Asset Management Action Plan (AMAP)

Writing Guide

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INTRODUCTION TO THE WRITING GUIDE

What is asset management?

Asset Management is a coordinated series of activities and systems that, monitor and maintain things of value.

Assets (physical infrastructure and equipment, land and buildings) have a service value to users, owners and the community. They have a financial value as they cost money to acquire, maintain, upgrade and dispose. The sale of immovable properties like land and buildings may also generate new resources that can be used to fund new assets or maintain old ones.

Those with responsibilities for asset management in any organization should be able to answer the following fundamental questions:

- What do you own (and where is it)?
- What is it worth?
- What is the condition?
- What is the remaining service life?
- What is the deferred maintenance?
- What do you fix first?
  - What will it cost and what is the acceptable level of risk?
  - Is it affordable?

What is an Asset Management Action Plan or AMAP?

An Asset Management Action Plan (AMAP) is a way to compare an organization's present asset management knowledge, practice and documentation against good asset management practices and to identify gaps and specific ACTIONS to close them.

A successfully implemented AMAP will be a significant step to the development of a sound asset management system that will help Local Governments best invest Local Government funds and provide the best service to the community.

An AMAP (figure 1) can relate to one or more assets and is based on a number of pillars:

(i) the Local Government asset management framework, i.e., the overall vision for the management of Local Government assets, including objectives, targets and links to the broader city vision and capital investment plan, if it exists;

(ii) an assessment of stakeholders involved in managing the asset(s) as well as a review of their specific functions and setting a performance goal for one or more priority asset in line with the Local Government asset management framework and national policies and regulations on asset management that govern the management of the selected asset;

(iii) a review of the types of methods and technologies or tools used in managing the asset (asset ledgers, asset inventory database, asset management software, valuation techniques, life-cycle management, strategic portfolio reviews, integration of asset management needs in annual budgets, reporting and auditing of the asset);

(iv) a performance assessment of these asset management practices against the stated objectives and a clear identification of gaps and areas for improvement; and

(v) the formulation of concrete actions by all relevant stakeholders that address the identified gaps and link proposed actions to improve the management of the asset to the current and medium-term Local Government budget.
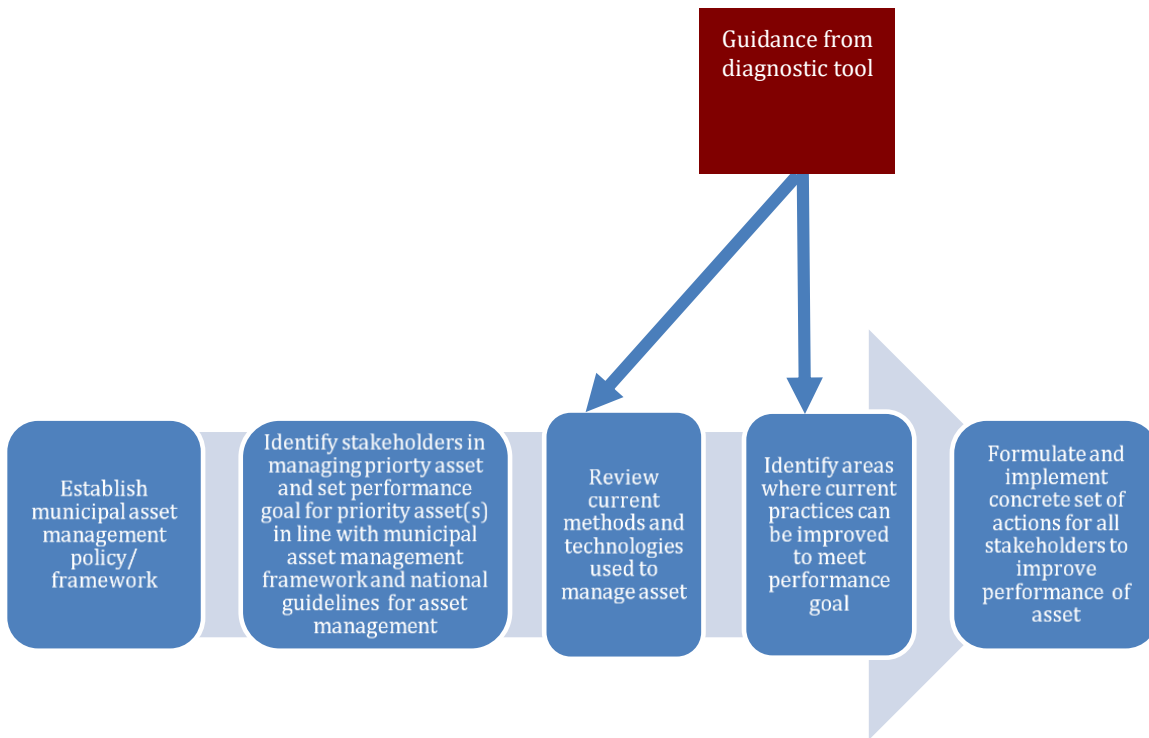

Figure 1: The Foundations of an "Asset Management Action Plan (AMAP)"

How does an AMAP help?

When AMAPS are in place for most critical assets, this is an indication, both locally and nationally, of a transparent and financially responsible Local Government. This, in turn, builds trust and confidence from local stakeholders as well as broader sources of resources and capital. Accordingly, the ultimate objective of implementing AMAPS and comprehensive asset management systems is to build the ability of each local jurisdiction to be more prosperous and provide a better quality of life for its citizens.

Who writes the AMAP?

The AMAP should be written by a senior Local Government representative with responsibility for Asset Management. It is important that the AMAP is developed and written with the consultation and involvement of all key asset stakeholders.

How do I use this writing guide and AMAP template?

This writing guide and Asset Management Action Plan (AMAP) template have been developed to assist Local Governments in writing their AMAPs by providing a structure and examples of good asset management practices and tools.

A Local Government can choose to write an AMAP for one or two assets to get started on the path to better asset management or it can choose to write an AMAP to begin developing its asset management framework and an action plan for a group of assets.

The template provides text and tables (in black text) that can be left in the document by those responsible for writing the AMAP. There is also guidance text (*in red italics text*) to indicate what additional information should be added by a Local Government. All red Italic text should be deleted prior to finalising the AMAP.

The guidance from the DIAGNOSTIC TOOL can be used by a Local Government to identify the level of awareness, significant gaps and suggested approaches to closing these gaps. The recommendations from the DIAGNOSTIC TOOL analysis should play a prominent part in the ACTIONS identified in your AMAP.

Key writing "Do's"

- Write in simple language, avoiding use of acronyms.
- Be consistent in use of terms.
- Be specific. Your AMAP must explain your plan so others can understand it.
- Use the template provided. Where a section does not apply, do not amend the template by removing the section. Put in a statement to the effect "This section does not apply."
- Ask questions and seek advice.

AMAP INTRODUCTION

The AMAP should begin with an introduction that explains its purpose and any assumptions and constraints that have been made in preparing the AMAP. This section may be written last after you have identified your priority asset and developed your action plan.

Assumptions are things that are accepted as true or inevitable, without proof that they exist or will occur.

For example:

Assumptions:

- We assume that our current level of own source funding will continue or increase modestly.
- We assume that our current level of asset management resources will not decrease.

Constraints are things that limit your ability to undertake certain actions. They can be internal or external.

For example:

Internal constraints:

- 'We are limited in our ability to hire additional staff and must implement our AMAP within our existing capabilities.'

External constraints:

- 'We must work with national agencies for assets that are used by our citizens but managed by others e.g. utilities

STEP 1 - LOCAL GOVERNMENT ASSET MANAGEMENT POLICY AND FRAMEWORK

Is there an Asset Management Policy/Framework in place?

- If YES? Then does it meet the requirements set out below?
- If NO? You can create an AMAP for the development of a policy document (INITIATE ACTION)

The Asset Management <u>Policy/Framework</u> should be:

- In accordance with legal requirements of the government and other regulatory bodies;
- In accordance with existing and expected stakeholders/customers' requirements;
- Agreed among key stakeholders;
- Adopted by council for a specified long-term period; and
- Periodically reviewed by appointed representatives of both Local Government and stakeholders.

If the current policy does not exist or meet all these requirements, then a policy document should be developed. The policy is an important document that sets out principles and requirements/objectives. It will 'set the scene' for many aspects of the asset management strategy and direction.

Examples of Objectives and Principles

Objectives and principles that can be used in an asset management framework (policy, strategy) could be:

Objectives:

Operational needs	Risk-based	Transparency
Efficiency	Customer focused	Compliance
Stewardship	Forward looking	Value-based/Affordable
Integrated approach	Service focused	

Principles:

- "We will strive meet or exceed all national regulations, benchmarks and requirements related to the management of our assets."

-" Open and effective management and reporting of public assets is our civic duty."

-" We will fight all forms of misuse, abuse or corruption related to the management of public property."

- "We commit to fair and equitable access and use of our assets regardless of race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status."

- "We recognize the benefits of asset management, which include:

  • Economic sustainability is strongly enhanced by reduced cost to deliver services.

  • Social equity and benefits are realized because the community has more resources to provide services and amenities.

- • Environmental sustainability and reliance is stronger because resources are conserved and more attention is given to long term solutions rather than short term affordability or convenience; moreover, proper valuation of environmental assets, such as lakes, rivers and groundwater allow land and other assets to retain value.

- • Citizens enjoy more dependable service levels without unexpected failures and indefinite interruptions.

- • The financial viability of the Local Government is enhanced because future costs are anticipated and reserves set aside.

- • The transparency of government is enhanced which leads to better communication with the public and grows citizen trust and confidence.

- • Communication is more effective with rate payers, elected officials, financial rating organizations and regulatory agencies because plans and results are documented and shared."

- " We will designate a focal point for asset management who will prepare and convene regular meetings to discuss how our asset management practices can be further improved to the benefit of our citizens."

-" We recognize that asset management is a multifaceted and multi-stakeholder process that involves demand, life cycle and financial management and we commit to include all relevant parties in our efforts to enhance our asset management practices."

- "We will commit to providing the resources to deliver on our asset management objectives."

- "We will ensure we have the appropriate organization, policies and procedures in place to support asset management and achieve our objectives."

- "We will report regularly on our assets and our asset performance."

- "We will involve and inform the public on important decisions related to the acquisition, repair or sale of our assets."

-" We will include financial asset management needs in our annual budget and medium term fiscal expenditure plans."

-" We will implement a user-friendly and functional asset management module that complements or is integrated into our current IFMS and other public financial management systems. We will train all relevant staff in its implementation."

- 'We will continue to improve our asset management practices and systems."

Local Government Asset Management Strategy

The Asset Management Strategy is an important document as it provides practical direction on what needs to be done to comply with the Policy and Framework. Think of it as one level of detail below the policy/framework.

Is there an Asset Management <u>Strategy</u> in place?

YES?

It should:

- Set out the Local Government's Asset Management vision, goals and objectives (following policy and framework)
- Be aligned with Local Government Strategic Development Goals
- Address the following as a minimum:
  - Documenting the current status of asset data and defining the future requirements of asset data;
  - Defining the required levels of service (LOS) that have to be provided to the customers, (Required LOS should balance: legal requirements, customers' expectations with asset's risk, affordability and timing constraints);
  - An overview of major problems in providing the required level of service (LOS);
  - Defining strategic asset management performance objectives;
  - Defining the necessary asset management rules and procedures (refereed to here as Protocols), which will provide guidance to all involved parties in implementing specific practices within the asset management system, such as:
    - Asset data collection and hierarchy protocol
    - Condition and performance assessment protocol
    - Criticality/risk assessment protocol
    - Response to service interruptions protocol
    - Response to customers' complaints protocol, etc.
  - Developing requirements for staff asset management knowledge and thus staff competencies and training;
  - Defining roles and responsibilities of decision-makers within the asset management system;
  - Adopting condition and performance assessment of assets as precondition for making all asset management decisions (medium to long term objective);
  - Adopting a risk-based decision-making processes for prioritization of maintenance and capital investment actions/interventions;
  - Adopting lifecycle costing when evaluating competing asset investment needs across asset classes

NO? You can create an AMAP for the development of a strategy document.

STEP 2 – PRIORITY ASSETS, STAKEHOLDERS AND PERFORMANCE GOALS

Step 2A - Identifying Priority Assets

The next task in drafting an AMAP is to identify your priority assets.

Is there a process in place for identifying <u>priority assets</u>?
- If YES? Then does it meet the requirements set out below?
- If NO? Use the guidance Writing Guide to develop a process for identification of priority assets.

The process for identifying priority assets should:

- Be aligned with the Local Government Asset Management Policy/Framework and AM strategy;
- Be aligned with Local Government Strategic Development Goals;
- Reflect customer (Stakeholder) priorities including required levels of service for assets. (In order to fully understand priority assets, it is important to understand who your priority stakeholders are).
- Reflect the risks associated with each asset. (A low risk asset usually means lower priority asset)

Prioritizing assets should be done objectively and without emotion or bias. As a minimum, prioritization should consider the vital function supported by the asset and the impact of loss of service.   It is good practice to assign standard criteria to all assets and then score them against the criteria on a numerical scale. Once all the scores are added up for the assets, those scoring the highest are considered the most important assets and would normally be given highest priority.

Standard Criteria (using a score of 1 to 5) examples to help you:

- Importance of asset to Local Government – Very important = 5, Not important = 1
- Impact on community if asset was out of service – Very High = 5, Very low = 1
- Condition of the Asset – New = 1, Very poor = 5
- Replacement value of asset - >$10,000,000USD = 5, less than $50,000USD = 1

For example, a sample of assets scored against these criteria could be:

Asset	Brief Description	Importance to Municipality	Impact if out of service	Condition	Replacement Value	Total Score	Priority Ranking
Elementary School	15 years old, replacement value $100,000 USD	3	3	3	2	11	4
Water Treatment Plant	10 years old, replacement value $5 million USD	5	5	5	4	19	1
Municipal Offices	40 years old, replacement value $10 million USD	5	4	3	5	17	2
Garbage Truck Fleet	Average 10 years old, replacement value $1 million USD	4	5	4	3	16	3

Asset importance determines where resources, effort, planning etc. will be focused for years ahead.

Once you have identified a process to identify your priority assets, list your priority assets in Table 1, along with the basis for selection them. Here is an example of Table 1.

Asset	Vital function(s) supported	Impact of loss of service
Water provision	Health and safety, social well being, economic	Loss of life (public health and disease)
Solid waste collection	Health and safety, social well being, economic	Loss of life (public health and disease) Loss of revenue

Step 2B - Identify Stakeholders

Stakeholders are people or organizations who have an influence on the way you conduct your asset management activities. They can be both internal and external and include users and external agencies.

It is important for effective asset management to understand who all your key internal and external stakeholders are; maximize their support and minimize any resistance. There may be stakeholders that are not currently involved, these should also be identified and put into Tables 2a and 2b in the AMAP template.

Is there a process for Identifying and managing stakeholders?

- If YES?   Then does it meet the requirements set out below?
- If NO? Use the AMAP to plan the development of a process for identification of stakeholders.

The process for identifying and managing Stakeholders should:

- Be aligned with the Local Government Asset Management Policy/Framework
- Identify stakeholders' specific roles /functions (customer/user, community representative, asset manager, service provider etc)
- Identify the power, influence and interest of each stakeholder and set out a strategy for managing each category of stakeholder

In considering your stakeholders, keep in mind that some will have more of an interest in the asset(s) than others, some will have more influence on how the asset is managed. It is important to understand who needs to be kept informed and who should be consulted as part of the asset management process.

Stakeholders can be classified according to their power and interest in the subject / asset.
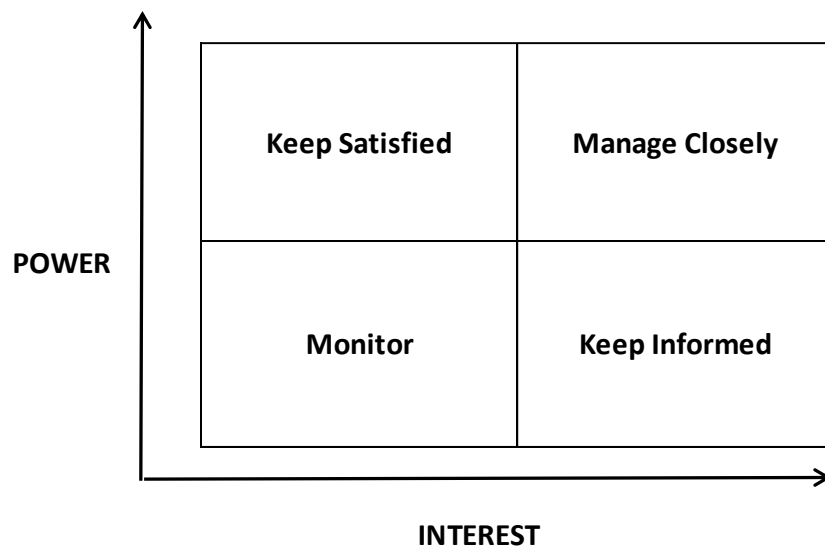
The figure above shows how stakeholders should be managed based on their influence (or power) and interest in the subject/asset.

For example: Garbage collection

- *The end users (customers) of the Local Government garbage collection service have low influence/power in how the service is performed but have high interest in the service delivered because failure of service affects their daily lives. They should be kept informed of service changes or schedule changes to prevent them becoming dissatisfied.*
- *The Drivers of the garbage collection vehicle fleet have high power and high interest in the service because they are essential components of the service. In order to maintain high service standards, the drivers should be managed closely.*
- *The staff or contractor who maintains the trucks also has high power and high interest in the asset so they should also be managed closely.*

Step 2C - Setting Performance Goal for Priority Asset(s)

Once you have a process for identifying priority assets you can now start setting performance goals for those assets in Table 2c of the AMAP template. The AMAP should contain performance goals only for priority assets (or priority asset groups) as the plan would be too large if all assets were included.

All Performance goals need to be 'SMART':

Specific, **M**easurable, **A**chievable, **R**elevant and **T**ime-bound

There may already be national performance goals that can be used for some assets. For example, the Nepalese National Planning Commission's 'Needs Assessment, Costing and Financing Strategy for Sustainable Development Goals'[1] provides the following goals for water and sanitation:

Table 3.9: Targets and indicators of SDG 6 (water and sanitation)

Targets and Indicators	2015	2019	2022	2025	2030
Households with Access to Piped Water Supply (%)	49.5	60.3	68.4	76.5	90
Basic Water Supply Coverage (%)	87	90.2	92.6	95	99
Population using Safe Drinking Water (%)	15	35	50	65	90
Open Defecation Free Area Declared (%)	41	56.5	71.9	83.5	99
Sanitation Coverage (%)	82	86.5	89.9	93.3	99
Proportion of Untreated Industrial Waste water (%)	99	75.3	57.5	39.7	10

Sources: SDG Status and Roadmap Report 2017

Where national goals don't exist, you can set your own performance goals. Here is a performance goal for the Local Government's garbage truck fleet:

'Garbage trucks will be functional 100% of the time.'

This is specific and measurable (we state '100%' of the time). It is relevant because the truck availability is an important factor in service performance. This goal however, may not be achievable if the Local Government only has one truck. A more achievable goal is:

'Garbage Trucks will be available for safe use on 95% of workdays (Monday to Friday 6am till 8pm) in any calendar year.'

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[1] National Planning Commission. 2018. 'Needs Assessment, Costing and Financing Strategy for Sustainable Development Goals'. Government of Nepal. Singhadurbar, Kathmandu.

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This allows for maintenance at night or at weekends and for occasional breakdowns during workdays. or time bound. Allowances need to be made for maintenance time and breakdowns.

It is also important to discuss performance goals with stakeholders. In this example, the stakeholders would be drivers, maintenance managers or maintenance contractors, spare parts suppliers and even vehicle buyers. You may even want to discuss the matter with human resources to see if is appropriate to propose that maintenance staff and drivers receive a bonus if vehicle availability targets are achieved.

Here is another example:

Asset – Water Distribution System or Borehole/Well

Performance goal (or Level of Service) – To provide a clean water supply.

LOS attributes: safety, responsiveness, availability, compliance, accessibility

Performance Measure for a water system could include:

Technical:

Safety	No more than one failed potability test in any one calendar year
Availability	Less than "Y" service disruptions per year per well
Compliance	All regulatory requirements are met

Customer:

| Responsiveness | Customer complaints will be responded to within 48 hours |
| Accessibility | All women in the service area have safe access to the well |

Here is an example of Table 2c.

Priority Asset	Performance Goal	Level of Service and Attribute	Performance Measure
Water Distribution System	To provide safe and reliable basic water supply coverage to 95% of population by 2025	Availability & Reliability: Piped service to businesses and homes within the core area, community wells for customers outside the core	Water yield ≥ 25L/person/day – Target is 95% of the time Less than 25 disruptions per year per well
		Accessibility: Wells/water points located in areas safe for women or for women only Compliance & Safety: Water quality meets basic regulations	All women in the serviced area have access to the well at all times – Target is 100% of all women, 100% of time Water quality is tested weekly. No more than one failed potability test in any one calendar year.

Step 2D – Identifying Active Stakeholders for Priority Assets

Now that your priority assets and performance goals have been identified, it is important to go back and identify those stakeholders who are ACTIVELY involved in managing your priority asset(s). You can do this by reviewing Tables 2a and 2b. <mark>Highlight</mark> those stakeholders who provide information that is needed to make decisions about your asset. For example:

- Municipal engineer
- Procurement officer
- Community development planner
- Operators or people who maintain priority assets
- Finance Chief
- Gender Officer

STEP 3 - UNDERSTAND AND REVIEW CURRENT METHODS AND TOOLS

In order to identify opportunities for improvement it is important to understand the current existence or status of processes and tools that are used by the active stakeholders. Research these processes and tools to determine whether they contribute to, or perhaps detract from, asset management in your organization. Tools are what are used by your organisation to manage asset information. They can take the form of ledgers, spreadsheets or software

Specific processes and tools may include:

Processes	Tools
Asset record information	Asset record keeping system or ledger
Asset condition assessment	Asset database software
Maintenance management or work order management	Asset condition assessment software
Identification and recording/ monitoring of service levels	Maintenance management or work order forms or management software
Financial management	Accounting ledgers
Purchase process	Financial management software
Asset disposal process	Lease ledger or software
Lease management	

List the active stakeholders that you identified in the previous section, along with their respective methods and tools, in Table 3 of the AMAP template.

Once the current processes and tools have been identified and understood, you have a benchmark. This process should have identified areas for improvement. These gaps can be inserted into Table 4 for consideration.

The guidance from the DIAGNOSTIC TOOL can be used to help you identify methods used by your internal stakeholders.

STEP 4 - GAP ANALYSIS

Through steps 2 – 3 you will have identified your goals and a number of areas for improvement. These gaps between current process and your goals should be inserted into Table 4 in the AMAP template. In addition, the diagnostics tool output will have identified some gaps in processes, resources etc.

The gap analysis process should ensure that the identified gaps have the following:

- Clear gap description that is not too complex;
- Clear restatement of performance goal to 'aim' for;
- Clear understanding of stakeholders affected;
- Clear 'actively managing' stakeholder identification; and
- Brief 'actions required' statement.

Analyzing Gaps and Identifying Actions

There may be many gaps identified in Table 4. It would not be practical to include them all in the final AMAP because limited resources would likely result in failure to close the gaps. The next step will help you prioritise these actions so that only those that are achievable in the short to medium term (less than three years) and will have the greatest impact are included in your AMAP.

The guidance from the DIAGNOSTIC TOOL can be used to identify significant gaps and suggested approaches to closing these gaps. The recommendations from the DIAGNOSTIC TOOL analysis should play a prominent part in the ACTIONS identified in your AMAP.

Here is an example of how to analyse your gaps using the information from Tables 2a, b & c, and Step 3.

Gap Analysis Example (Table 4)

Priority Asset	Performance Goal	Identified Gap Title	Gap description	Stakeholders affected (those impacted)	Stakeholders actively managing	Actions required
Community well/borehole	Basic water supply to 92% of community by 2021	Water supply	Current supply only reaches 80% of community	All community members using well, schools, neighbouring communities, health centres.	Senior Engineer, Inventory Manager, Maintenance Manager, plumbing technicians.	Identify areas underserved. Develop plan to drill new wells/ boreholes. Increase number of wells/boreholes.
	50% of community has safe drinking water by 2021	Water quality	Current water quality fails on a regular basis due to lack of treatment and poor well maintenance	All community members using well, schools, neighbouring communities, health centres.	Senior Engineer, Inventory Manager, Maintenance Manager, plumbing technicians.	Monthly treatment of wells with disinfecting chemicals. Develop maintenance plan and processes for wells/boreholes.

STEP 5 – ACTION PLAN

Actions and Resources

The penultimate section of the AMAP is listing the actions, nominating an 'owner' for each action, and identifying out the resources required to implement the actions (Table 5a in the template). This is a very important section as it brings into focus all the resources required to implement the change and will be a good indicator of whether the actions can be realistically implemented with the available resources. Table 5a in the AMAP should be completed with all this information.

It is important to understand that just because resources (financial/systems/ personnel) are not available to implement an action, that does not prevent a Local Government from putting together a business case to seek the additional resources. If the business case can show that the benefits are greater than the resource costs, there may be options to seek the additional funding from the central government, donors or NGOs. Thus, it is critical to identify if the actions can be competed with existing resources or if additional resources are required.

You can now prioritize the actions you are including in your AMAP and include a target date for completion in Table 5b (in the template). There are many criteria for prioritization, but it makes sense to look at it with a simple approach. Firstly, review the actions that result in the greatest impact for the least amount of resource effort, these are the 'low hanging fruit' actions. Implementing these actions and getting results will help the asset management team to see early progress. This will help to motivate the team when it comes to implementing the more challenging actions.

The criteria for selecting the next actions are

- practicality;
- urgency; and
- resource availability.

These are not listed in order of importance. Some Local Governments may choose to deal with the most urgent actions despite not having the resources to implement immediately available. Some may choose to select the next 'easiest' actions to implement based on practicality and resource availability.

Table 5b is a summary of your AMAP. Additional details needed to support your actions and priorities can be included in an annex (A) if necessary.

FOLLOW UP AND REVIEW

Communication of the AMAP to key stakeholders is vital. This may be done by presentation (where it is easier to add more information to demonstrate a point) or simply by email or paper copy of the AMAP. You cannot guarantee that stakeholders will read the AMAP so it is recommended that you conduct a 'launch' or presentation along with distribution of paper copies of the AMAP.

Follow up on progress with all action owners at least every six months and when significant stakeholders or policies change. If required, re-assess priorities and make changes to the AMAP to ensure that it reflects current Local Government policy.

Communicate successes to all stakeholders using emails, newsletters or meetings. Keeping those affected up to date and motivated will help to ensure the success of the improvement program.

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