/programme implementation linkages between work undertaken and the results of that work may not be as straightforward. At the “output-level” of intended result, which may require achievement of multiple “progress results”, the achievement of intended results is still largely within the direct control of those undertaking work but even at this level the need to achieve multiple “progress results” introduces elements of uncertainty regarding the extent to which a particular “output” is in fact being achieved, and this uncertainty can be compounded if achievement of the “output” requires participation from others. At the “outcome-level” of result, ISWM projects typically involve achievement of multiple outputs and the participation of multiple stakeholders; determining the extent to which an ISWM project or programme is progressing towards, or maintaining, intended goals can be highly uncertain, and this uncertainty becomes broader at the “impact-level” of result, where many factors unrelated to ISWM may make progress towards intended results at this level unclearer still.

Evaluation is a tool that allows these issues to be assessed and clarified, and *to facilitate stakeholder coordination*. Evaluation assesses monitoring information, determines where progress is satisfactory and identifies where and how initiatives can be strengthened in support of achieving intended results. Evaluation may also identify new lower level (“progress-results” or “output-results”) results that need to be achieved in order to achieve higher level (“outcome-results” or “impact-results”) results, or new actions in support of achieving previously defined results. Often, it is helpful for evaluation to be performed by an external entity in order to ensure a balanced perspective between stakeholders. ISWM system managers and administrators should require brief evaluation to be undertaken on an annual basis within ISWM programme activity centres, and should undertake a broader evaluation every 3 years ; evaluation should be undertaken at the mid-point and end points of ISWM projects.



FLEXIBILITY IN IMPLEMENTATION

Flexibility In Implementing ISWM Projects Is Required Because Of:

- A time lag (and changes in circumstances) between project design and project implementation
- Changing circumstances during project implementation
- Lessons learned

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Flexibility In Implementation

Ideally, ISWM projects will be implemented in precisely the way they have been intended at the project design stage. This rarely – if ever – happens. ISWM system managers and administrators therefore need to adopt the management tools and techniques identified in this module in order to provide a coordinated approach to project implementation, but should adopt a level of flexibility that can accommodate adjustments to project design.

The need for flexibility in project implementation has three main causes. There may commonly be *a time lag between project design and project implementation*. This time lag often occurs as a result of the time that is required for projects to be formally approved and for project resources to start flowing following completion of project design. ISWM projects can be large and complex, requiring implementation over a number of years; accordingly, the time lag between the design of some project components and their implementation can be as much as several years. During this period, it is common for circumstances to change in ways that impact project implementation (for example, other initiatives might be taken that impact initial project design – perhaps some other donor project).

In some cases *changing circumstances during project implementation* may result in a need to adjust the implementation process. Policy priorities may change during implementation, for example, and this might require adjustment in how activities are undertaken to achieve results, or the timing of actions in support of results. However, while the means and timing associated with achieving intended results may change as compared to what was planned in project design, results at the output and outcome level may not need to be changed.

During project implementation, ISWM technical and administrative lessons will be learned. Lessons learned in one area may be applicable in another, and lessons learned in one METAP country may be relevant in another. Lessons learned should be incorporated into ISWM project implementation.

Where adjustments to project implementation are to be undertaken as compared to what has been set out in project design, it is important to ensure that funding agencies are kept apprised of significant adjustments so as to avoid misunderstandings on their part. Also, it is important to ensure that adjustments to one activity do not impact other activities, or that if they do appropriate adjustments are also made to those activities.



REPORTING

Regular Reporting Is A Key ISWM Management Activity

- It ensures stakeholders are kept informed and facilitates coordination among them
- It enables decisions on future actions
- It provides a basis for feedback to the public

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Regular Reporting

Regular reporting is an essential element of effective ISWM system management and administration and enables three key administrative activities:

- *It ensures stakeholders are kept informed and facilitates coordination among them.* At the national level, ISWM activities involve - at a minimum - ministries and agencies responsible for local government, finance and environment, and may also involve agencies responsible for development and other functions. At a local level, similar ministries and agencies may be involved in addition to local government entities. At both levels, private sector, NGO and public stakeholders will be involved in ISWM projects. Regular reporting ensures the availability of information among stakeholders, and allows coordination of stakeholder activity in support of achieving ISWM goals.
- *It enables decisions on future actions.* Effective ISWM decision making must often address multiple priorities. Reporting provides the basis for understanding issues and for defining options for addressing issues as they arise. Without adequate reporting, ISWM decisions are likely to be focussed on immediate needs and narrowly defined institutional interests.
- *It provides a basis for feedback to the public.* Public interest in ISWM initiatives is typically very high; few public policy areas impact residents as frequently or as directly and as solid waste management. Reporting provides ISWM system managers and administrators with a basis for providing feedback to the public on solid waste management initiatives.

MAKING “OUTPUT BASED” MANAGEMENT APPROACHES WORK FOR ISWM

“Output-Based” Management Approaches Need Institutional Support:

- Senior management must articulate support for the approach
- Minimum performance and environmental standards must be established
- Open and transparent private sector tendering is required

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Making “Output-Based” Management Approaches Work For ISWM

“Output-based” management offers benefits to ISWM system managers and administrators. Managers and administrators work within institutional frameworks and cultures, however, that have developed over many years. Change to “output-based” management approaches may be difficult for institutions and may be resisted by individuals. In order to be effective, therefore, *senior management must articulate support for the approach* and should be seen to be participating in it.

The gains that can be achieved through “output-based” management approaches are intended to be achieved within the context of acceptable standards, however: output-based management is an invitation to efficient and effective results, but not to any results. It is therefore important to identify performance and environmental standards within which “output-based” management approaches are implemented. As an example, it is relatively inexpensive to design/build a waste disposal site; it is more complex and more costly to design/build a waste disposal site that meets acceptable environmental standards, but clearly a new waste disposal site should meet minimum acceptable environmental standards. ISWM performance standards should also be established for waste management operations, and they can be established administratively to govern the implementation of “output-based” management approaches; for example, use of the templates and approaches in this module can be specifically required in support of ISWM system management.

Open and transparent private sector tendering is required in support of private sector participation in “output-based” management approaches. The private sector cannot afford to participate in tendering procedures that are less than open and transparent, and failure to maintain open and transparent tendering will result in failure to achieve results that are efficient and effective.



CONCLUSIONS

This Module Has:

- Introduced the concept of “output-based” approaches to ISWM system management/administration
- Identified the different levels of results and the types of issues that should be addressed in “output-based” management approaches
- Provided some templates to assist in implementing “output-based” approaches to ISWM

The objective is to achieve coordinated, efficient and effective ISWM.

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Conclusions

The METAP RSWMP Inception Mission (2003) determined that, with some exceptions, solid waste system management and administration in the METAP region is characterised by low levels of public sector efficiency and effectiveness and poor – even hostile – relationships between different agencies with solid waste management responsibilities. ISWM requires effective management structures and effective working relationships between institutions with waste management responsibilities.

“Output-based” approaches to ISWM system management and administration can improve effectiveness, improve efficiency and improve relationships between institutions. The approach is rigorous, but should not be inflexible and should not require large time commitments to implement so long as the work necessary to implement the approach is integrated into the work programmes of institutions. The biggest change necessary to implement the approach may be one of mindset within the institutions with solid waste management responsibilities.

This slide concludes this module. It is helpful to remind participants what they have learned and to encourage them to apply what they have learned in their workplace using the templates that have been provided.