

10 STEPS TO A NATIONAL QUALITY MANAGEMENT SYSTEM



The Geneva International Centre for Humanitarian Demining (GICHD) is an international expert organisation based in Switzerland that works to eliminate mines, explosive remnants of war and other explosive hazards. By undertaking research, developing standards and disseminating knowledge, the GICHD supports capacity development in mine-affected countries. It works with national and local authorities to help them plan, coordinate, implement, monitor and evaluate mine action programmes. The GICHD also contributes to the implementation of the Anti-Personnel Mine Ban Convention, the Convention on Cluster Munitions and other relevant instruments of international law. The GICHD follows the humanitarian principles of humanity, impartiality, neutrality and independence.

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10 STEPS TO A NATIONAL QUALITY MANAGEMENT SYSTEM

A HANDBOOK FOR MINE ACTION MANAGERS

The GICHD supports national authorities and their partners in implementing robust quality management systems (QMS) for more efficient prioritisation and delivery of priority outputs and outcomes. It encourages the adoption and implementation of quality management (QM) policies, systems and processes resulting in:

- enhanced QM capacity in the mine action (MA) sector;
- a working QMS for national MA programmes; and
- increased efficiency, effectiveness and safety in mine action programmes for all stakeholders.

The handbook benefits from findings of evaluations in nearly every MA programme worldwide, as well as QM assessments or case studies in over fifteen MA programmes. It also reflects experience from GICHD's regional and national QM in MA Workshops, and from direct QMS development support to programmes and organisations.



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LIST OF ABBREVIATIONS

ADS

Animal Detection System

ALNAP

Active Learning Network
for Accountability and
Performance in Humanitarian
Action

ANAMA

Azerbaijan National Agency
for Mine Action

APMBC

Anti-personnel Mine Ban
Convention

BI

Business Intelligence

BSC

Balanced Scorecard

CEN

European Committee for
Standardization

CCM

Convention on Cluster
Munitions

CCW

Convention on Certain
Conventional Weapons

CW

Capacity Works

EFQM

European Foundation for
Quality Management

EOD

Explosive Ordnance Disposal

ERW

Explosive Remnants of War

GICHD

Geneva International Centre
for Humanitarian Demining

GIZ

Gesellschaft für Internationale
Zusammenarbeit (German
Development Agency)

HAP

Humanitarian Accountability
Partnership

IATG

International Ammunition
Technical Guidelines

ICBL

International Campaign to
Ban Landmines

ILO

International Labour
Organization

IM

Information Management

IMAS

International Mine Action
Standards

IMSMA

Information Management
System for Mine Action

IO

International Organisation

IP

Implementing Partner

ISACS

International Small Arms
Control Standards

ISO

International Organization for
Standardization

KPI

Key Performance Indicator

MA

Mine Action

MAC

Mine Action Centre

MACCA

Mine Action Coordination
Centre of Afghanistan

M&E

Monitoring and Evaluation

MINT

Mine action INTelligence tool

MOFA

Ministry of Foreign Affairs

NATO

North Atlantic Treaty
Organization

NGO

Non-governmental
Organisation

NIST

National Institute of
Standards and Technology

NMAA

National Mine Action
Authority

NMAS

National Mine Action
Standards

OECD/DAC

Organisation for Economic
Cooperation and
Development/Development
Assistance Committee

PCM

Project Cycle Management

QA

Quality Assurance

QC

Quality Control

QM

Quality Management

QMS

Quality Management System

RBM

Results-Based Management

SADD

Sex and age disaggregated
data

SOP

Standard Operating Procedure

TÜV

Technischer
Überwachungsverein
(German Association for
Technical Inspection)

UK

United Kingdom

UKAS

UK Accreditation Service

UN

United Nations

UNDP

United Nations Development
Programme

UNICEF

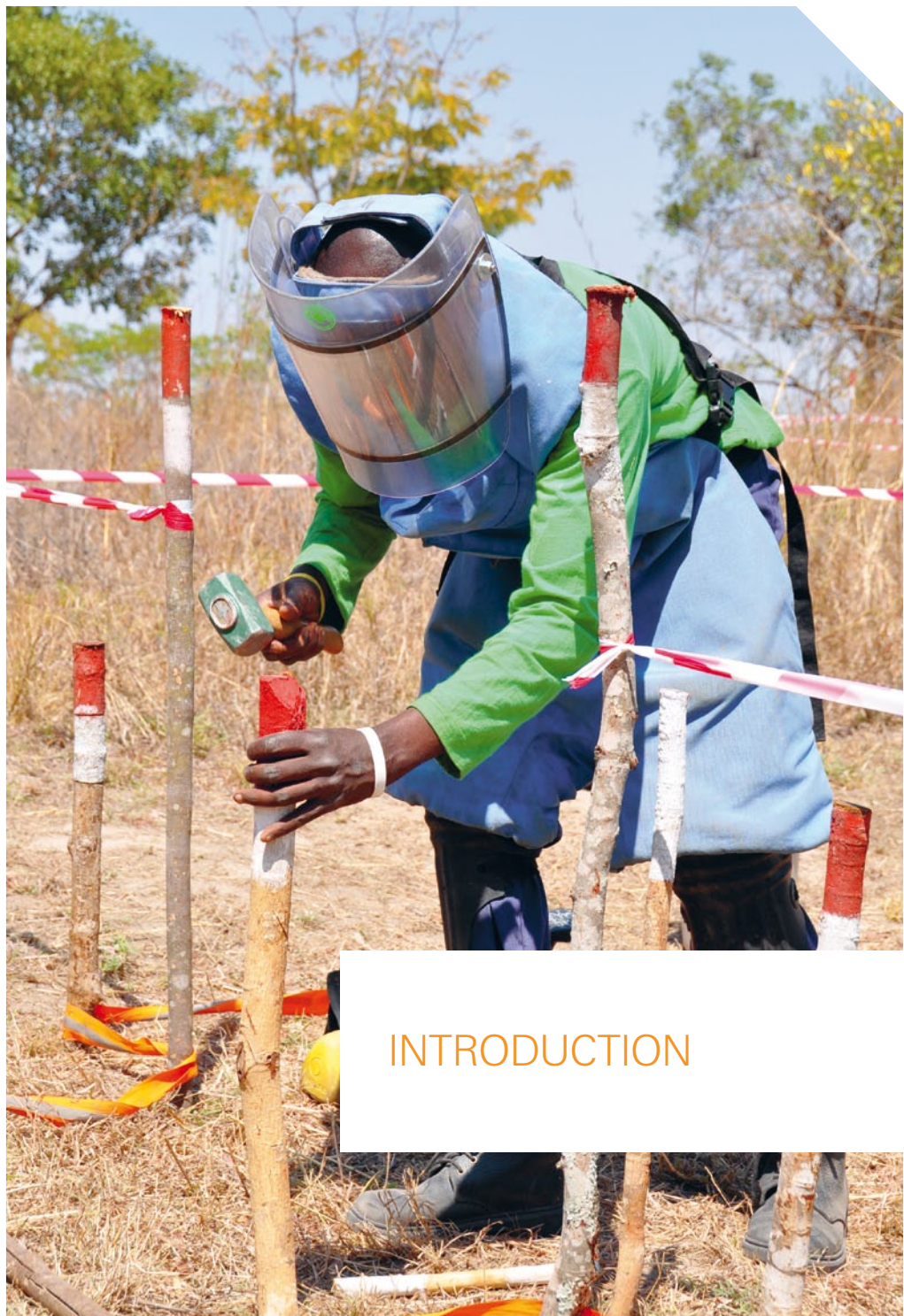
United Nations International
Children's Emergency Fund

UNMAS

United Nations Mine Action
Service

UXO

Unexploded Ordnance



INTRODUCTION

MANAGING FOR QUALITY AND RESULTS



The need for sound Quality Management Systems (QMS) in Mine Action (MA) appears obvious: if demining procedures are not reliable, and if released land is not 100% safe for use, we risk loss of lives and limbs.

However, beyond this there is a great deal that requires quality management (QM) for efficiency¹ and effectiveness,² as well as to achieve humanitarian and developmental results. MA managers have to be able to answer such questions as:

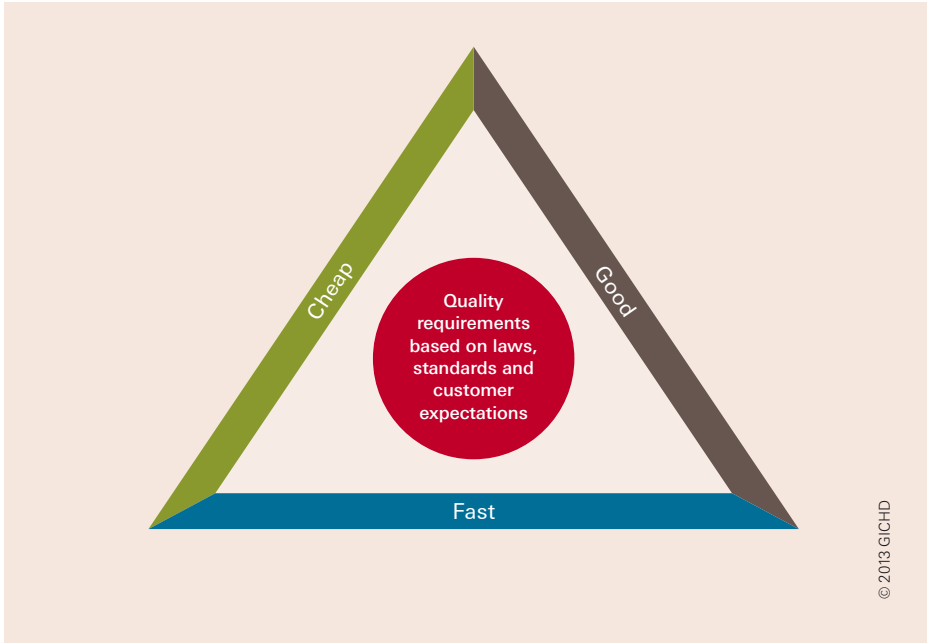
- what do beneficiaries,³ donors or partners expect from our mine action programme, and how do we meet or even exceed their expectations?
- if there is a problem in our programme, how will we know?
- how can we prevent mistakes?
- how do we ensure best value for money without compromising safety?
- how is contract compliance achieved?
- how is recording of data and information for liability purposes secured?
- how do we ensure continual learning and improvement?

The **timely** delivery of **good** products or services⁴ – like land released – for a **reasonable price** is a requirement that we have to meet without ever compromising safety for deminers. In addition to laws and standards, the expectations of our customers – beneficiaries, donors and partners – define what is meant by **timely, good and reasonable**. This, in short, explains quality.

In more formal terms, **quality** means 'the degree to which a set of inherent characteristics fulfils requirements', and **quality management** means 'co-ordinated activities to direct and control an organisation with regard to quality.'⁵

FIGURE 1

COMPONENTS OF QUALITY



The balance between **fast**, **cheap** and **good** according to laws, standards and partners' expectations requires thorough, thoughtful and constant management. It requires more than the application of individual initiatives such as a team leader checking the work of a deminer or a Mine Action Centre (MAC) inspecting an implementing partner's demining team.

It rather means co-ordinated effort by different (national) stakeholders, at every level, to:

- ensure a consistent level of quality and compliance with relevant laws and standards;
- ensure customer expectations are known, met or even exceeded; and
- enable and encourage continual improvement.

Setting up a Quality Management System assists organisations and programmes in understanding and meeting these requirements in a systematic manner. A QMS helps achieve better quality, and increased satisfaction amongst customers, beneficiaries and partners. Most importantly a QMS helps establish and maintain the confidence of stakeholders in the quality and reliability of organisations, programmes, their outputs/products and in the outcomes achieved.

Most MA programmes and implementers already do QM in one way or another. However, assessment of a number of programmes, as well as experience gained during ten years of MA evaluations, show that there is a continuing need to improve efficiency and effectiveness and to define and achieve humanitarian and developmental goals.

SCOPE AND AUDIENCE FOR THIS HANDBOOK

The overall goal of this handbook is to provide concrete steps to support MA programmes in developing a QMS that enhances efficiency and effectiveness to:

- reduce casualties and negative socio-economic effects of mine and explosive remnants of war (ERW) contamination;
- ensure women, girls, boys and men participate in and benefit equally from MA interventions;
- increase value for money in MA programmes;
- improve contributions to development;
- fulfil government plans and treaty obligations.⁶

Specific objectives include enhancing the capacity of MA officials and practitioners in the mine action sector to:

- understand different QM approaches;
- establish a common QM-related terminology;
- identify, visualize and improve both internal and customer-related processes;
- integrate QM, information management (IM) and operations;

- select and use QM tools;
- improve QM systems at the organisational and programme-wide levels;
- encourage development, adoption and implementation of QM policies in mine action programmes;
- promote QM as an integral component of management to achieve safety, efficiency and effectiveness, as well as measurable humanitarian, developmental and political results; and
- mainstream gender into QM systems.

One of the aims of this handbook is to create a common and consistent understanding of terminology and approaches to align MA consistently with other sectors' use and understanding of up to date QM methods.

The principles, models and tools described in this handbook, and the ten step approach at its core, are applicable at both programme level (a constellation of organisations and institutions that co-operate to achieve a common goal, but that may not have a single defined hierarchy) or/and at an organisation level (a single entity having a defined management structure).

Organisations directly involved in MA include Mine Action Centres (MAC), implementing partners (IP) – national, international, Non-governmental Organisations (NGO) and commercial companies, quality assurance providers (also known as independent verification and validation providers).

The programme level typically encompasses National Mine Action Authorities (NMAA), United Nations agencies (UN), a number of government ministries, donors, international institutions, MAC and some operating organisations, including commercial companies.

This handbook does not seek to cover all aspects of QM: it is a broad discipline covered in many other publications. Instead the aim is to provide a stimulus to set up a system for **results-based QM**, which has a strong focus on customers, interested parties and the outcomes of programmes. The focus of this publication is on how to achieve good performance and results by using the principles of:

- the process approach;
- continual improvement;
- a factual approach to decision-making; and
- leadership and involvement of people.

This handbook does not seek to answer questions such as: What should a field inspection tick-box form contain? How many inspection teams do I need in my programme? These aspects vary from programme to programme and can change quickly. It is better to address such questions in programme-specific mentoring, or in dedicated meetings of QM managers.⁷

The handbook provides a brief introduction to QM approaches and principles before concentrating on an explanation of concrete steps to set up a QMS. In addition, it provides **Resources** in the form of case studies and tools as part of the CD-ROM in the back of this handbook. This is also available in electronic format on the GICHD website.⁸ The CD gives further detailed information, practical examples and summaries of first-hand experience.



QM DEVELOPMENTS
WITHIN THE MA SECTOR



Historically the MA sector has taken a somewhat narrow view of QM, focusing primarily on land that has been subject to clearance. More recent developments reflect an increasing understanding of the need for Quality Management Systems to embrace all aspects of an organisation or programme's activities and to include other components of MA. These include all types of released land (eg released through Non-technical Survey and Technical Survey), information and reports, maps and other products provided to customers and stakeholders inside and outside MA, as well as mine risk education (MRE), victim assistance (VA), and stockpile destruction.

Recent and on-going developments include:

- new and broader International Mine Action Standards (IMAS) on QM.
- review and updates of the existing IMAS (modifications ie for 07.30 accreditation of demining organisations, 07.40 monitoring of demining organisations and 09.20 post-clearance inspection).
- more use of the ISO 9000 series (more and more MA staff receive formal training and a number of international MA NGO and companies are ISO 9001:2008 certified), of business excellence models such as EFQM,⁹ and of results-based management.
- better integration of QM and IM.
- increased emphasis on Quality Assurance (QA) rather than Quality Control (QC), with reduced use of post-clearance inspection procedures.
- application of QM to all key processes at organisational and programme levels.
- collaboration amongst national stakeholders on QM and integration in existing structures (ie for standardisation).

Overall guidance is provided by the IMAS.¹⁰ They not only define requirements for products, they also give guidance on QM. Most countries with MA programmes have legally binding National Mine Action Standards (NMAS), based on IMAS.¹¹ NMAS, and in their absence IMAS, define the requirements for organisations' Standard Operating Procedures (SOP)¹² reporting and resources; they often form part of commercial contracts through inclusion or reference.

The main goal, so far, of QM in MA programmes has been to provide confidence to the beneficiaries, the operator and the NMAA that clearance and quality requirements have been met and that released land is indeed safe to use.

It is now accepted within the MA industry that QM embraces all aspects of an organisation's operations and processes, not just accreditation, monitoring and post-clearance inspection. Most operating organisations now include post release assessments in their QM toolbox. This allows them to obtain information about adverse indicators (missed mines, land not in use, accidents etc), or to establish whether land is being used by the intended beneficiaries in the intended way.

Some particularly important product and process requirements are further defined, such as in IMAS 07.11 for land release, 08.10 for non-technical survey and 08.20 for technical survey, 09.10 for clearance requirements, 09.11 for battle area clearance.

The term **Quality Assurance** has often been used equivalently to **monitoring** in MA programmes, and taken to mean field inspection visits, internally by the organisation or externally by the MAC. These visits resulted in tick-box conformity or non-conformity reports. Both terms actually have broader meanings.

QA encompasses a much wider range of activities focused on providing confidence that quality requirements **will be** fulfilled.¹³ It implies measuring process performance and **pro-actively building in quality and success in all key processes**. These include the provision of training, the development of procedures, the selection of equipment and the management of other resources, systems and requirements that feed into the overall operational process.

Monitoring refers to a continuing function using systematic collection of data on specified indicators to provide information to management and main stakeholders of an on-going project, programme or policy. This information includes indications of progress towards and achievement of objectives, and of the use of allocated funds.¹⁴ Data on beneficiaries of mine action activities should be disaggregated by sex and age to monitor gender-related differences within activities. Monitoring has much more to do with the **systematic tracking of key performance indicators** (KPI) than with field inspection visits, which is only one way to gather data.

Quality Control has often been used in MA as exclusively relating to physical post-clearance inspections of a sample of cleared area.¹⁵ Within an ISO framework the meaning is more generally to ensure quality requirements **have been** fulfilled, which means measuring product performance or, in simple terms, **checking that what you got is what you wanted**. This is something that can be applied to the products of all key processes, not only post-clearance inspections.

IMAS originally treated **cleared** land differently from **released** land. The 2013 standard is that all released land should have the same characteristics: there should be no hazardous objects (within depth and item specifications)¹⁶ left in the ground when it is handed over, regardless of the process being applied. One of the purposes of QM is to ensure that the same level of confidence is associated with land however it has been released:

- non-technical survey
- technical Survey
- clearance
- manual techniques
- mine detection dogs
- mechanical methods

The main tools and techniques used to gain confidence that the clearance/release process will deliver land that meets requirements are:

- the accreditation of implementing partners by a national or UN-managed MAC to confirm compliance with the requirements of NMAS:¹⁷
 - ▶ accreditation of demining organisations and their assets (IMAS) 07.30¹⁸
 - ▶ testing explosive ordnance disposal (EOD) qualifications (IMAS 09.30)
 - ▶ testing of mine detection dogs and handlers (IMAS 09.42),¹⁹ as well as QA of the testing process
 - ▶ testing of mechanical systems, including testing and evaluation of the machine's capabilities and limitations, requirements for follow up work, data collection and analysis, maintenance, recovery and protection of infrastructure and the environment.²⁰
- monitoring in the form of inspection visits, conducted internally by the organisation, and externally by a MAC or an independent contractor. External inspectors assess internal aspects of the QMS.

- quality control tools and techniques include definitions of non-conformities such as minimum target specifications during clearance, or adverse events post hand-over, missed items post hand over, and land use inconsistencies. QC involves checking that the delivered product meets requirements (checking that what you get is what you wanted). For cleared land, QC should include analysis of post-clearance evidence (through collection of evidence about what happens on the land after it is put to use). It may also involve the physical inspection of ground, although the trend in the industry is towards less emphasis on post-clearance inspection and more on quality assurance processes (proactively building quality and success into processes).²¹

ACHIEVING BETTER EFFICIENCY, EFFECTIVENESS AND RESULTS

Developments in QM in MA reflect a desire to learn from experience, improve methods and approaches and overcome limitations associated with previous understanding.

In particular an effective QMS should:

- not be limited to clearance/land release, but should cover other key processes such as training/capacity development, reporting, and priority setting. Where appropriate it can cover mine risk education, victim assistance, stockpile destruction and other significant activities;
- be sustainable after transition from a UN-managed to a nationally-managed programme;
- address all QM aspects which affect efficiency and effectiveness within an organisation;
- address QM on a programme-wide basis to continually improve overall performance;
- address 'quality-at-entry' (ie project/programme design) and quality at the outcome level (ie do the outputs flow to the target beneficiaries and are they used in the expected way);
- be integrated with the country's overall system for standards;
- mainstream gender and diversity to ensure that women, girls, boys and men from different backgrounds participate in and benefit from MA activities equally; and
- analyse the root causes of problems and lead to fact-based decision making.

INEFFECTIVENESS AND INEFFICIENCY

Ineffectiveness and inefficiency most commonly occur in mine action when there is a breakdown in the information feedback loops that use checks, reviews, experience and evidence to drive planning, operational and decision-making processes.²²

Ineffectiveness

A process, project or programme is **effective** when it achieves its aims, objectives or purpose. In mine action the ultimate purpose of most activity is to remove, or at least reduce, the negative influence of mines and ERW on people, societies and economies. It does so through the application of a range of operational processes (such as desk top assessments, non-technical and technical surveys, and clearance), supported by other enabling processes (SOP development, training, procurement, monitoring, checks and inspections, handover procedures, etc).

The immediate objective of the land release process is to deliver land that is safe to use; that is, it contains no dangerous items (in a specified area and specified depth). If dangerous items are missed, and the land is handed over, then the process has been **ineffective** and is likely to prevent achievement of this goal.

Furthermore, the land release process is ultimately effective when it makes a real difference to its direct beneficiaries – a concept explored further in the section of this handbook describing Results-Based Management (RBM). A typical intended result might be that released land will be used for growing crops. If a site visit, a year or two after the land has been handed over, finds that no crops are being grown, it is clear that the desired results have not been achieved – the process has been **ineffective** (even if technical activity was effective in releasing safe land).

Inefficiency

Efficiency relates to the resources used (people, equipment, time, money) to achieve objectives. It is perfectly possible to be effective (objectives achieved), while still being inefficient (more resources than necessary were used).

An efficient clearance operation keeps resources (deminers, mine detection dogs, machines etc) working on ground that requires technical effort. It should

not involve the deployment of resources to areas where there is no reason to believe that a hazard exists, and it also should not result in resources standing idle (perhaps because safety separations prevent the full clearance team from all working at the same time).

There may be good reasons why a process was ineffective or inefficient – sometimes situations change, new information becomes available etc. However, a key purpose of a QMS is to avoid the same problem re-occurring. Experience gained when an ineffective or inefficient situation is discovered should be used to improve the ability of managers and operators to take decisions when a planning, prioritisation or land release process is carried out. However, such positive feedback can only happen if:

- the problem is noticed;
- immediate action is taken to correct the problem;
- the cause of the problem is analysed; and
- decision makers are made aware of the causes of and solutions to the problem.





QM APPROACHES

MA is part of both security and development sectors. It operates in the public and private sectors and is a world-wide industry. It encounters different QM approaches and terminology. In some cases different terms are used to describe similar issues, such as **interested party** and **stakeholder**; in others the same term is used but with different meanings, for example **monitoring**. There are also differences between the understanding of terminology within **traditional QM in MA** and in the **world of QM outside MA**.

ISO 9001 is the primary tool at organisational level, and Capacity Works (both described below) focuses more on the programme level. They both offer useful and important insights at any level. Many MA QMS will benefit from aspects of both systems. This chapter also provides a brief description of the principles of Results-Based Management (RBM) and Project Cycle Management (PCM). These help address wider questions of quality in outcomes stemming from MA projects and programmes, plus the quality of project designs.

Numerous other management systems, models and tools such as Six Sigma, balanced scorecard, Kaizen, Pareto analyses, and the Deming Cycle (named after its creator, W Edwards Deming) are used to support QM. To avoid overload and confusion, only a few of these tools and models are directly used and described in this handbook.²³

THE ISO 9000 SERIES

The International Organization for Standardization (ISO),²⁴ founded in 1947, is the world's largest developer of voluntary international standards for products and good practice, with the aim to make industry more efficient and effective. It is a network of national standard bodies, with currently 163 members representing nearly all countries of the world.²⁵

The ISO 9000 series includes:²⁶

- ISO 9000:2005 Quality management systems – Fundamentals and vocabulary
- ISO 9001:2008 Quality management systems – Requirements
- ISO 9004:2009 Managing for the sustained success of an organisation – A quality management approach.

The ISO 9000 series distinguishes between requirements for the QMS and requirements for products. Requirements for a QMS are specified in ISO 9001. They are generic and applicable to organisations in any industry or economic sector, regardless of the

offered product category. ISO 9001 itself does not establish requirements for products or product-related processes, although it does require organisations to ensure that such requirements are clearly understood.

Requirements for product-related processes can be specified by regulations, standards, customers, or, in the case of MA for instance, by an organisation or programme, in anticipation of customer requirements. The requirements for products, and in some cases associated processes, can be contained in, for example, technical specifications (such as CEN Workshop Agreements²⁷ in the MA context), product standards, process standards (as in the IMAS on Land Release), contractual agreements and regulatory requirements.²⁸

The eight fundamental ISO principles for QM are:

1. Customer focus
2. Involvement of people²⁹
3. Leadership
4. System approach
5. Process approach
6. Continual improvement
7. Factual approach to decision making³⁰
8. Mutually beneficial supplier relationships

The ISO 9001 principles are increasingly used within the MA sector and provide relevant, applicable and internationally accepted approaches to QM. Some organisations in MA have already obtained formal certification measured against the standards; others have chosen to adopt some elements without becoming certified. This handbook makes no recommendation as to whether organisations **should** pursue certification, but it does recommend adoption of the principles described in ISO 9000. They form the central theme of this handbook.



ISO 9001 CERTIFICATION

The International Organisation for Standardisation (ISO) does not itself certify organisations against the requirements of its standards (such as ISO 9001). Instead most countries have a single accreditation authority that authorises certifying organisations to issue certificates within the country. For example, in the United Kingdom (UK) the authority is the UK Accreditation Service (UKAS). There are usually many certification bodies (almost 100 in the UK for instance).

Organisations seeking certification against ISO 9001 (currently the 2008 issue) typically make use of a specialist consultancy to assist them in developing and applying a compliant QMS, before making contact with a certification body to arrange a certification audit.

Certification brings a number of benefits:

- formal recognition
- access to experienced external feedback
- internal clarity
- confidence in the QMS
- enhanced external profile.

Organisations may make use of the ISO 9001 approach without choosing to pursue formal certification. In the MA industry a number of organisations have chosen to become formally certified; others have chosen to adopt those elements of the system that they find most appropriate for their organisations, while not seeking to satisfy every requirement.

Prior to a certification inspection an organisation should have fully implemented the system, conducted internal audits of all procedures and processes, and carried out at least one management review meeting. A certification audit consists of two stages:

- Stage one confirms that the system is fully in place and that all mandatory documentation (such as a quality policy, quality manual, quality procedures and processes, plus forms and records) is available and complies with the requirements of the standard.

- Stage two involves discussion with senior management and staff of the organisation as well as direct inspection of documentation and records.

Once achieved, certification lasts for three years with further external audits taking place each year. A full recertification audit takes place after three years.

Achieving certification requires hard work and commitment from the organisation. Depending on the size of the organisation, the complexity of its work, the level of experience already available and the extent to which the organisation has a functioning QMS in place, the preparation and certification process may take between a few months and a couple of years.

The cost of obtaining and maintaining certification also depends on the size and experience of the organisation. Certification inspections do not in themselves cost a great deal, but training and consultancy costs may be significant for larger organisations.

The Resources³¹ include a case study of the experience of an NGO from the initial system through audit, to certification and implementation of the mature system.

EFQM AND CAPACITY WORKS

When looking at the programme level (with a number of organisations operating together) business excellence models, such as EFQM, bring additional perspectives, over and above those offered by ISO 9001.

The European Foundation for Quality Management (EFQM)³² is a network of about 500 organisations with a mission to inspire members to achieve sustainable excellence by engaging leaders to learn, share and innovate using the EFQM Excellence Model.

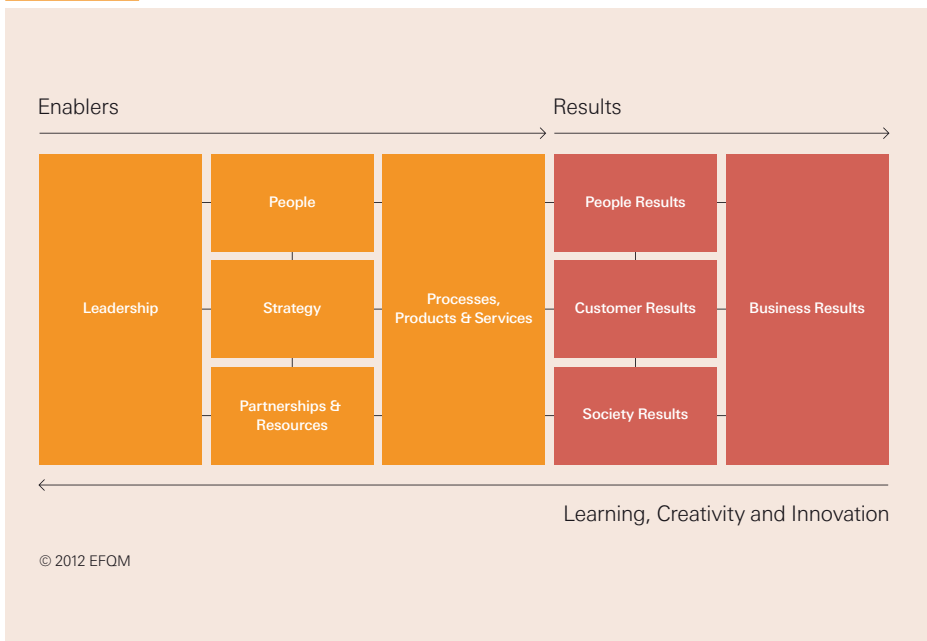
The difference between ISO and EFQM is the scope of application: while ISO defines requirements for the QMS (including its assessment) and guidance for performance improvement, excellence models contain criteria for comparative assessment of organisational performance that are applicable to **all** activities. This means excellence models allow for comparison of performance of organisations.

The common principles between the two approaches are that they:

- enable an organisation to identify its strengths and weaknesses;
- contain provision for assessment against generic models;
- provide a basis for continual improvement; and
- contain provision for external recognition.³³

The EFQM model differentiates on one side between the **enablers** (leadership, people, strategy, partnerships and resources, processes, products) and on the other side the **results** (from the viewpoint of people, customers, society and business). Learning, creativity and innovation are cross-cutting. The approach used is self-assessment: managers use systematic questionnaires and analysis tools for the answers.

FIGURE 2 EFQM EXCELLENCE MODEL

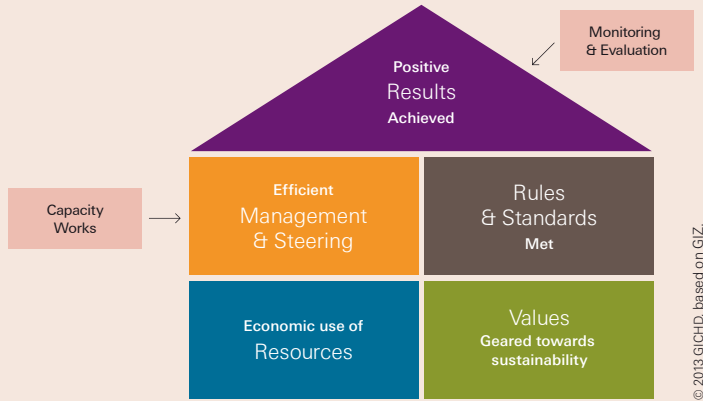


The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ, German Development Agency)³⁴ has used the EFQM model when developing its approach to QM, including the management model Capacity Works (CW).³⁵

GIZ QM

GIZ illustrates its approach to QM as a house:³⁶

FIGURE 3 GIZ HOUSE OF QUALITY



The quality features are:

- values geared to sustainability;
- economic use of resources;
- efficient steering;
- compliance with rules and regulations; and
- positive results achieved.

The quality features have been developed based on the EFQM criteria. GIZ uses the management model Capacity Works (CW) particularly for efficient steering, but also to ensure learning. Quality is measured both in terms of how well a product has been delivered and in terms of client satisfaction. Monitoring and evaluation are used to assess whether positive results have been achieved.

GIZ commits to quality and to continual improvement: *'GIZ endeavours to consistently improve its services and in-house processes. We apply a quality management system and systematically analyse our work and the results it generates. This makes what we do more effective and more economically efficient and improves our accountability vis-à-vis our commissioning parties'.*

The CW management model is the application of the EFQM model in the development sector, namely in the specific context of capacity building in a multi-stakeholder development environment. This is directly comparable to MA, and is a useful model for QM at the programme level.



QM at programme level

CW defines two **logics** or decision-making environments:

- the logic of **Leadership** within an organisation, and
- the logic of **Steering** in a multi-stakeholder programme.

The main difference between these two levels is the way decisions are being made. An organisation or company is normally organised in a hierarchy, and it is the hierarchy that makes decisions possible. In a multi-organisational context – at programme level – cooperation and negotiations make decisions possible, normally with one organisation mandated to co-ordinate decision-making.

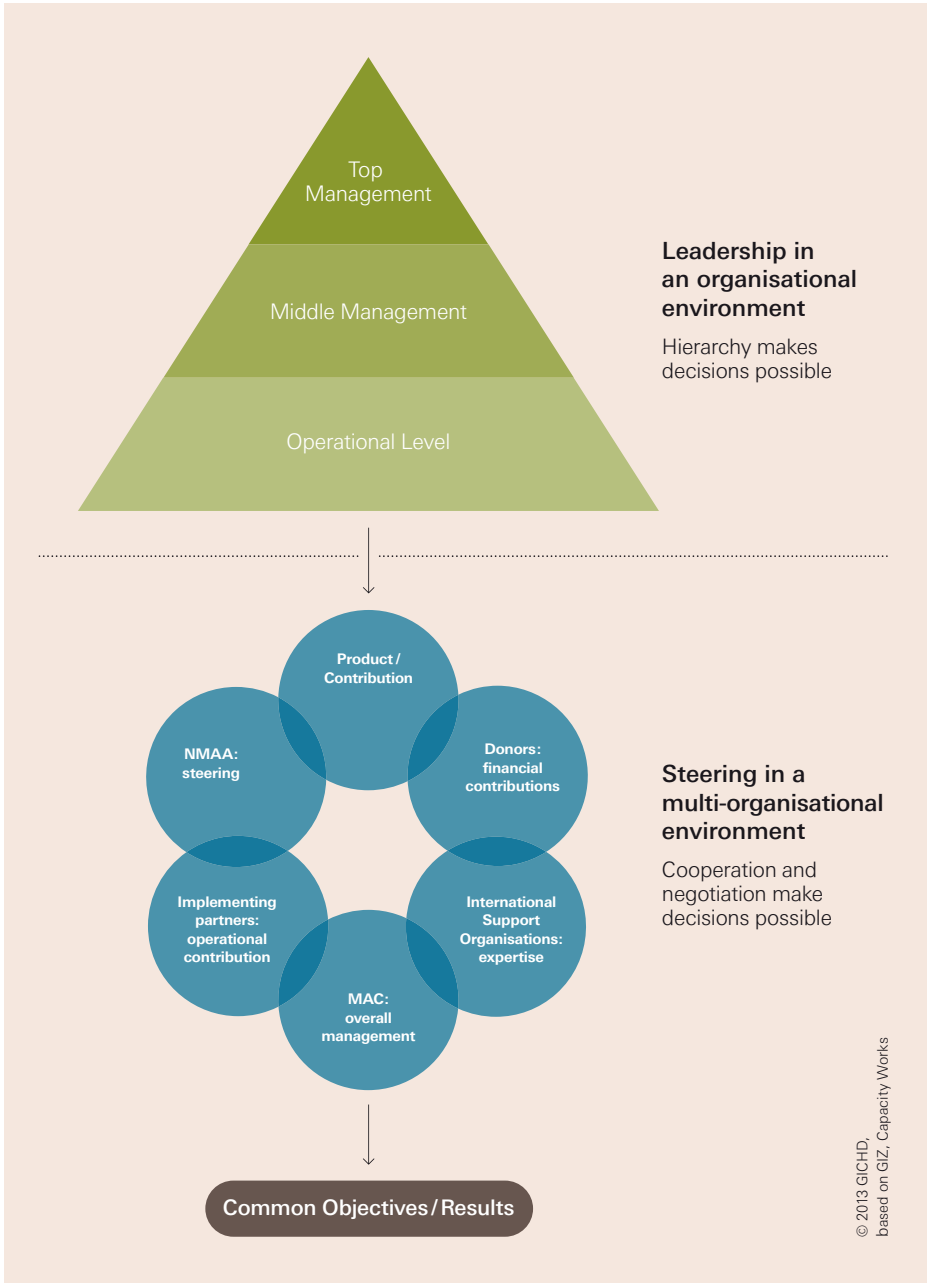
At the programme level, it is important to define stakeholders – who has an interest in the performance of the programme? These are those who:

- put resources in
- are willing to share and co-ordinate
- share objectives and goals.

Examples in a MA programme include the MA authority, coordination centre, implementing partners, donors, other government agencies and, potentially, international support organisations.

FIGURE 4

MAP OF TWO LOGICS



After investigating thousands of projects and programmes worldwide, GIZ identified five **success factors** leading to quality at the programme level:

- Strategy
 - ▶ a clearly defined path for change, considering the context, existing laws/ regulations/standards and resources/competences.
- Cooperation
 - ▶ understanding who you will be operating with. Establishing processes for co-operation, defining roles and responsibilities and pursuing learning. When cooperating with external partners, to be familiar with external actors and their resources, to establish partnerships and to communicate your own comparative advantages.
- Steering structure
 - ▶ the structure is a result of negotiation. The functions of the steering structure include planning, coordination, control, strategy, management of resources, conflict management and most importantly decision-making.
- Processes
 - ▶ understanding of key strategic processes including the management and steering of outputs and outcomes, cooperation and learning processes.
- Learning and innovation
 - ▶ measures such as evaluation and research to develop and consolidate learning capacities. Ideally, co-operation systems are more than the sum of their members, and they allow for learning at all levels: individual, organisation, co-operation system and policy field.

CW provides managers who are steering a programme with tools that guide the analysis and action in each success factor. It provides criteria for quality, but not ready-made solutions.

The specific relevance of the CW management model in MA lies in all stakeholders understanding that quality is not only important within their own organisation or company. They also contribute to quality in the co-operation network of stakeholders at the programme or national level. This also includes constructs like UN headquarter and field programmes with certain autonomy, as well as industry-wide learning and improvement. It necessitates jointly co-ordinating, co-operating and improving continually in a national programme, and to consider how lessons can be learned from one programme to the other. The model is particularly relevant for Mine Action Centres (national, UN-run and those in transition from UN-run to national), and for any actor working on capacity development.

In addition to programme stakeholders, CW includes **trading partners**. Trading partners are outside the programme as they do not share the same goal or objectives (eg a country free from the threat of mines), but they still play a role in achieving quality in a programme. They are in a support relationship to the programme, for example suppliers such as metal detector manufacturers or other equipment or logistics suppliers. For collaborating with these trading partners, managers can apply the ISO principle of mutually-beneficial supplier relationships.



OTHER MANAGEMENT MODELS AND SYSTEMS

The QM standards and models applied in this handbook include IMAS, the ISO 9000 series, and CW as the application of the EFQM excellence model in the development sector. There are two other important models applied to make the link between the QM principle of **customer focus** and the focus on **outcomes** in development. They are Results-based Management (RBM) and Project Cycle Management (PCM).

Results-Based Management (RBM)

RBM is a performance management system used when supplying public services, including those financed by official development assistance (as in much of mine action). When selling in the private sector (the 'market'), people and organisations purchase goods and services – the outputs of farms, factories, etc – to meet their own requirements, so the customer is both the **client** paying for the product and the consumer or **beneficiary**. However, in providing public services, we typically find that the beneficiary is different from the organisation paying for the goods or service. This has important implications.

In international aid, including many mine action programmes, who is the customer? Is it the client (ie the one who pays), the citizens (the intended beneficiaries), or the recipient government (which is responsible for the delivery of public services)? We often need to think more deeply about **customers** and, therefore, **satisfying all customers**.

Because of this, defining customer satisfaction is more difficult when providing public services – and particularly when these are financed by international aid. RBM can be thought of as an extra set of concepts and tools needed to implement QM when the one benefiting or using the outputs we deliver is not the one who pays. Therefore, we can think of different categories of customers to satisfy.

The ISO approach is to use the term **interested party** instead of **customer** to cover a wider range of stakeholders. Interested parties to a mine action organisation include, for example:

- women, girls, boys and men in beneficiary communities;
- donors;
- the mine action centre and other government officials;
- suppliers and partners;
- society as a whole; and
- its own staff.

They all have their own expectations.

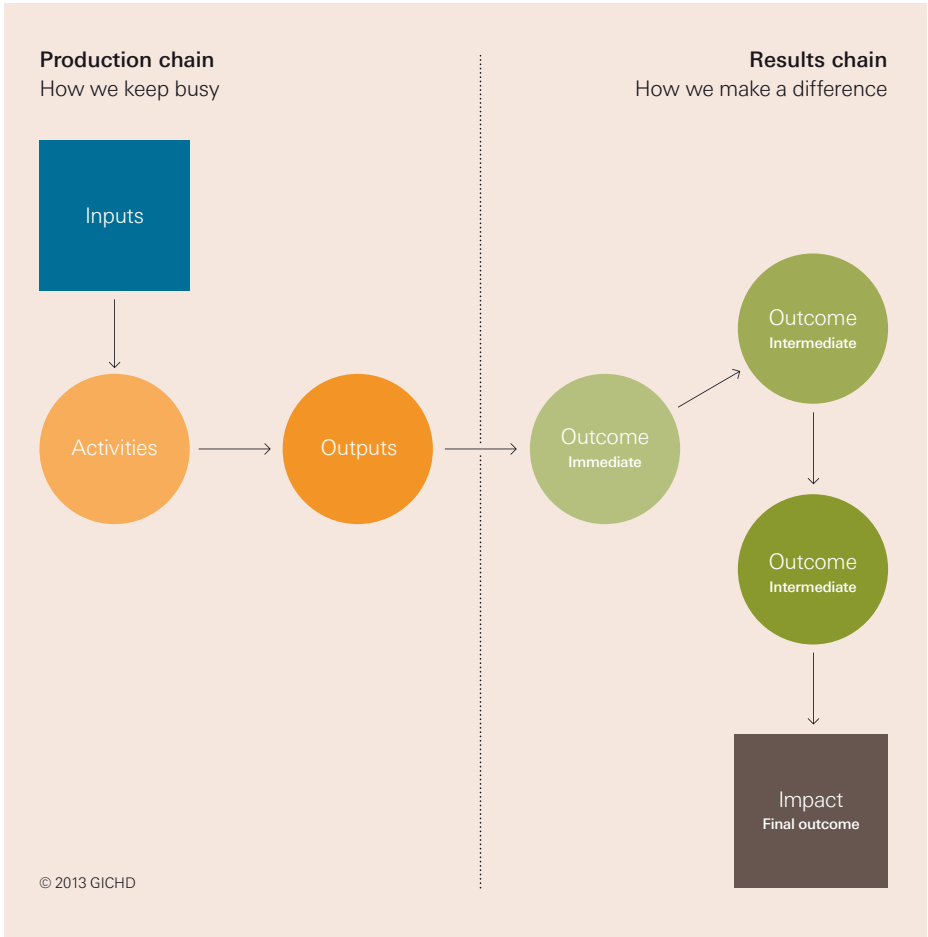
A second key theme of RBM is the principle that, first and foremost, we need to plan how we **will make a difference** to the target beneficiaries rather than **how to keep busy** in producing outputs. A mine action programme is not responsible simply for delivering outputs (eg safe land; prostheses fitted); it also should be managed in such a way that the mine action outputs lead to good outcomes for citizens in mine/unexploded ordnance (UXO) affected areas (eg land is used, by the intended people, in the intended way).

The responsibility of a national MA programme extends to the achievement of good outcomes, even though it cannot directly create those outcomes, because it is receiving public funds to deliver public services.³⁷

With this RBM principle in mind, we **budget to outputs but manage to outcomes**.

FIGURE 5

PRODUCTION AND RESULTS CHAIN

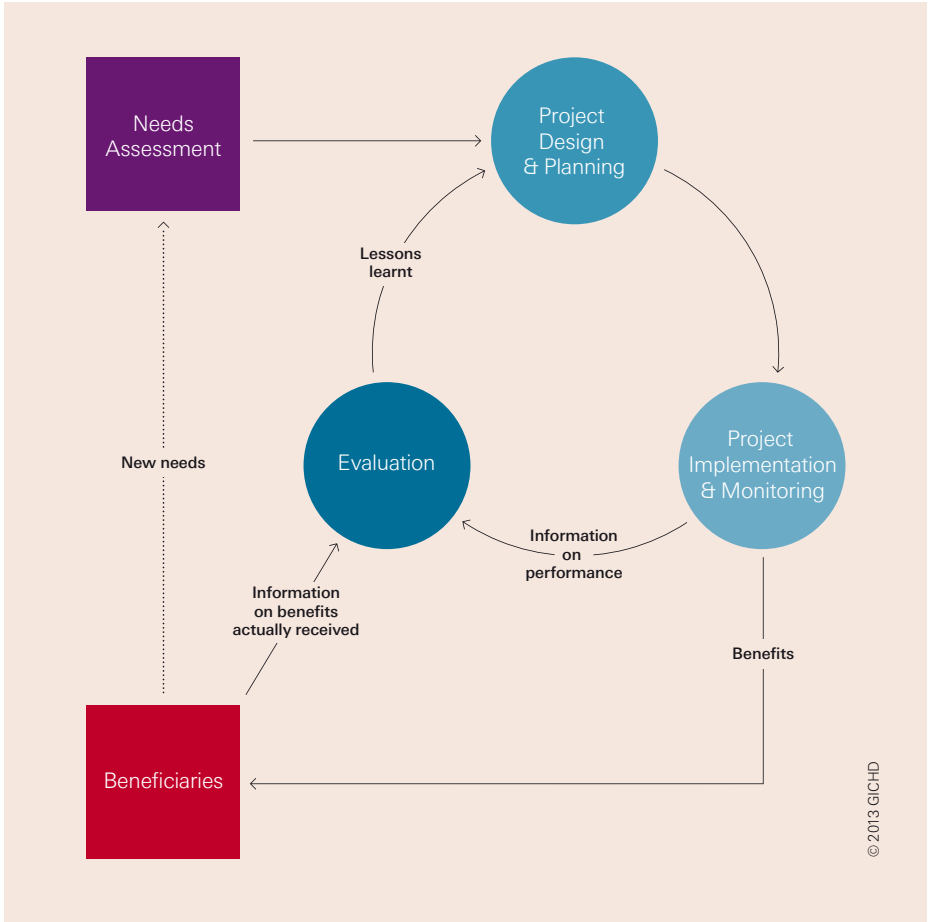


Project Cycle Management (PCM)

PCM is a simple and useful concept that is applied in development cooperation. Again, PCM focusses on a few key principles that are equally valid for QM. It shares the results-focus of RBM: we need to plan projects to deliver what women, girls, boys and men truly need,³⁸ not simply to deliver outputs we happen to be good at producing.

FIGURE 6

PROJECT CYCLE MANAGEMENT



A second key PCM principle is that every project should be designed to produce two types of benefits; in the case of mine action:

1. Benefits to affected women, girls, boys and men – the outputs that will be useful to people in mine/UXO communities to create good outcomes, which improve their well-being.³⁹
2. Information to mine action planners and managers on what is working, what is not, and how to improve performance in the next generation of projects.

When designing projects, planners need to define indicators that can track progress of activities, outputs **and** outcomes. During implementation, managers need to track the indicators to ensure the project is delivering these outputs and achieving these outcomes. At various points, performance should be evaluated both in terms of meeting output targets and of achieving planned outcomes. The lessons can then be applied to the next generation project, which leads to performance improvement over time.

Projects have **quality at entry** when they are well designed to achieve results – outcomes rather than simply outputs – and to generate information on what is working, what is not, and how to improve performance in the next generation of projects.

Relating RBM and PCM to the ISO 9000 principles, there are clear connections:

- Measure performance by **how we make a difference** to women, girls, boys and men in mine-affected communities more than **how we keep busy**
 - ▶ Customer satisfaction.
- Apply the lessons to improve performance in both project planning and project implementation
 - ▶ Continual improvement.
- Design projects to deliver both benefits to people and lessons learnt to Mine Action managers
 - ▶ Continual improvement in satisfying customers.

International Quality Initiatives

There are several other models used for QM. They are mainly based on the concept of self-assessment, similar to ISO 9004 and EFQM. Other well-known examples include the Baldrige Criteria for Performance Excellence of the National Institute of Standards and Technology (NIST), an agency of the U.S. Department of Commerce.⁴⁰

In the **security and development sectors**, there are a number of organisations, bodies and networks focussing on quality and standards. The most relevant to mine action are:

International Ammunition Technical Guidelines (IATG): the IATG were developed in 2011 under the UN SaferGuard Program by a technical review panel consisting of experts from Member States, with the support of international, governmental and non-governmental organisations. The aim is to reduce the hazard to local

communities from unplanned explosive events and to negate the risk to wider communities posed by the uncontrolled proliferation of ammunition. One of the key aspects is to improve national stockpile management.⁴¹

Integrated Disarmament, Demobilisation and Reintegration Standards

(IDDRS): the IDDRS of December 2006, developed by the UN, provide guidance on all aspects of the DDR process. They are also intended to serve as a repository of new knowledge by means of the UN DDR Resource Centre.

International Small Arms Control Standards (ISACS): in collaboration with partners worldwide, the UN has developed ISACS that provide guidance to practitioners and policymakers on fundamental aspects of small arms and light weapons control.⁴²

Development Assistance Committee of the Organisation for Economic Cooperation and Development (OECD/DAC):

in its own definition, the DAC, through inclusive partnerships for development, helps ensure better lives for people in the developing world by helping to understand development finance, strengthening aid delivery, improving development policy, and building partnerships for development.⁴³ The DAC has developed glossaries that greatly support standardising language and with this understanding of key development concepts.⁴⁴

Humanitarian Accountability Partnership (HAP): Established in 2003, HAP International is the humanitarian sector's first international self-regulatory body. By self-definition, members of HAP are committed to meeting the highest standards of accountability and quality management in humanitarian action.⁴⁵ HAP is, for example, developing and maintaining standards for humanitarian action.⁴⁶

The Sphere Project: Established in 1997, the Sphere Project is a voluntary initiative that brings a wide range of humanitarian agencies together around the aim to improve the quality of humanitarian assistance and the accountability of humanitarian actors to their constituents, donors and affected populations.⁴⁷ The Sphere Handbook, *Humanitarian Charter and Minimum Standards in Humanitarian Response*, is one of the most widely known and internationally recognised sets of common principles and universal minimum standards in life-saving areas of humanitarian response.⁴⁸

Groupe URD: Created in 1993, Groupe URD is an independent institute which specializes in the analysis of practices and the development of policy for the humanitarian and post-crisis sectors. Its role is to help organisations to improve the quality of their programmes through evaluations, research, quality support and training.⁴⁹ Groupe URD has developed the COMPAS Quality assurance

method⁵⁰ and provides expert advice to accompany organisations in the process of adopting a quality approach.

Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP): ALNAP was established in 1997, following the multi-agency evaluation of the Rwanda genocide. It is a sector-wide active learning membership network, dedicated to improving the quality and accountability of humanitarian action, by sharing lessons, identifying common problems and, where appropriate, building consensus on approaches.⁵¹

THE IMPORTANCE OF MAINSTREAMING GENDER IN QMS

Gender refers to the socially constructed roles and opportunities associated with women, girls, boys and men (**WGBM**). These attributes, opportunities and relationships are ‘socially constructed’ (as opposed to being biologically determined), learned through social norms, and context/time-specific and changeable.

The following are important points and conclusions regarding mainstreaming gender in QMS:

- **Customer focus** – WGBM in beneficiary communities are all customers, but they do not all have the same needs, priorities, capabilities etc.
- **Confidence in the end product** – conduct a gender analysis to understand gender- specific mobility patterns and who will therefore be the main end-user of the land.
- **NMAS** are a key structure for ensuring the needs, priorities and capabilities of WGBM are taken into consideration during mine action programming. They guide how IPs develop standard operating procedures (SOP).
- Relevant **SOP** should address:
 - ▶ the steps that will be taken to access the different segments of the community
 - ▶ the gender composition of teams (particularly for positions where there is a clear benefit to having gender-balance)
 - ▶ how the materials will be designed to be sex/age appropriate

- ▶ how messages will be targeted to different population demographics
- ▶ how services will be designed to meet the specific needs of WGBM.
- During **organisational accreditation** check that the IP has included documentation that supports the equal access to employment of men and women and is compliant with national laws eg labour law. Also check the SOP related to community liaison, mine risk education, victim assistance, land release and handover to ensure they address how the IP will access WGBM with the different activities.
- During **operational accreditation** check that the IP is compliant with the relevant SOP as part of the field assessment by using gender-sensitive QA.
- Collect sex and age disaggregated data (**SADD**) and gender statistics to build gender-sensitive indicators that help **monitor and evaluate** gender-related differences within MA and gender-related changes over time.



10 STEPS TO
A NATIONAL QMS

This book is about setting up a national QMS; a QMS on programme level. If you work for an organisation or company, remember that most of the steps described below also apply in any organisation or company with little adjustment. It is even more important to remember that every organisation or company is an important stakeholder within the national (or UN-run) MA programme, and contributes to achieving quality at the programme level. QM at the programme level only works if all stakeholders share the same vision on quality, agree on how to achieve it, and contribute their part. It certainly helps the programme-level QMS if the stakeholders have their own internal QMS that fits into the overall system.

BEFORE STARTING

It makes sense to consider a **readiness assessment** to increase the chances of setting up a QMS smoothly and efficiently. This is done by seeking answers to the following questions:⁵²

- What is driving the need?
- Who are the champions for advocating or setting up the QMS?
- What is motivating the champions?
- Who will benefit from the QMS?
- Who will not benefit from the QMS?
- How will the QMS support better efficiency, effectiveness and achievement of programme goals?
- How will the organisation or programme react to negative information generated by the QMS?
- Where does capacity exist to support a QMS?
- How will the QMS link project, programme, sector and national goals?

A readiness assessment will help identify the barriers and obstacles – structural, cultural, political, or individual – in a given organisation or programme.

Setting up a national, programme-wide QMS may sound like a big task so it is important to break it down into workable units. This is why we chose the 10-step approach. Some programmes may choose to break the task down further by starting with a limited pilot, ie one province and only a few key processes instead of a whole-of-government approach including the full scope of the system. A pilot helps to test and improve key elements of the system, and to confirm its suitability prior to scaling it up. A pilot also helps to demonstrate the effectiveness of results-based QM, and with this to gain stakeholder support.



STEP 1

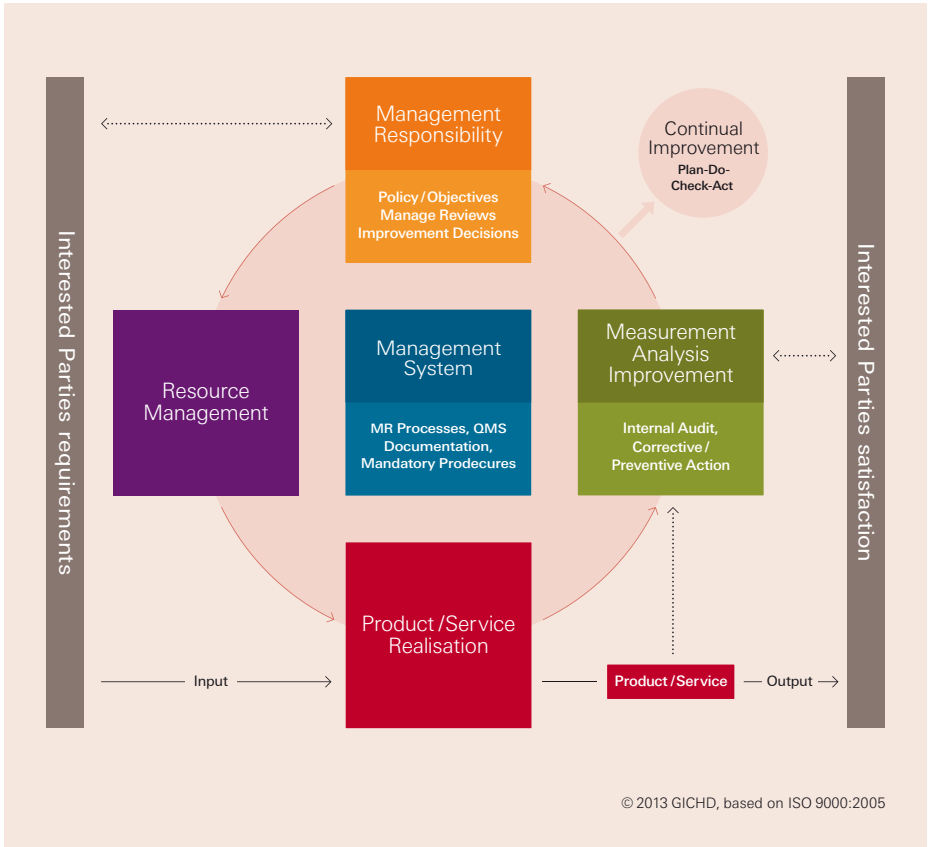
UNDERSTANDING THE SYSTEM APPROACH TO MANAGEMENT

By definition, a **System** is a '*Set of inter-related or interacting elements*'. A **Quality Management System** is a '*Management system to direct and control an organisation with regard to quality*'. A **Management System** means to '*establish policy and objectives and to achieve those objectives*'.⁵³

A QMS includes a quality policy, quality objectives, processes, resources, and clearly defined roles and responsibilities. It is that part of the programme or organisation's management system that '*focuses on the achievement of results, in relation to the quality objectives, to satisfy the needs, expectations and requirements of interested parties, as appropriate*'.⁵⁴

FIGURE 7

SYSTEM APPROACH



The QM system approach:

- determines the needs and expectations of the interested parties
- establishes a quality policy and objectives
- determines processes and responsibilities to attain quality objectives
- determines and provide resources to attain objectives
- establishes and applies methods to ensure effectiveness and efficiency of processes
- determines means of identifying non-conformities and eliminating their causes
- establishes processes for continual improvement.

STEP 2

DEFINING THE SCOPE OF A QMS

The scope of a QMS is primarily defined through considering what a programme or organisation does and who it interacts with. In MA there are standards that relate to **product requirements** – the requirement for released land to be clear of hazard items or for emergency risk education to provide clear warnings about the explosive threat to as many people as possible for instance. In some cases, particularly at the national programme level, requirements may be specified in laws and national standards. Additional product requirement definitions may be found in contracts as well as through understanding the expectations of other interested parties.

There are also standards, such as ISO 9001, IMAS and some NMAS, that include specific requirements for the QMS itself.

The scope of the QMS reflects the context (external and internal) in which the organisation or programme exists. External context comprises the environment in which the organisation/programme functions and seeks to achieve its objectives. Understanding the external context is important to ensuring that the objectives and concerns of external stakeholders (donors, other authorities, other organisations, society etc) are appropriately reflected when developing the quality policy and objectives.

The external context may include (but is not limited to):

- the social and cultural, political, legal, regulatory, financial, technological, economic, natural and commercial environment, whether international, national, regional or local;
- key drivers and trends within the industry or sector, and associated sectors, having an impact upon the objectives of the organisation/programme; and
- relationships with, perceptions and values of external stakeholders.

The internal context is the internal environment in which the organisation/programme seeks to achieve its objectives. Within a single organisation the internal context typically embraces:

- governance, organisational structures, roles and accountabilities;
- existing policies, objectives and strategies;
- capabilities – resources and knowledge (such as funding, time, people, processes, systems and technologies);
- relationships with and perceptions and values of internal stakeholders;
- organisation’s culture;
- information systems, information flows and decision-making processes;
- standards, guidelines and models adopted by the organisation; and
- form of memoranda of understanding, contracts and other applicable agreements.⁵⁵

Conducting an assessment and gap analysis of existing QM approaches

A gap analysis starts with understanding the legal requirements and standards applicable to a programme, or organisation; then trying to find out what is missing for a results-based programme-level QMS. Existing laws and standards are reviewed for completeness, for example, checking if there is a requirement for a quality policy and objectives, or processes for corrective and preventive actions, and for continual improvement.

It is important to differentiate clearly between requirements that have been defined for:

- products (eg land safe to use);
- services (eg training);
- processes (eg technical survey);

and requirements that have been defined for QM (eg the requirement to set up a QMS).

The best starting point is a programme **self-diagnosis** using a list of questions as proposed in the Resources section. These questions lead to answers about aspects such as standards, strategies, coverage of the current system, responsibilities, resources and information management.

Another option is to contract a specialized ISO 9000 organisation⁵⁶ to conduct a gap analysis referring to the requirements defined in ISO 9001. Vietnam chose this option, and the professional gap analysis led to a list of documents that had to be produced (for example, a procedure for receiving and handling the requests of customers/beneficiaries, and a procedure for monitoring and measuring customer satisfaction).

A broader approach to self-diagnoses of a QM system at the national level could be the EFQM model, strictly speaking the five success factors defined in Capacity Works. A CW self-diagnosis asks how well a programme is doing regarding strategy, cooperation, steering structure, processes, and learning and innovation. The section on EFQM and Capacity Works describes what is meant by 'good' on programme level. When, for example an operational steering structure has been established, the structure is a result of negotiation, the functions of the steering structure include planning, coordination, control, strategy, management of resources, conflict management and, most importantly, decision making.

Identifying national QMS stakeholders

There are a number of different stakeholders in national programmes who are responsible for ensuring the maintenance of standards to protect the public, ensure worksite safety and adherence to contracts. This includes the public sector (in some cases sub-contracting private sector companies), professional associations, companies contracted for external assessments etc. These stakeholders and their contributions should be clearly identified, eg when setting up a QMS.

EXAMPLE: QMS STAKEHOLDERS IN GERMANY AND AZERBAIJAN

Germany

Looking at a long-term established programme (as in Germany), there is a sub-division of controls ensuring adherence to laws and standards:

- Public (civilian) EOD cells, which are normally under the Ministries of Interior or under the construction authorities of the Regional Authorities, do physical post-clearance inspections of samples of the cleared areas.
- Health and safety control sections of local authorities look after aspects relating to the protection of the general public, for example environmental aspects.
- Professional trade associations look after the protection of employees and maintenance of industrial health and safety standards.
- Sections within the Regional ministries commissioning tenders on behalf of the Federal Government and the Regions are checking adherence to standards set by the construction sector.
- Other Regional Ministries licence and certify senior EOD staff.⁵⁷

In addition, there are organisations like the Technischer Überwachungsverein (TÜV, German Association for Technical Inspection)⁵⁸ conducting professional tests on material and equipment, for example vehicles. They provide tested equipment with certification.

Azerbaijan

In Azerbaijan, the national MA centre ANAMA, which is under the Cabinet of Ministers, is also the main implementer of services. QM covers, for example:

- internal and external monitoring of safety procedures, including demolitions;
- quality of operations, including following SOP and post-clearance sampling;
- equipment testing and checks;
- logistics;
- medical support;
- accident investigation; and
- technical meetings for improvement, reward system etc.

Stakeholders include the Ministry of Emergency Situation for demolition management, which includes the monitoring of explosive storage and conducting explosive transport, as well as the training and certification of personnel. The Ministry of Labour and Social Protection provides safety instructions and the labour law book, and does, for example, yearly inspections on the adequate insurance of the workers. The police support with their central emergency call, allowing affected people easy access and feedback.

Stakeholders can be internal or external to the programme. Internal stakeholders share the medium-term objective of the programme:

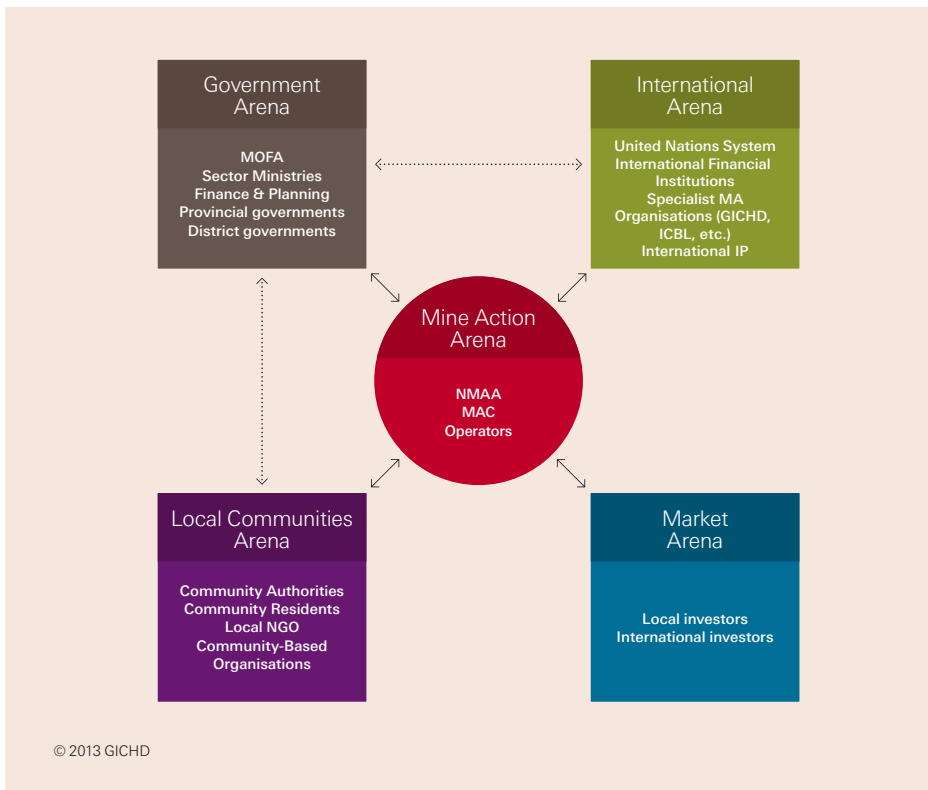
- they are part of the core co-ordination system.
- they hold a vested interest in a programme; for example, groups sharing needs and values or acting publicly organised (eg victims' rights or other advocacy).
- they provide material resources.
- their social position and knowledge make them relevant for the design, planning and implementation of a QMS.

External stakeholders are outside of the core co-ordination system; they are not reached by programme activities, and have no financial input. However, it can be interesting to obtain information on resources that can be mobilized to help achieve programme objectives in order to strengthen the programme.

In general the more stakeholders involved, the harder it will be to manage a programme, and the greater the value associated with adoption of formal systems or models such as CW.

A simple and useful tool to identify and visualize the main actors of a QMS is stakeholder mapping. This can be done as a group effort using the generic overview below or the model described in the textbox.

FIGURE 8 MINE ACTION ARCHITECTURE



STAKEHOLDER MAPPING

Stakeholder mapping should be done by a group of key actors of the MA programme plus people with relevant outside expertise. There should also be a facilitator. It starts with a clearly defined question, for example: Who are the stakeholders in our national QMS? This could be a suitable question in the start-up phase of a national QMS. The group brainstorms while one person writes each stakeholder on one post-it note. The group can think of actors that are already part of the national QMS, and of actors that should be part of the QMS in future. Both can be identified with different colours.

If a programme already has a quite well established system, the mapping question could also be: QM on programme level – how can we improve co-ordination between stakeholders in order to make MA more efficient and effective? This question is particularly relevant for example at times of transition from UN to national ownership of a programme.

The facilitator, guided by the group, then fixes one post-it note after the other on a graph like this:

FIGURE 9 STAKEHOLDER MAP



© 2013 GICHD,
based on GIZ, Capacity Works

The graph differentiates between public and private sectors, civil society and international actors. Key stakeholders are in the first ring, primary stakeholders in the second ring, and secondary stakeholders in the third ring.

The group should then decide on the borders of the system: who and what should be covered, and what should not?

The limitations of this tool are obvious: the map is the subjective view of the creators, and it is a snapshot in time, as actors and relationships change. However, it is a good first step to get agreement among key stakeholders on the scope of the future QMS.

Legal Requirements

The QMS may need to ensure satisfaction of a range of legal requirements. Some may already be familiar from within the MA sector, especially where national laws and regulations, specific to the industry, have been established. However, it is likely that there will be other legislation, applicable to MA, that organisations should be aware of and satisfy. Typical examples include labour law, safety and occupational health law and environmental law. There may be others, depending on the prevailing circumstances and conditions within individual countries.

STANDARDS FOR SAFETY AND OCCUPATIONAL HEALTH

Safety and occupational health (S&OH) is one example where MA has set overall standards (IMAS 10 series) that organisations and programmes should adhere to in order to reduce risk and provide a safe working environment.

To achieve this, managers should provide:

- effective management and supervision;
- safe work practices;
- appropriate, effective and safe equipment;
- appropriate training; and
- effective personal protective equipment.

NMAA and employers should establish and maintain S&OH management systems. Such systems should distinguish between obligations and responsibilities at the national level, and those of the employer and employee as proposed in International Labour Organization (ILO) C155 and R164 (established norms that regulate conditions of work and safety).

National responsibilities include establishing a system to issue or approve regulations, codes of practice and SOP on S&OH which explain:

- employers' responsibilities: to maintain a safe workplace, equipment and procedures;
- employees' responsibilities: to take care, comply with instruction and wear personal protective equipment.

Some organisations may establish parallel, but associated, management systems for safety and environmental aspects of their operations, but it is more common within MA to establish a single integrated system.⁵⁹ A basic objective of a QMS is to satisfy requirements (a Quality Policy typically includes a written commitment to do so). Programmes and organisations need to be clear on which legal requirements apply and how they will be reflected within the scope and detail of the QMS.

THE IMPORTANCE OF LEGAL CLARITY

It can be hard to achieve efficiency and effectiveness without legal clarity. Decision-makers need a clear and reliable legal framework if they are to have confidence in the decisions they take and the consequences of those decisions. If an accident results from a missed mine in released land, who will be liable? If it is the survey or clearance team leader, then he or she is likely to choose 100% clearance over other more efficient responses, even if survey data provides sufficient evidence that no clearance is required.

Liability is legal responsibility for one's conduct: a person who commits a legal wrong or breaks a contract or trust is said to be liable or responsible for it.

The **duty of care** that is owed to others in performing an action or activity is complex, but in basic terms it is the standard by which one would expect to be treated while in the care of another. In demining, there is always a residual risk, which is **the risk remaining following the application of all reasonable efforts to discredit, remove, or destroy all mine or ERW hazards from a specified area to a specified depth. But what defines all reasonable effort?** Procedures have to be in place, standards defined, contracts have to be clear.

The following are important points and conclusions regarding liability:

- it is important that the National Mine Action Authority (NMAA), on behalf of the government, develops a policy that details liability aspects, including the shift of liability from the demining operator to the government or the local community when pre-defined criteria have been fulfilled.
- the extent of civil liability for any negligence on the part of mine action operators should be clarified in national standards (and arguably also national legislation). The liability of demining operators is generally based on negligence, though in some legal systems there is strict liability for carrying out dangerous activities. Both options are viable solutions.
- legislation providing for the strict liability of the State in all cases, or in cases where the State has declared certain territories as mine-free, would avoid the generally complex assessment of negligence/reprehensible conduct. Therefore, this may be most cost-effective overall.
- NMAA should have well established standards for handing over cleared land. Such standards should define at what exact point the responsibility of the operator is handed over to the authority. National standards should be detailed to the level of information that is to be collected and reviewed as a part of the handover of cleared land. Such standards should also include how and for how long such information should be stored.
- there should be clear rules for compensation including procedures and levels of compensation following any accidents occurring in areas that have previously been cleared and subsequently accepted and handed over to the authority.⁶⁰

Actions

1. Carry out a programme/organisational self-diagnosis
2. Consider using an ISO 9000 consultant
3. At the programme level consider using CW
4. Carry out a stakeholder analysis
5. Identify applicable legal and standards requirements



STEP 3

IDENTIFYING THE NEEDS OF INTERESTED PARTIES

Once the stakeholders or interested parties of a programme are well understood and mapped, their different needs and expectations must be identified. This refers to current and anticipated future needs. Remember the customer's expectations are beside laws and standards at the centre of the quality triangle, as explained in the introduction, and the focus on customer satisfaction is one of the basic QM principles.

The easiest approach to identifying needs is to compile a list as in the tables below. It is essential to gather first-hand information, ie to talk to the stakeholders, eg end-users and beneficiaries, and ask them what their needs are. This can also be done in the form of a survey, and it should be supported by background research.

The ISO definition of an **Interested Party** is a *'Person or group having an interest in the performance or success of an organisation'*.⁶¹ In MA, we could extend the definition to include an organisation or a programme. The equivalent term in development language is **Stakeholder**. Examples include customers, owners, people inside an organisation, suppliers, donors, partners or society. ISO has a specific definition for **Customer**: an *'Organisation or person that receives a product'*. A customer can be a consumer, client, end-user, retailer, beneficiary or purchaser, and a customer can be internal or external to the organisation or programme.⁶² The operations department of an organisation is, for example, an **internal** customer of the information management department, and the Meeting of States Parties of the APMBC can be an **external** customer of a national MA programme.

INTERESTED PARTIES' EXPECTATIONS FROM THE VIEWPOINT OF AN NGO/IP MANAGER

INTERESTED PARTY	EXPECTATIONS
Beneficiaries	<ul style="list-style-type: none"> • Requests for clearance are dealt with in a timely manner • Transparent, inclusive system for priority setting • 100% safe land handed over for intended use • MRE is timely, targeted to threat/problem, and delivered in an age/sex appropriate way • VA is timely and targeted to the needs of the different sex/age groups
Mine Action Centre (MAC)	<ul style="list-style-type: none"> • Work according to NMAS/accredited SOP • Accurate reporting on activities, outputs and outcomes

Organisation's donor(s) – if applicable	<ul style="list-style-type: none"> • Safe, effective and efficient operations • Accurate reporting on activities, outputs and outcomes • Sustainable socio-economic impact • Financial transparency and trustworthiness
National authorities	<ul style="list-style-type: none"> • Requests for clearance are dealt with in a timely manner • Transparent, inclusive system for priority setting
Local authorities	<ul style="list-style-type: none"> • Requests for clearance are dealt with in a timely manner • Transparent, inclusive system for priority setting
Organisation's staff	<ul style="list-style-type: none"> • Safe job, recognition, salary, adequate work environment, training/capacity development for future jobs, no discrimination in the workplace
Organisation's headquarters/Board/ Council of Foundation	<ul style="list-style-type: none"> • Safe, effective and efficient operations • Accurate reporting on activities, outputs and outcomes • Sustainable socio-economic impact • Financial transparency and trustworthiness
Mine Action Authority	<ul style="list-style-type: none"> • Adherence to national strategy • Acceptance of national authorities
Society	<ul style="list-style-type: none"> • Protection of environment, ethical behaviour, compliance with law, upholding principle of 'Do No Harm'
Suppliers & partners	<ul style="list-style-type: none"> • Mutual benefit, trusting cooperation, continuity

INTERESTED PARTIES' EXPECTATIONS FROM THE VIEWPOINT OF A MINE ACTION CENTRE MANAGER

INTERESTED PARTY	EXPECTATIONS
Implementing partners	<ul style="list-style-type: none"> • Timely and accurate provision of services like accreditation, tasking, QA, QC • Co-ordination of stakeholders • Act as focal point of national authorities • Overview of legal obligations • Maintain national MA database and share information
UNDP	<ul style="list-style-type: none"> • Accurate reporting on programme progress • Timely requests for specific needs
MAC's donor(s)	<ul style="list-style-type: none"> • Effective and efficient operations • Accurate reporting on activities, outputs and outcomes • Sustainable socio-economic impact • Financial transparency and trustworthiness
National authorities	<ul style="list-style-type: none"> • Effective and efficient operations • Accurate reporting on activities, outputs and outcomes • Sustainable socio-economic impact • Financial transparency and trustworthiness • Requests for clearance are dealt with in a timely manner • Transparent, inclusive system for priority setting
Local authorities	<ul style="list-style-type: none"> • Requests for clearance are dealt with in a timely manner • Transparent, inclusive system for priority setting

Organisation's staff	<ul style="list-style-type: none"> • Safe job, recognition, salary, adequate work environment, training/capacity development for future jobs
Mine Action Authority	<ul style="list-style-type: none"> • Formulation of national strategies and work plans • Following agreed targets • Accurate reporting
Society	<ul style="list-style-type: none"> • Protection of environment, ethical behaviour, compliance with law • Leave sustainable structures after transition to national ownership to deal with residual problem
Suppliers & partners	<ul style="list-style-type: none"> • Mutual benefit, trusting cooperation, continuity

ON A PROGRAMME LEVEL

INTERESTED PARTY	EXPECTATIONS
Beneficiaries	<ul style="list-style-type: none"> • Easy access to request assistance • Requests for clearance are dealt with in a timely manner • Transparent, inclusive system for priority setting • 100% safe land handed over for intended use • MRE is timely, targeted to threat/problem, and delivered in an age/sex appropriate way • VA is timely and targeted to the needs of the different sex/age groups • Easy access to effective complaint/feedback mechanism
State Parties to APMB and CCM	<ul style="list-style-type: none"> • Timely fulfilment of treaty obligations • Accurate reporting on progress towards meeting the obligations

Donors	<ul style="list-style-type: none"> • Safe, effective and efficient operations • Accurate reporting on activities, outputs and outcomes • Sustainable socio-economic impact • As above, if the donor is a State Party to the APMBC
National authorities	<ul style="list-style-type: none"> • Requests for clearance are dealt with in a timely manner • Transparent, inclusive system for priority setting
Mine Action Sector internationally	<ul style="list-style-type: none"> • Allow other programmes to benefit from lessons learned in the programme

Customer satisfaction relates to the **perception** of customers (or interested parties) that their requirements have been met. It is entirely possible to deliver a product (such as released land) that meets stated requirements, but for the customer (the land user) to refuse to make use of it; their **perception** is that land **does not satisfy** their requirements (that it is safe). For example, in an area on the outskirts of Juba, South Sudan, land was released in mid-2010 and handed over to one of the settler chiefs residing in the area. While the mine/ERW operator informed some households near the released land that the land was safe to use, other households and chiefs were not informed about the status of the land. As a result, many community members felt the land was unsafe and avoided crossing portions of it several months after handover had taken place.⁶³ Similarly, when assessing the needs of interested parties it is important to be clear about what is feasible, in terms of what can **reasonably** be achieved.

Need and **desire** are often not the same thing – an interested party may **desire** that a large area of land be fully cleared, but if the **need** relates to a much smaller area (where contamination actually exists), then it would be inefficient, and perhaps prohibitively costly, to clear land that does not require it. This reinforces the importance of consulting a full range of stakeholders – women, girls, boys and men – at the community level to increase the quality and relevance of information gathered and to inform cost-effective decisions on cancellation and release of land through survey and clearance.

Balancing desired requirements and expectations with what is practical and reasonable is an important part of the process of developing a QMS. There is no point delivering a product that is rejected by the intended beneficiary or interested party. The development and agreement of common understanding and acceptance of defined needs is essential to the further development of the QMS.

The next steps are to:

- ensure that the objectives of the organisation or programme are linked to the needs and expectations of the interested parties.
- communicate interested parties' needs and expectations throughout the organisation or programme.
- ensure a balanced approach when satisfying the different expectations of interested parties such as owners, employees, suppliers, financiers, local communities and society as a whole.

In the context of PCM/RBM, the message is clear: even if we spend donor/taxpayers' money, there is still an obligation to achieve best quality for all interested parties.

Actions

1. Identify and agree stakeholder needs and expectations
2. Ensure that programme/organisation objectives are linked to stakeholder needs and expectation
3. Communicate objectives and stakeholder needs and expectations throughout the organisation
4. Use PCM/RBM approaches to confirm linkages between the organisation, its outputs, intended outcomes and stakeholder needs and expectations



STEP 4

LEADERSHIP AND INVOLVEMENT OF PEOPLE

Clear roles and responsibilities and formal lines of authority in a programme and an organisation have to be established. It has to be clear who is in charge of what activity and decision, particularly on inter-ministerial level, but also within an organisation.

Any QMS relies upon the availability of accurate, up to date information if it is to function effectively. Problems (non-conformities) must be identified, reported and dealt with, indicators must be based on truthful input, and reviews must take into account sometimes unpleasant feedback from customers and interested parties. The extent to which the QMS exists in an open, honest and transparent professional environment will be determined to a great extent by the leadership of the organisation or programme. In the absence of such leadership, problems will be hidden, indicators and measures will be distorted, and unpleasant truths will be ignored: the QMS will not work.

A QMS will struggle to function effectively if there is not commitment from the top management of the organisation (or the primary stakeholders in a programme) towards the establishment and continual improvement of quality. One of the key tools for describing and communicating that commitment is the quality policy.

Formulating quality policy and objectives

A policy is a principle or rule to guide decisions and to achieve rational outcomes. It is a **Statement of Intent or a Commitment**, providing a framework for objective setting. A law can compel or prohibit behaviour; a policy guides actions toward those most likely to achieve a desired outcome.

The **Quality Policy** '*sets out overall intentions and direction of an organisation related to quality as formally expressed by top management*'⁶⁴ and provides a framework for establishing and reviewing quality objectives.

The quality policy and objectives should be consistent with applicable standards (IMAS, NMAS, other relevant national law), and reflect the expectations of interested parties. Its purpose is to provide a focus to direct the programme or organisation

in respect of quality, to demonstrate management commitment and to encourage decentralized decision-making. The quality policy and objectives determine desired results and help to direct resources to achieve these results.

Developing the quality policy is a responsibility of the senior management of an operating organisation or company, and of the mandated body (ie MAC, NMAA) at programme level.

ISO 9001 sets out basic requirements of a quality policy. It should:

- be appropriate to the organisation
- include a commitment to comply with requirements
- include a commitment to continual improvement of the QMS
- provide a framework for establishing and reviewing quality objectives
- be communicated and understood within the organisation
- be reviewed for continuing suitability

In MA programmes development of a policy may provide an opportunity to address additional aspects of the MA system, at the organisational or programme level as appropriate. For example:

- What are the barriers to decision-making?
- How can the policy help overcome those barriers?
- What is the role of standards within the decision-making process?
- Should certain roles and responsibilities be explicitly stated in the policy?
- Can the policy encourage the use of QM tools?

Other considerations may include:

- How will the policy be reviewed and maintained?
- How will the policy be distributed externally, or made publically available to enhance communication with other actors and the wider world?

Policies should be established for directing and operating organisations as well as at the programme level. Each policy should comply with higher level policies, rules and regulations. Policies may have different purposes, but those purposes should be consistent with each other.

At the programme level policies require stakeholder (or interested party) support and endorsement. At the organisational level, policies will be required in MAC and in operating organisations.⁶⁵

Quality objectives need to be consistent with the quality policy and the commitment to continual improvement. They should be **SMART**: Specific, Measurable, Achievable, Relevant and Time-bound. Examples could include one-off objectives such as 'achieving certification against the requirements of ISO 9001:2008 by June 30th 2014', or on-going objectives such as 'to communicate an initial response to enquiries and requests within 2 working days of receiving them'. The achievement of quality objectives should have a positive impact on product quality, on financial performance, safety and on operational effectiveness and efficiency (reflecting the basic quality components of **fast, cheap, good**). This should lead to the satisfaction and confidence of interested parties.

Quality objectives complement, and may be associated with, other objectives of the programme or organisation such as those related to growth, funding, the environment and safety and occupational health.⁶⁶

Identifying roles and responsibilities

A key aspect of a QMS is **senior management responsibility**. A QMS can only operate effectively if senior management leads, acts, and creates an environment where people are fully involved and committed to the principles of QM. Senior management responsibilities include:

- establishing and maintaining the quality policy and quality objectives of the organisation or programme;
- promoting the quality policy and quality objectives throughout the organisation or programme to increase awareness, motivation and involvement;
- ensuring focus on customer requirements throughout the organisation or programme;
- ensuring that appropriate processes are implemented to enable:
 - ▶ requirements of customers and other interested parties to be fulfilled
 - ▶ quality objectives to be achieved;
- ensuring that an effective and efficient QMS is established, implemented and maintained to achieve these quality objectives;
- ensuring the availability of necessary resources; and
- reviewing the QMS and continually improving it.⁶⁷

Quality is not the responsibility of one person called the Quality Manager, or of a QM Section; every staff member or stakeholder in a programme is responsible for quality in the processes he/she is working on. The role of the **Quality Manager** in this context is to set up, control and continually improve the QMS – mandated and supported by senior management. The Quality Manager needs to be clear that QM is not policing, and that it does not mean one member of staff micro-manages other members of staff.

Once the stakeholders in a national system have been identified (see Step 2), roles and responsibilities are allocated by mandate or by national law (or in their absence, IMAS provide further guidance).

The principle of clear roles and responsibilities applies at all levels, including the national or programme level, the organisational level, and in individual processes. This leads to the next step, the identification of key processes.

Actions

1. Formulate a quality policy and quality objectives
2. Identify roles and responsibilities

STEP 5

IDENTIFYING AND MAPPING KEY PROCESSES

A **Process** is a '*Set of inter-related or interacting activities which transforms inputs into outputs*'.⁶⁸

Mine action consists of many different inter-related processes. A key part of developing an effective QMS is to identify and describe significant processes associated with an organisation or programme's function. A fundamental practical principle of quality management is that confidence in the quality of the process output is achieved by gaining confidence in the inputs to, and activities within, that process.

For organisations or programmes to function effectively they have to identify and manage numerous inter-related and interacting processes. Often the output from one process forms the input into another.⁶⁹

Some processes have always had a high profile within mine action QMS. Particularly obvious operational examples include:

- clearance of land;
- non-technical survey; and
- technical survey.

But there are many other processes that feed into the core operational processes, or follow on from them, including;

- recruitment and selection of personnel;
- training;
- procurement;
- demolition and disposal;
- mine risk education;
- victim assistance; and
- prioritisation.

As well as others, of greater or lesser importance, depending on the circumstances and conditions found within individual countries, programmes and projects.

The identification of those processes that are significant to an organisation or programme is an important part of the initial stages of developing a QMS and should benefit from an appropriate level of effort and involvement. Significant processes are likely to be those that:

- directly relate to the delivery of products or benefits to customers and other stakeholders;
- provide inputs to processes directly associated with the delivery of products or benefits; or
- are important to the general and efficient functioning of the organisation / programme

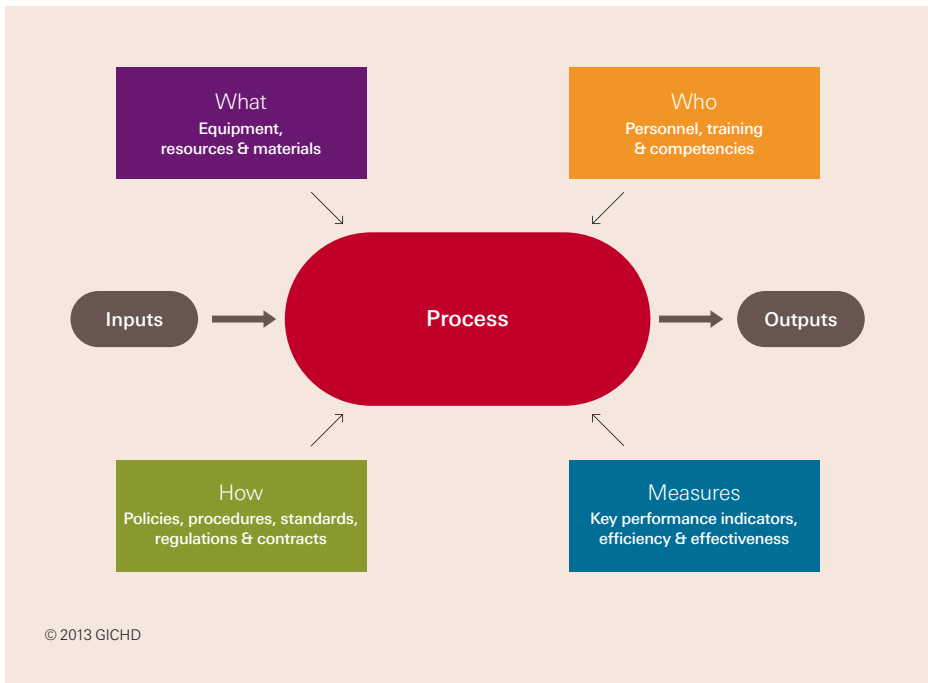
Like many other aspects of organisational and project management, decisions about which processes should be treated as significant is a matter of judgement, best addressed through rigorous and thorough discussion within and without the organisation/programme.

Inputs and outputs

While there are a wide variety of inputs to MA processes, they generally (although not exclusively) fall within a small number of categories:

- ‘What’ elements: equipment, resources and materials;
- ‘Who’ elements: people, training and competence;
- ‘How’ elements: policies, procedures, standards, regulations, contracts; and
- ‘Measures’ elements: key performance indicators, objectives, efficiency and effectiveness

FIGURE 10 THE ‘TURTLE’ DIAGRAM



A typical example of a significant process found in all MA programmes and organisations is that of training. Here the primary **input** is trainees, who will be transformed by the training process into an **output** – individuals competent to perform additional specified tasks, functions or responsibilities. However, for the process to be effective many other inputs are relevant:

- equipment – appropriate to the needs of the course and in serviceable condition;
- other people – instructors, training managers, perhaps caterers and logistics personnel, all of whom require to be competent to perform their own functions if the training is to be a success;
- training plans, lesson plans, equipment operating instructions, a syllabus, exam papers, standards; and
- measures – indicators of effectiveness such as pass marks in end of course exams, indicators of efficiency, such as pass rates, cost per student.

The details may vary, but in every case, if stakeholders are to have confidence in the quality of the women and men who successfully complete a course, they must have confidence that key inputs and activities have also been identified and are, themselves, subject to effective QM.

Historically the MA industry focused on one process output – cleared land. As the industry has developed the focus has broadened to recognise that there are many other important outputs from processes within MA. They include:

- all released land, whether assessed as presenting no risk or actively cancelled, reduced or cleared during land release processes;
- information – survey reports, operational records, performance indicators, personnel records, etc;
- people – as they exit training and development processes;
- equipment – from procurement processes; and
- many others associated with different processes of relevance to MA.

Each one should benefit from QA activities (pro-actively building success and quality into processes) and QC (checking that what is received is what is wanted). It can be just as important to check that a report or a trained person meets requirements as it is to check that released land satisfies its requirements.

Every process identified as being significant for the organisation/programme should have at least one output associated with it. A process that has no apparent output is either not, in fact, a process, or requires further attention to identify an output. Having a clear definition of an output (and its associated requirements) is essential if QM is to take place.

PROCESS INPUTS – TENDERS AND CONTRACTS

The contracting of competent and capable suppliers (of equipment, training or technical services) directly affects the quality of important inputs to mine action processes.

The Contracting Agency should:

- consider quality aspects at all stages of the procurement process;
- apply its own internal QA and QC procedures within the organisation;
- include QM requirements in tender documentation;
- consider how QM systems are scored in proposals;
- implement QM systems for monitoring of contract implementation in the field;
- establish a QM structure as required; and
- make use of existing certifications and tests.

The Contractor should:

- address quality aspects in all steps of the proposal preparation;
- establish internal QM processes for the administration and management of the contract;
- present comprehensive QM methodologies in technical proposals; and
- ensure contract compliance regarding QM during implementation.⁷⁰

Describing Processes

Every process has:

- a designer (the person or team responsible for defining and describing it);
- implementers (those who carry out the actual practical functions described in the process;) and
- an owner (the person responsible for the successful and efficient implementation of the process).

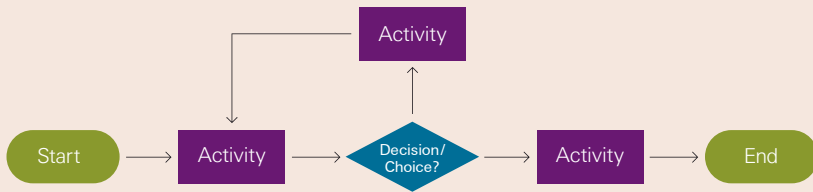
All parties need to be involved in describing the process.

The designers must understand clearly the purpose, scope and practicalities of the process. Implementers must be confident that the process is practicable and is a fair reflection of the reality of what happens. The owner must be confident that the described process is likely to be effective (deliver what it is supposed to) and that it will be possible to understand and manage efficiency (the use of resources) within the process.

Bringing all parties together (and perhaps including other parties interested in the performance of the process) provides an excellent opportunity to gain a common understanding of a process and to lay down the basis for future confidence in its implementation. This can be particularly useful when processes cut across departments within an organisation (often a source of misunderstanding and suspicion) or even between organisations in a programme.

Processes can be described in a number of ways – as simple text statements, using GANTT charts, Mind Maps and other tools. Managers should familiarise themselves with the various options available, but the most commonly used tool is the process map. The use of a small number of symbols to show the start, end, activities and decisions in a process, as well as to identify associated documents and linked processes, is deceptively simple. However, it provides a powerful tool to capture experience, knowledge and ideas in a way that encourages common understanding amongst individuals and organisations. This provides the basis for identifying performance indicators.

PROCESS MAPPING – HINTS, TIPS AND TRICKS



1. Give the map a title – remember it; stick to the scope of the process; avoid 'mission creep'
2. Use standard symbols
3. Use arrows to show the direction of flow in the process
4. Try to make the start an event or a decision
5. Try to associate the end of the process with delivery of an output
6. 'Decisions' are always questions
7. Try to make the map fit comfortably onto a single sheet of writing paper – that way it is easier to understand it in its entirety
8. Look out for feedback loops

When producing a process map start by giving it a title – keep it in mind so that the map doesn't stray into associated, but different topics, themes and processes. Next fix the start and end of the process. Try to make the start a specific event or decision, so that there is no doubt whether the process has started or not. Try to associate the end of the process with delivery of an output (land, a report, a decision etc.) so that is also clear when the process stops. The text in an activity box should be an instruction – 'carry out technical survey' for instance. Decisions are always choices between two or more options, so the text in the decision box should be followed by a question mark – 'Quality check OK?' A decision diamond should always have at least two arrows leaving it- one for 'yes' and one for 'no' for instance. The process map should have a clear simple logic to it – discuss it and test it; get input from people who actually apply the process. Does it reflect what should happen? Does it make sense? Look out for feedback loops – usually when a decision box leads back into the process. They are often associated with improvement of the process or product.

Describing processes brings a number of important benefits to the organisation/ programme and its QMS.

- It supports training and professional development.
- It ensures common ownership and understanding of how the organisation functions.
- It provides the basis for audit, inspection and monitoring of activity.
- It can be used to communicate clearly and convincingly with outside stakeholders.
- It streamlines relationships between individuals, departments and organisations.
- It reduces the difficulties of translation.
- It highlights continual improvement opportunities.

Good process mapping is not easy, but it is well worth it when done well. Managers should take time over the development of process maps, get plenty of input from others and obtain advice and guidance from on-line and industry sources.⁷¹

If a process map becomes excessively large and complicated then it may be better to try to break the process down into a number of subsidiary, but related processes. Each one can be mapped separately, indicating any linkages between them. Equally if a process map is so simple that it only consists of a couple of symbols then it may not be worth trying to map it. Like all tools there is a degree of skill and artistry in how it is used. Use it when it is helpful to do so. If it is not helpful, do not use it, or consider other tools that may be more appropriate.

There are excellent software tools available to help develop process maps (such as Microsoft Visio), but any lack of such resources should not dissuade organisations and programmes from developing process maps using white boards, pencil and paper or other available software.

Process mapping can be used at any level in an organisation or programme. It is perhaps most familiar at the operational level where process maps of land release are now relatively common in operating organisations, but it is equally possible to use it at higher programme wide levels.

Key performance indicators

'What gets measured gets done' and 'If you can't measure it, you can't manage it'.

These are popular sayings highlighting the importance of key performance indicators (KPI). ISO 9001 dedicates a whole chapter to **Measurement, analysis and improvement**. Development actors ask: *'How will we know success when we see it?'*

KPI are vital instruments used by managers to understand whether things are going as planned. The right set of indicators provides information on performance and results, and highlights areas that need attention. However, KPI have to be selected carefully, as they require work including data collection and analysis. They should be selected and developed for significant and meaningful aspects of a MA programme/operation.

Performance indicators refer to the efficiency and effectiveness of processes producing outputs, such as:

- a document (ie operational reports, NMAS);
- trained staff (ie for surveys, clearance, MRE, admin, QM, ratios of female to male trained staff); or
- released land.

KPI should include both the functioning of the QMS and the production chain. Performance can be measured at all points: at entry, during an activity, at decision points, and looking at the **outputs**.⁷² Performance indicators can, and should, be developed to understand not just the internal performance of a process and its immediate outputs/products, but also the subsequent results and **outcomes** associated with it (explored further in the section of this handbook on Results-Based Management).

Performance does not stop at the output level. There should be indicators showing whether the programme is achieving its intended humanitarian, developmental or political results. In development language, a performance indicator is *'a variable that tracks the changes in the development intervention or shows results relative to what was planned'*.⁷³ This refers to the outcomes achieved from the outputs, eg fewer mine accidents, increased income due to the use of land, or APMBC obligations fulfilled. Outcomes of MA activities should be tracked for the different age and sex groups to avoid assumptions that they are all the same.

Outcomes are not usually under the direct control of the programme, but nevertheless have to be measured to ensure that the programme or project makes a positive contribution from the customer, beneficiary and stakeholder perspective. The cumulative evidence of a cluster of indicators is used to understand if an initiative is making progress. Results indicators are a specific variable. When these are tracked systematically over time, they indicate progress (or lack thereof) toward an outcome or impact.⁷⁴

For a new QMS, all indicators should be numerical or yield yes/no answers. Qualitative indicators may come later with more maturity and when making best use of results-based monitoring and evaluation. Qualitative indicators can be particularly relevant at the outcome level, ie referring to the satisfaction of beneficiaries.

Effectiveness indicators

Effectiveness is the extent to which planned activities are realised and planned results achieved. In process terms they show:

- whether the process succeeded?
- did it do what it was supposed to?
- did it deliver the required product or output? Did it satisfy requirements?

Indicators of effectiveness often yield yes/no answers and are associated with measuring the extent to which specific objectives have been achieved.

- Did a procurement process purchase the correct item in the required timescale?
- To what extent is released land being used for its expected purpose?

In MA some indicators of effectiveness may be the **absence** of certain events – a missed mine or an accident in a released area for instance are both indicators that a process has been **ineffective**. The absence of such events over time is an indication that the process succeeded – it was *effective*.

Efficiency indicators

Efficiency describes the relationship between the result achieved and the resources used. Efficiency indicators are often ratios – deminer days worked per mine found, cost per trainee on a course, for instance. Ratios may be useful when comparing changes

over time, when comparing the situation in different places, or when comparing different organisations doing similar things. Examples include:

- area cleared per mine found (m²/mine) – an indicator of the efficiency with which clearance resources have been targeted;
- average time taken to respond to a request for MA assistance;
- number of deminer days per mine found; and
- m² cleared per deminer day

Efficiency indicators generally reflect effort in relation to results. Effort is typically associated with time, cost and resources used. Results will be dictated by the specific process and its defined outputs/products.

Benchmarking

Benchmarking is the process of comparing indicators from an organisation or programme's own processes and performance with best practice from elsewhere within the industry. Such an approach goes beyond the scope of ISO 9001 processes (which are primarily concerned with the performance of an individual organisation) and reflects the wider principles found in business excellence models, such as EFQM. Benchmarking can only be carried out where information is available about the performance of other organisations and programmes within the MA industry.

Indicators at different levels

Managers at different levels in organisations and programmes have different responsibilities and needs for indicators. Each QMS should be responsive to the various needs of functions and managers. A QMS should ensure that IM systems capture the necessary data, perform the required analysis and deliver performance indicators to users.

Gender-sensitive indicators

SADD and gender statistics enable us to build gender-sensitive indicators that help monitor gender-related differences within MA and gender-related changes over time. In order to develop an indicator, we must first determine the difference or change that is of interest and establish the baseline to be used in the comparison over time.

Indicators for the QMS

Many of the indicators selected for use within a QMS will reflect operational performance within different organisations, elements, departments and units. However, it is equally important to ensure that KPI are selected to show how the QMS itself is performing. Indicators might include:

- time to close out non-conformities;
- incidence of non-conformities by department;
- internal audits completed against the schedule; and
- proportion of staff members who have received formal quality training

Information quality in mine action processes

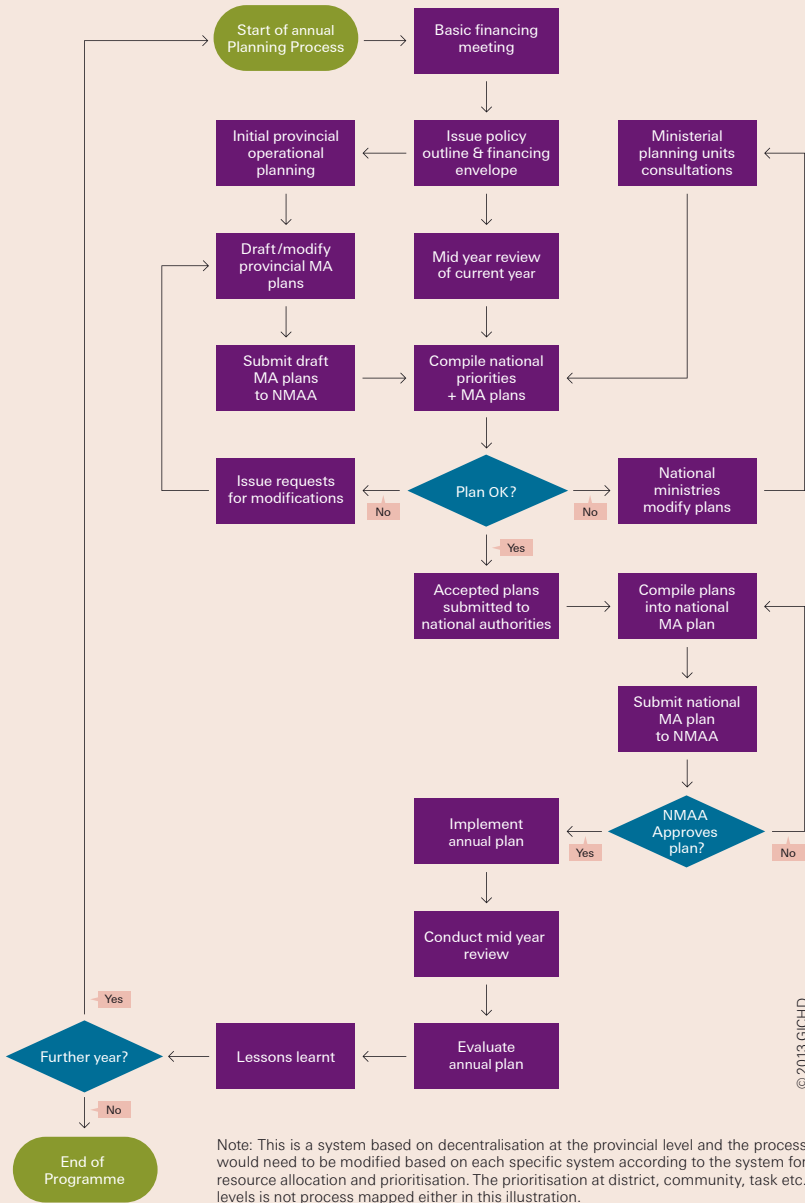
Many of the core processes of mine action, such as land release, exhibit important aspects of quality management. They are also, however, fundamentally dependent upon information management to support high quality decision-making. The inter-relationship between QM and IM, as both relate to practical activity, is constant and critical to the success of any programme or operation.

This handbook does not directly address questions of QM in relation to IM, but all of the principles set out in this document are applicable to information. In particular, the quality of information matters in MA both when it is an input to a process (reports as inputs to a prioritisation process, for instance) and when it is the output or product of a process (such as a completion record that will be the definitive statement of what happened and what was found at a site).

IM aspects of QMS are addressed in a later chapter, but in process terms the key requirement is that information stands up to real world tests. It is well worth having systems in place to ensure that the information entered into a database agrees exactly with what was written on a field data collection form. If it subsequently turns out that the information was wrong in some way then it is essential that the QMS includes the facility to identify such problems and take action to stop them happening again.

FIGURE 11

PRIORITY SETTING PROCESS MAP⁷⁵



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Note: This is a system based on decentralisation at the provincial level and the process would need to be modified based on each specific system according to the system for resource allocation and prioritisation. The prioritisation at district, community, task etc. levels is not process mapped either in this illustration.

Actions

1. Identify significant processes
2. Identify inputs of all types to each significant process
3. Define outputs and associated requirements for each process
4. Describe and map the processes
5. Identify key performance indicators
 - a. Indicators of success
 - b. Indicators of efficiency
 - c. Opportunities for benchmarking
 - d. Indicators at different levels
 - e. Gender-sensitive indicators
 - f. Indicators for the QMS
6. Identify continual improvement feedback loops
7. Disseminate, review and improve process descriptions
8. Constantly keep in mind information needs, requirements and quality within processes

STEP 6

IDENTIFYING AND MAPPING CONTINUAL IMPROVEMENT PROCESSES

'Continual improvement of the organisation's overall performance should be a permanent objective of the organisation.⁷⁶ It consists of recurring activity to increase the ability to fulfil requirements'.⁷⁷

In general terms, the aim of continual improvement in MA is to improve the efficiency and effectiveness of projects and programmes and to increase the likelihood that needs and requirements of customers and other interested parties will not only be satisfied now, but that satisfaction will be increased over time.

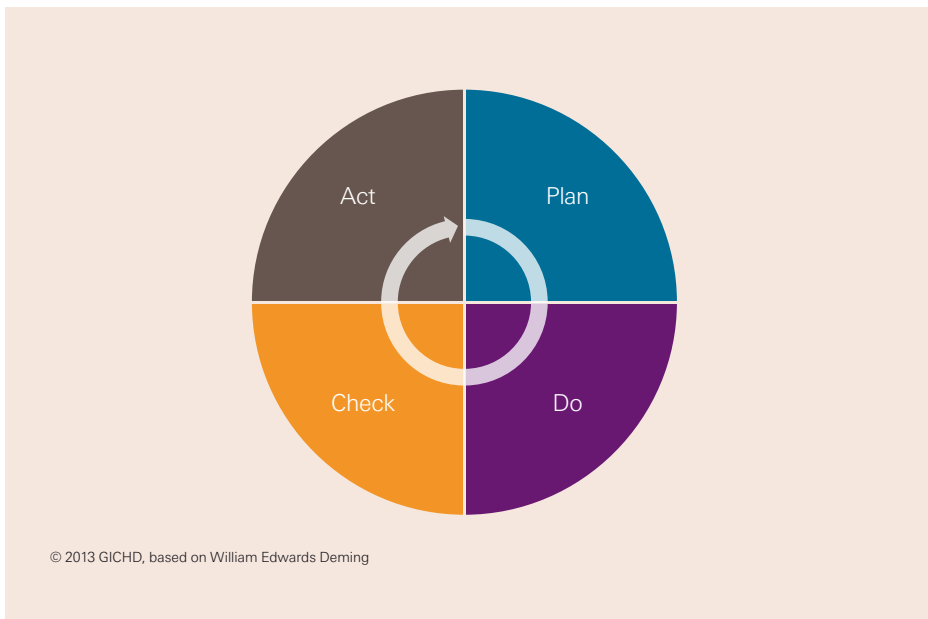
At the heart of continual improvement is the Deming Cycle, usually known as PDCA – Plan, Do, Check, Act. Plan the activity or process; do it, check it (through the use of performance indicators, audits and monitoring); act to improve the process on the basis of the results of checking.

PDCA feedback loops can be found at every level and in every activity that an organisation or programme undertakes. Where a programme or organisation struggles to cope with problems it is often because PDCA loops are not functioning. Typically informal checking indicates that there is a problem, but no action is taken to respond and improve.

A PDCA cycle can be as simple as looking at the formatting requirements of a standard document or report (P), drafting it (D), checking to see that it meets the requirements (C) and then correcting it (A) before finally sending it off to its recipient.

The same basic principles can be found at the programme level. Annual plans (P) are used to direct programme operations (D) which are then subject to formal evaluation (C) and the results of which inform decisions (A) about future phases.

FIGURE 12 DEMING CYCLE PDCA



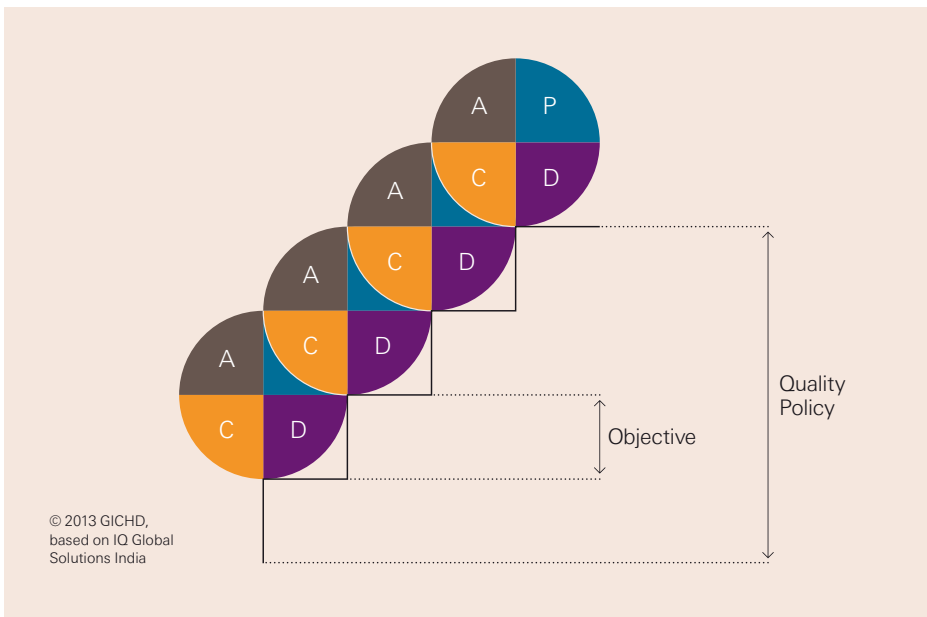
Continual improvement actions include:

- analysing the existing situation to identify areas for improvement;
- establishing objectives for improvement;
- searching for possible solutions to achieve improvement objectives;
- assessing these solutions and making a selection;
- implementing the selected solution;
- measuring, verifying, and analysing results of the implementation to determine that the objectives have been met; and
- formalising changes.⁷⁸

Continual improvement cycles relate to the QMS itself and to any of the organisation or programme's processes. Cycles may appear as **Feedback Loops** within processes (such as re-clearing land that has failed an internal check), others as specific **Review Processes** (management review of the overall performance of an organisation or programme). PDCA processes are also applied to the documentation in an organisation or programme – policies, procedures, forms etc.

FIGURE 13

CONTINUAL IMPROVEMENT – PDCA STEPS-UP



PDCA FEEDBACK LOOPS

PDCA feedback loops happen all the time throughout MA, often without being noticed. It is an instinctive desire of most people to deal with problems, and opportunities for improvement, when they encounter them. That can be quite straightforward when the PDCA loop falls under the control of one person or a small group (when reviewing and revising subsequent drafts of a document, for instance). It is more complicated when a wider group of people is involved, and when there is a greater risk that action will somehow be forgotten, delayed or otherwise neglected.

Examples of PDCA loops in mine action include:

Programme Level:

- (P) Develop the annual or multi-year national plan for mine action reflecting stated policies and priorities
- (D) Implement the national plan
- (C) Monitor and evaluate operations and their results, outcomes and impacts, In-progress reviews
- (A) Issue updated policies, targets and objectives for current and future plans.

Organisational Level:

- (P) Development of a training management plan (TMP) for a demining course
- (D) Delivery of the training course to students
- (C) End of course exams and tests, inspection of training delivery, monitoring of key performance indicators, feedback from operational units, feedback from students
- (A) Make changes to the course syllabus, instructor competence requirements, student qualifications and experience requirements, to be reflected in a revised TMP.

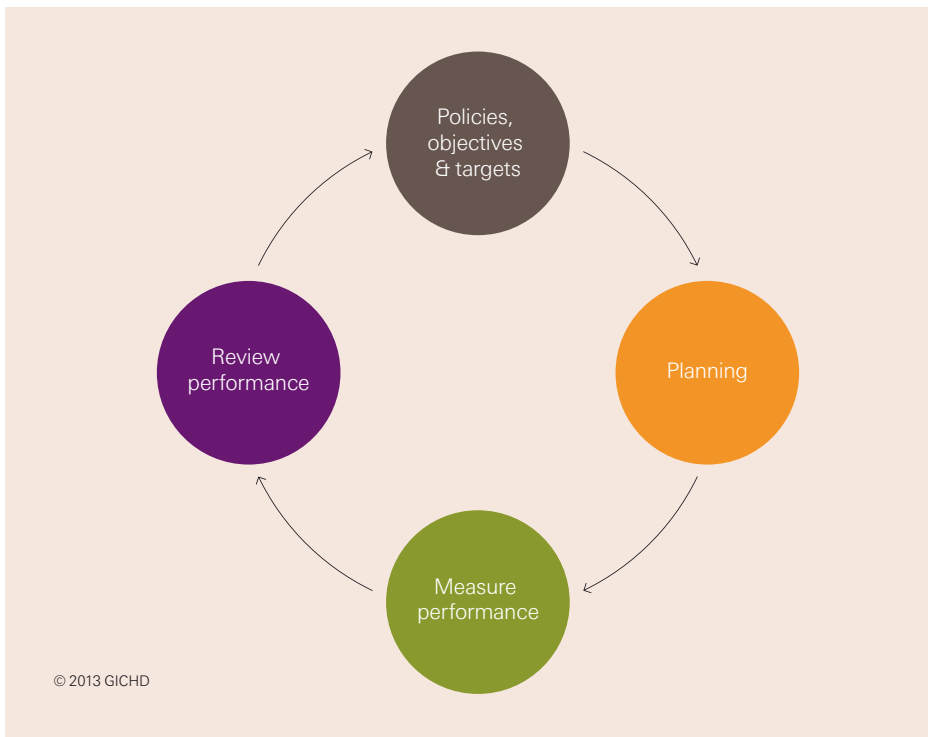
Field sites:

- (P) Plan technical operations at a clearance site based on a tasking order
- (D) Start technical survey
- (C) Gather data from technical survey, analyse results, review situation
- (A) Release some land (cancel/reduce) and redefine clearance requirement.

Understanding the problem is the key to any improvement. Feedback from customers and other interested parties, audits and review of the QMS can help. Customer complaints are a common indicator of low customer satisfaction but their absence does not necessarily imply high satisfaction.⁷⁹

PDCA cycles are driven by the setting of policies, objectives and targets. Planning takes place in order to maximise the chances of achieving objectives and complying with policies when carrying out work. During the operational phase performance is measured (using monitoring of KPI, audit and inspection). The results of performance measuring are fed into the review process. Reviews identify requirements to change (or update) policies, objectives and targets, before the cycle continues onwards, improving each time it goes round.

FIGURE 14 PDCA CYCLE DIAGRAM



Review

Review is an essential part of any continual improvement or PDCA process. It can be a formal activity, such as during an overall QMS Management Review, the requirements for which are specified in ISO 9001.

It may also be achieved during a more informal session. An example of this is when a land release site manager considers newly available information, assesses it and uses it to take decisions about what needs to be done to achieve the task as efficiently as possible. Land release is itself a PDCA process. An initial definition of the task (a suspected hazardous area for instance) is used to plan non-technical survey, the information from which is reviewed and used to release some land (cancellation), while refining the definition of the area requiring further action. Technical survey gathers more information, which is once again reviewed, to release more area (reduction), and to improve further the definition of the area requiring further work. Clearance of any remaining area provides the additional information necessary to be able to reduce to zero the area requiring further attention. The process continually, and repeatedly, improves the definition of the hazardous area until it is finally eliminated altogether.

A key output of any review process is the setting of objectives. They should detail what is to be done, who will do it, when it will be done by and who will confirm that it has been done.

Reviews need not be time-consuming. They should be carried out on specific aspects of the QMS (which could be the QMS in its entirety, or some small part of it) and should remain focused and rigorous.



Non-conformity, corrective and preventive action

Non-conformity is 'non-fulfilment of a requirement'.⁸⁰ **Correction** is 'action to eliminate a detected non-conformity';⁸¹ **Corrective Action** is 'action to eliminate the cause of a detected non-conformity or other undesirable situation';⁸² and **Preventive Action** is 'action to eliminate the cause of a potential non-conformity or other undesirable potential situation'.⁸³

The way in which an organisation or programme approaches the detection, prediction and handling of non-conformity in its systems is fundamental to the effectiveness of its QMS. The purpose of an effective approach is to:

Detect and correct; predict and prevent

That is, the system should **detect** problems that have already occurred and take action to **correct** them and **predict** potential problems that haven't yet occurred, and take action to **prevent** them happening in the future.

Non-conformity can relate to any aspect of the processes or products and outputs associated with an organisation/programme. Examples of non-conformities include:

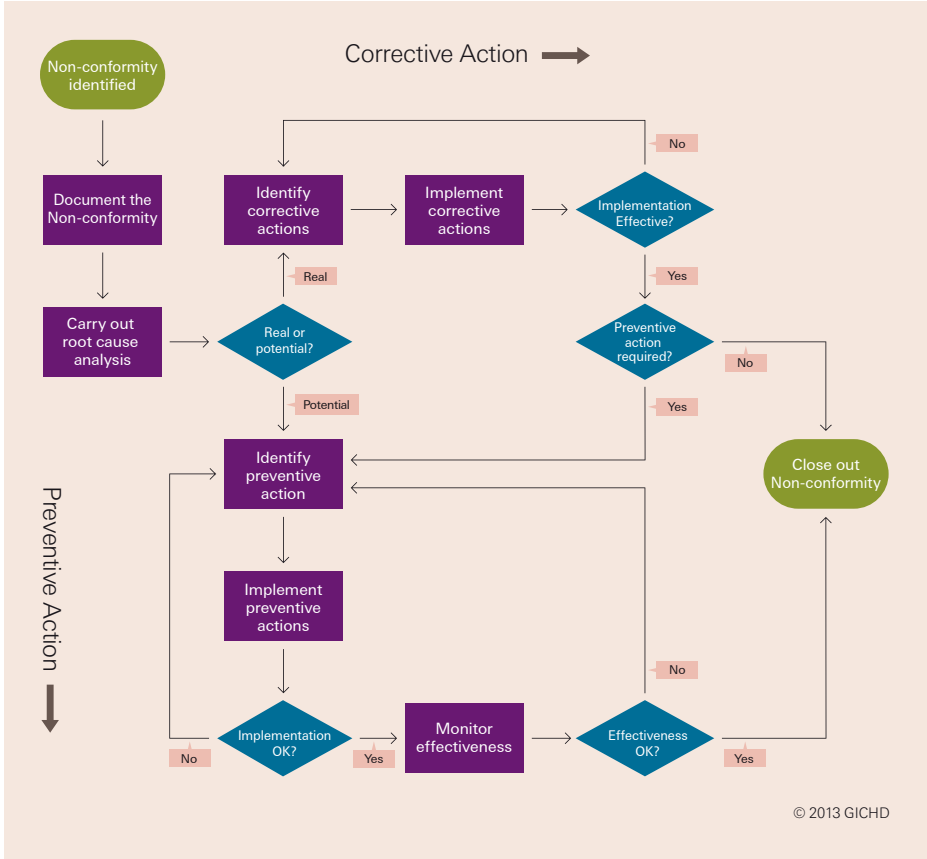
- using an out of date version of a SOP;
- finding a missed mine in a released area;
- failing to conduct adequate internal checks and inspections;
- finding that a deminer is not properly qualified for the role; and
- discovering that released land has not been used for its expected purpose, or has not been made use of at all

Non-conformities may be **actual** (they have already happened) or **potential** (it is reasonable to think that they might happen in the future). Actual non-conformities must be corrected (solving the immediate problem) and then action must be taken to prevent the same problem happening again. Action must also be taken to prevent potential problems happening in the future.

Any response to a non-conformity starts with a rigorous root cause analysis. Simple situations may be analysed through collective discussion amongst those involved. More serious or complex situations may require a more formal approach, using tools such as the Ishikawa, or fishbone, diagram.⁸⁴ No problem can be properly corrected or prevented without a clear understanding of its root cause. Responses based on superficial or subjective assumptions should be avoided.

FIGURE 15

ILLUSTRATIVE NON-CONFORMITY RESPONSE PROCESS



The most serious non-conformity that MA programmes generally face is a missed mine (or other ERW item) in land released for public use. When such a situation arises correction is usually achieved by removing the missed item and re-clearing some or all of the released area. Re-occurrence is prevented by addressing the root cause of the problem – equipment failure, procedural failure or other shortcomings in the land release process. The root cause analysis may also identify other potential future problems that require preventive action.

However, there are plenty of other non-conformities that can have serious implications within a MA programme. Perhaps the most common (and often missed) problem arises in relation to the reporting and use of information. Errors in the collection of data and its reporting into analysis processes can have significant consequences

if decisions are taken on the basis of flawed information. The land release process depends to a great extent on the effective use of valid information to support decisions about which land requires further effort and which can be safely and confidently released. Data/information non-conformities and problems within IM systems can represent major shortcomings that need an urgent and energetic response.

One of the greatest sources of inefficiency and disillusion within an organisation is a perceived failure to address non-conformities, especially potential ones that have been identified through the professional attention of members of the work force. Any non-conformity should be captured within a formal system. Responsibility for its resolution should be clearly stated and there should be a deadline for completion of any required corrective and preventive actions. Keeping interested parties informed about the progress of the response to the non-conformity powerfully communicates the organisation's commitment and professionalism.

Accident investigations are a particular type of non-conformity response and, although they are usually associated with safety systems, they typically include important QM factors and influences. The basic principles of root cause analysis, identification of corrective and preventive action, allocation of responsibilities for action, and checking to confirm full and effective implementation, precisely parallel the QM non-conformity process.

Actions

- 1.** Make continual improvement a permanent objective of the organisation/ programme
- 2.** Seek out PDCA cycles within processes at every level
- 3.** Encourage open and honest identification of non-conformities within processes and products/outputs
- 4.** Detect and correct – predict and prevent
- 5.** Identify root causes of actual and potential problems
- 6.** Make corrective and preventive actions the responsibility of specific individuals
- 7.** Develop KPI associated with non-conformity management

STEP 7

SETTING UP AN INFORMATION MANAGEMENT SYSTEM SUPPORTING A QMS

A functioning information management system is a pre-requisite for a QMS. Similarly, the successful adoption of a QMS will facilitate the implementation of an IM system. The two concepts are very closely linked.

IM and QM in MA

In the MA domain the emphasis to date has been on the quality management of information management, rather than vice versa. QM for IM covers activities that aim to ensure the accuracy of data being collected, generally by introducing clear processes and quality controls. Limiting the QM concept to IM prevents realisation of the full benefits across the organisation or programme.

This handbook is on the topic of QM and, as a result, the use of IM for quality management is in focus. QM for IM should be viewed in a similar way to the application of QM to any other organisation activity. In the past, the limited use of IM for QM has been in recording quality assurances and quality controls, such as non-conformities. This is not a comprehensive approach to the use of IM for QM.

IM is used as a tool for several purposes in QM. Some IM purposes translate directly to terminology used in QM. These include **Record** management, **Document** management and **Knowledge** management, with the latter particularly for continual improvement. The line between records and documents in MA can sometimes be fine. As a rule of thumb, files of legal value that are unlikely to change over time are Records. Examples include handover certificates, clearance reports, and accident reports.

ISO 9000 defines **Documents** as '*information and its supporting medium*' (eg procedure document, standard, project proposal, etc); and **Records** as '*document stating results achieved or providing evidence of activities performed*' (ie to document corrective and preventive actions on non-conformities, victim statistics, etc). ISO 15489-1 defines **Record** in a slightly more detailed manner as '*information created, received, and maintained as evidence and information by an organisation or person, in pursuance of legal obligations or in the transaction of business*'.

In comparison to Records, Documents change over time. Document management includes activities to track what version of a document is the most recent, who has done what editing to a document, and in general to provide functionality to facilitate collaboration on documents. Examples include suspected hazardous areas and task dossiers. Note also that all documents produced by an organisation can be included in its document management. A draft proposal to a donor is hence just as relevant.

As shown in more detail in Step 9: Audit, Monitoring and Evaluation, IM also sets the basis for KPI monitoring. This activity is part of the broader domain of Monitoring and Evaluation. For this purpose, IM is used to store continuous measurements of indicators, which can be used for on-going **monitoring** of the performance of a process or for retrospective **evaluation** of any quantitative causes behind high or low performance. For this purpose IM can also be used to link a QMS and RBM by monitoring indicators on Output and Outcome levels, with the assumption that the indicators are well defined.

DOCUMENTING THE QUALITY MANAGEMENT SYSTEM

ISO 9001 provides clear statements of the requirement to document the QMS and its implementation. The standard requires:

- a Quality Policy, Quality Manual and Quality objectives (including programmes for their achievement), and an explanation of the interaction of processes within the organisation.
- the creation and implementation of mandatory procedures for:
 - ▶ control of documents
 - ▶ control of records
 - ▶ internal audit
 - ▶ control of non-conforming product
 - ▶ corrective action
 - ▶ preventive action
- the identification and description of key processes within the organisation (typically using process maps).
- forms and records to provide evidence of the effective implementation of the QMS.

The standard does not dictate which processes should be identified and mapped, but it does require management to consider and address aspects such as:

- management review of the QMS;
- provision of resources;
- human resources (competence, training and awareness);
- product realisation (the process of determining product requirements, creating and delivering products to customers, – the area of the system that most directly relates to traditional SOP);
- design and development;
- purchasing;
- customer property; and
- analysis of data.

While the documentation of any ISO 9001 system exhibits some standard characteristics, it will also include distinct differences reflecting the specific nature of the organisation's activities and the input of its managers and staff.

IMSMA

The Information Management System for Mine Action (IMSMA) provides a hub for most data necessary for QMS. At its core, IMSMA is a records management system. However, it is also well suited for documents and indicators. If the QMS needs are taken into consideration when setting up IMSMA, the organisation will be provided with most of the required data without the need for redundant data collection or storage. For this benefit to occur there has to be clarity on what indicators are required, which data is needed to produce the indicators, and at which frequency the measurements should be made. As with other collected data, it is also important that quality, in terms of eg accuracy and timeliness, is well understood.

IMSMA is engineered to allow for maximum connectivity to analytical tools like Microsoft Access, which can be used for simple monitoring and evaluation. For more advanced users, the GICHD provides an online platform for monitoring and evaluation. This platform, called the Mine action INTelligence tool (MINT), is separate from IMSMA and can be connected to any data source, including common financial systems. MINT opens new doors for IM to support and facilitate the implementation of a QMS (see Step 9).

USING IM TO INCREASE UNDERSTANDING OF MA

IM is carried out for a purpose – in QM terms the **requirement** must be specified if the quality of the **product** is to be **assured** and **controlled**. The requirement should be specified by the customer – the user of the information products provided by the IM system.

Examples of important purposes in MA include:

- understanding the MA problem – to support efficient land release and resource targeting
 - ▶ how mines /UXO /ERW are associated in hazardous areas
 - ▶ physical characteristics of devices
 - ▶ effects of aging.
- understanding performance – to increase efficient use of resources
 - ▶ quality and safety indicators
 - ▶ progress rates
 - ▶ efficiency of decision-making
 - ▶ implications for procedures and training.
- understanding MA impact – to increase the effectiveness of programmes and projects
 - ▶ results-based management
 - ▶ project cycle management.
- direct support to the QMS
 - ▶ records management
 - ▶ document management
 - ▶ performance management
 - ▶ information for communication to interested parties.

In each case the recipient person or organisation needs to communicate the purpose and requirements to the IM system. IM managers can then develop the appropriate processes, procedures, checks and training necessary to ensure quality.

STEP 8

MAKING BEST USE OF QM TOOLS

A number of QM tools or models have been mentioned in the previous chapters, such as process or stakeholder mapping. In addition, there are further tools and methods that can help QM, particularly after a system has been properly established.

Tools can be applied at both the organisational and programme levels. They help to answer questions. This means it is important to identify questions prior to using a tool. Example questions might be: What is the root cause of this problem? Is the QM system working well? Are the stakeholders in the programme satisfied? Tools can be used to correct and prevent mistakes, to promote effectiveness and efficiency, and to support the QM principles of **continual improvement** and **customer focus**.

ISO 9001 requires **Management Reviews** of the QMS. Management Reviews are meant to find problems or risks at the strategic and operational levels early, and deal with them. Senior managers should meet at regular intervals to ensure the functioning, effectiveness and efficiency of the QMS and to work on improvement options. Improvement means to identify system weaknesses, and eliminate them.

In detail, the managers should look at:

- non-conformities;
- feedback from customers and other interested parties;
- ideas for improvement (eg from Quality Circles – see below);
- evaluation and audit results (see below);
- status of improvements;
- cost comparisons;
- staff reviews/surveys;
- key performance indicators;
- status of corrective/preventive measures;

- external changes, such as to applicable laws or standards that may require system changes; and
- follow-up from previous action points.

The goal of a Management Review is to achieve a better QMS and processes, better products regarding the needs of the interested parties, and better use of resources. For the success of the Management Review meeting it is important to ensure that:

- goals, targets, and measures have been clearly formulated;
- responsible persons have been nominated; and
- required resources have been provided.

Quality Circles are easy to establish and are low cost. They are therefore popular in private sector companies. The term derives from the Plan-Do-Check-Act circles: a group of stakeholders meets to identify, analyse and solve problems, and to find ideas for improvement.

FIGURE 16 QUALITY CIRCLE



Typically six to ten people with common experience meet to analyse topics or problems relating to their work. The sequence is:

- set (SMART) targets for Quality Circle meeting
- find problem
- analyse problem components
- carry out root cause analysis
- identify solutions
- prepare and implement action plan
- check results

Quality Circles can make use of other QM tools, for example the fishbone diagram, audit or evaluation results, or process mapping to mention just a few. Example questions for Quality Circles could be:

- What stops us from doing our job faultlessly, on time and (cost) efficiently?
- Which solution is acceptable and feasible?

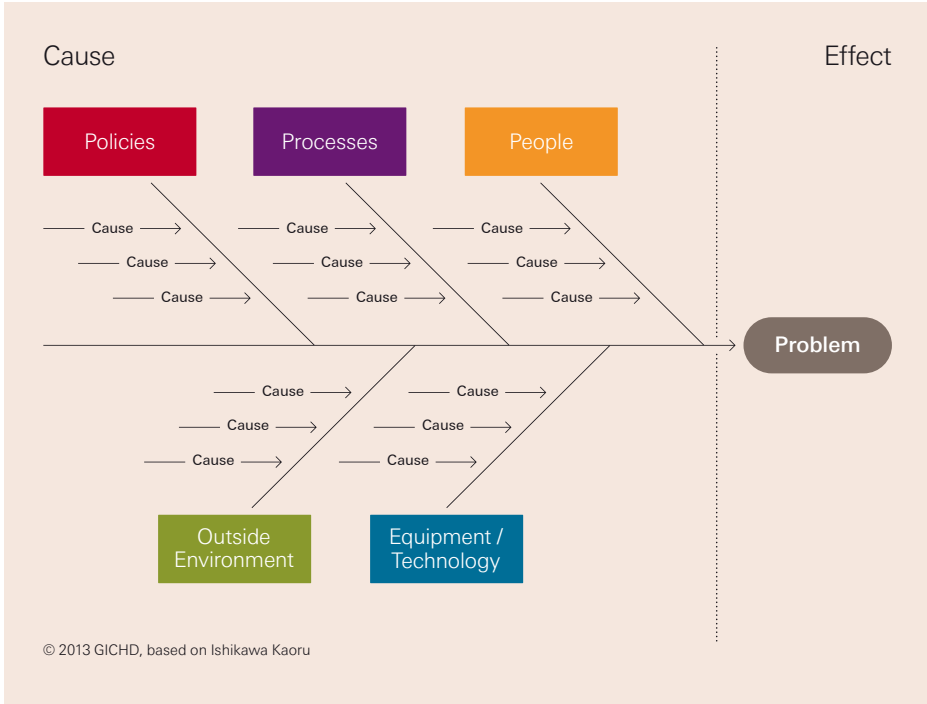
The output of a Quality Circle should always be an action plan with priority on easily-achieved, quick measures.

The **Ishikawa Diagram**, also called **fishbone**, is an easy first step to the root cause analysis of a problem. It starts with identifying the problem, which is on the effect side of the graph, the head of the fish. A group of stakeholders brainstorms on the cause of this problem and writes each cause on one post-it. The post-it notes are then by consensus placed on the different 'bones', indicating what leads to what. The 'bone categories' can vary, but the following ones proved to be useful: policies, processes, people, equipment/technology, outside environment.



FIGURE 17

FISHBONE DIAGRAM



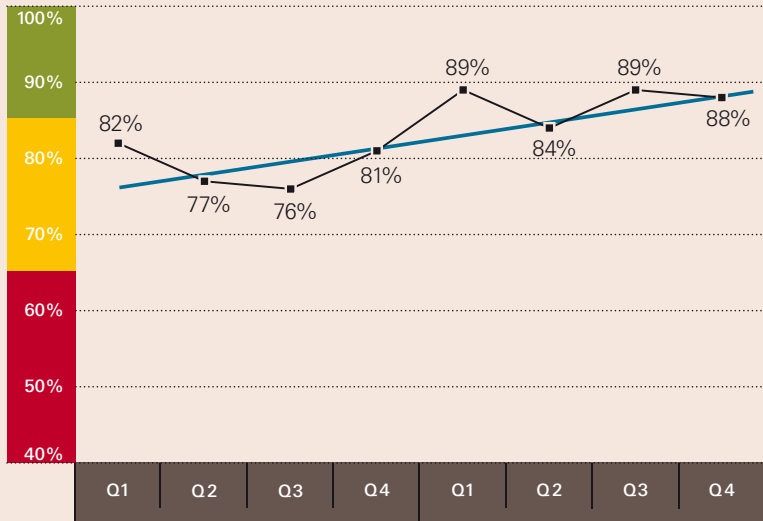
Balanced Scorecards (BSC) are a strategic planning and management system used to align business activities to the vision statement of an organisation or programme.

In the Afghan MA programme, BSC have been used to:

- measure the productivity and quality of mine action operations at organisational level;
- continually improve the efficiency and effectiveness of the Mine Action Coordination Centre’s (MACCA) coordination function;
- improve mine action performance;
- help decision makers decide on fund allocation objectively;
- mainstream Monitoring & Evaluation (M&E) activities within MACCA; and
- most recently to measure to what extent MACCA and Implementing Partners mainstream gender in MA activities.

MACCA established performance indicators such as operational results, quality, accidents and reporting, on which organisations could score or lose points. The ranking could then be displayed showing red, yellow and green areas.

FIGURE 18 BALANCED SCORECARD RANKING



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MACCA has also developed a number of other tools, including a project monitoring tool to track whether organisations meet the project document requirements. These are described in the Afghanistan case study in the Resources.

Any tool in the QM context should be used to support achieving the organisation's or programme's quality objectives. There are countless tools; it is important to choose the right one for the right question or task. Tools are useful to structure and visualise thinking, but they cannot replace managers' thinking.

STEP 9

AUDIT, MONITORING AND EVALUATION

Audit, monitoring and evaluation are important for the principle of continual improvement and they also play a role in making the QMS work in a meaningful way. This is because they provide important data and information on performance and outcomes feeding into management reviews.

Audit

An audit is a systematic, independent and documented process for obtaining audit evidence (verifiable records, statement of fact or other information) and assessing it objectively to determine the extent to which audit criteria (such as policies, procedures or requirements) are fulfilled. Quality audits are performed to verify conformance to standards through reviewing objective evidence. A system of quality audits may verify the effectiveness of a QMS and identify opportunities for improvement.⁸⁵

Internal or **first-party** audits are conducted by, or on behalf of, the organisation itself for internal purposes. External or **second-party** audits are conducted by customers or interested parties of the organisation, or by other persons on behalf of the customer / interested party. This could, for example, be an audit of an organisation by or on behalf of a MAC or a donor. External **third-party** audits are conducted by external independent organisations, such as those providing certification or registration of conformity with requirements such as those of ISO 9001. ISO 19011 provides guidance on auditing.

Example questions in MA audits could be for:

- accreditation:
 - ▶ will the organisation be able to meet the national standards?
 - ▶ are there adequate SOP?

- MAC auditing an organisation's QM system:
 - ▶ are there defined standards / SOP for QM?
 - ▶ have resources been allocated to QM?
 - ▶ are the roles and responsibilities for QM clearly defined?
 - ▶ is there trained staff for QM?
 - ▶ are there traceable records on QM providing confidence to the customer (in this case the MAC)?
 - ▶ did the implementer find all explosive devices according to the agreed standard?
 - is the threat well understood?
 - is the detection equipment adequate?
 - are the staff well trained and capable?
 - ▶ will the implementer be able to cover all potentially hazardous ground?
 - is all information on the extent of the threat available?
 - are there valid criteria to define the boundaries of the hazardous area?
 - are there clear decision-making responsibilities and processes?

Monitoring and Evaluation

This chapter only gives a short introduction on the topic. If a programme wishes to set up a full results-based monitoring and evaluation system, there is more exhaustive guidance in other publications.⁸⁶

The terms Monitoring and Evaluation (M&E) are used slightly differently in different contexts, for example in (results-based) development, QM or within the military.

In the NATO glossary, one definition of monitoring is *'the act of listening, carrying out surveillance on, and/or recording the emissions of one's own or Allied forces for the purpose of maintaining and improving procedural standards and security...'*, and one definition of evaluation is *'the structured process of examining activities, capabilities and performance against defined standards or criteria'*.⁸⁷

This gives an indication, but in our context the definitions from the **results-based development** context are used in this handbook:

Monitoring and evaluation both measure and assess performance and/or results, but in different ways and at different times. **Monitoring** is a *'continuing function that uses*

systematic collection of data on specified indicators to provide management and the main stakeholders of an on-going development intervention with indication of the extent of progress and achievement of objectives and progress in the use of allocated funds'.⁸⁸

Monitoring takes place throughout programme or project implementation. It is a routine, on-going, internal activity of tracking key indicators; it is carried out by programme or project staff. Managers should monitor a programme's inputs, activities, outputs and outcomes to track performance against specific targets. Monitoring data also shows trends of, for example, an increase or decrease in accidents.

Evaluation is the systematic and objective assessment of a planned, on-going or completed project, programme or policy, its design, implementation and results. Evaluations look at relevance, efficiency, effectiveness, impact and sustainability. An evaluation should provide information that is credible and useful, enabling lessons learned to be incorporated into the decision-making process of both recipients and donors.⁸⁹

Evaluations are periodic and time bound assessments of a programme or project's performance, to address in-depth issues and to answer some of the 'why' questions behind monitoring data such as:

- why are there more accidents in one minefield than in others?
- why is one community developing better after clearance than the other?
- why are the demining teams unable to meet quality requirements?
- why are non-technical survey teams not making all reasonable efforts to contact women, girls, boys and men in beneficiary communities?

Evaluations can be internal, external, or participatory, and they provide periodic feedback to key stakeholders of a programme.

Evaluations help:

- to make resource allocation decisions;
- to rethink the causes of a problem;
- to identify emerging problems;
- decision-making on competing or best alternatives;
- public sector reform and innovation; and
- to build consensus on the causes of a problem and how to respond.

They provide information on strategy (are the right things being done?), operations (are things being done right?) and on learning (are there better ways of doing things?).⁹⁰

Standards for MA evaluation can be found in IMAS 14.10 Guide for the evaluation of mine action interventions.⁹¹ These standards are mainly based on the OECD/DAC standards,⁹² plus the UN Evaluation Group Norms and Standards.⁹³ Chapter 11 of IMAS 12.10 is the standard for the evaluation of Mine/ERW Risk Education.⁹⁴ It is mainly based on OECD/DAC standards, plus the UNICEF Programme Policy and Procedure Manual.⁹⁵

In the ISO frame of reference, evaluation refers merely to the assessment of the QMS, for example:

- reviewing the quality management system – top management should carry out regular systematic evaluations of the suitability, adequacy, effectiveness and efficiency of the QMS with respect to the quality policy and quality objectives. Amongst other sources of information, audit reports should be used for the review of the QMS.
- evaluating processes within the QMS – there are four basic questions that should be asked in relation to every process being evaluated:
 1. Is the process identified and appropriately defined?
 2. Are responsibilities assigned?
 3. Are the procedures implemented and maintained?
 4. Is the process effective in achieving the required results?

Evaluation of a QMS can vary in scope and encompass a range of activities, such as auditing and reviewing the QMS, and self-assessments.⁹⁶

An organisation's self-assessment is a comprehensive and systematic review of the organisation's activities and results referenced against the QMS or a model of excellence. It can provide an overall view of the performance of the organisation and the degree of maturity of the QMS. It can also help to identify areas requiring improvement in the organisation and to determine priorities.⁹⁷

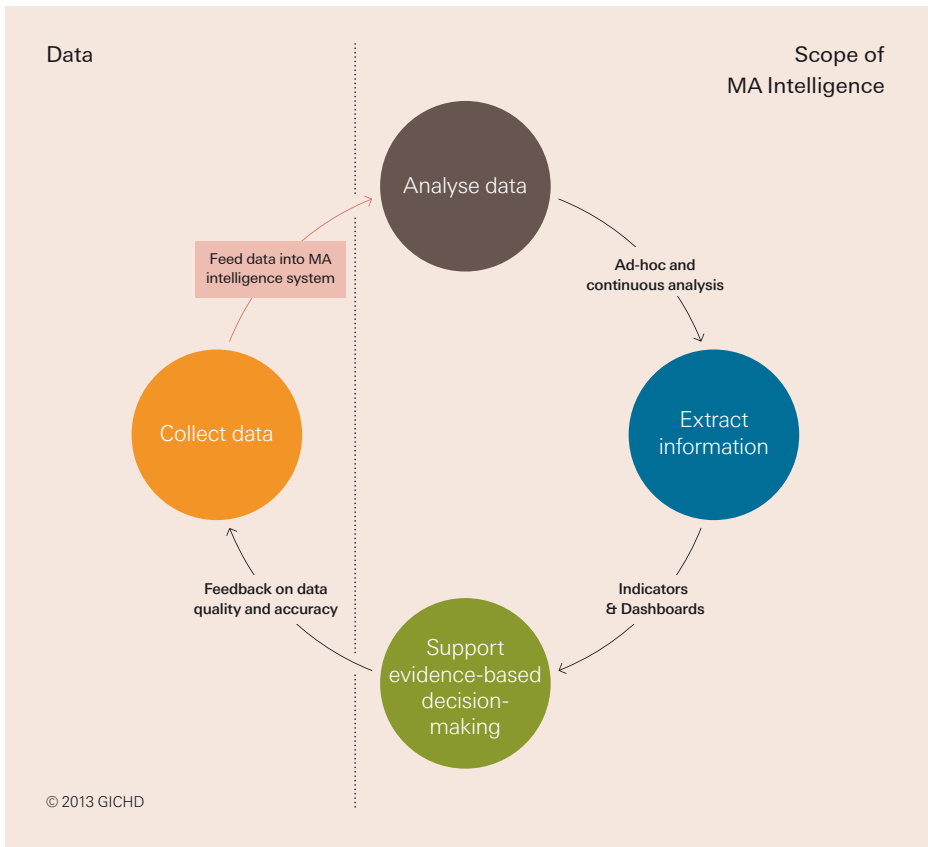
Information Management for Monitoring

The key to an accurate monitoring process is availability and analysis of data. As pointed out in Step 7, it is important to collect the **right** data and to ensure its quality. Any indicator, regardless of its level (input, activities, outputs, outcomes),

has to be fed by data that can be aggregated along different analytical axes. In this process, **raw data** is analysed and transformed into **information** with the objective to optimize future decisions and performance. Commonly, this is referred to as Business Intelligence (BI).⁹⁸ In mine action, BI – thereafter analogically referred to as **mine action intelligence** – plays a crucial role in monitoring, tracking of indicators, and ultimately in decision support.

SADD is data that is cross-classified by sex and age, distinguishing between women, girls, boys and men to identify and understand their differences, distinct capabilities, responsibilities, needs and priorities. SADD and gender statistics enable us to build gender-sensitive indicators that help monitor gender-related differences within MA and gender-related changes over time.

FIGURE 19 PROCESS AND SCOPE OF MINE ACTION INTELLIGENCE



While the definition of useful analytical axes and indicators is a high-level task that should involve stakeholders from management, operations and information management, the actual computation and tracking can be well handled and automatised using appropriate tools. The Mine action INtelligence Tool (MINT) developed by the GICHD and made available to the MA community, addresses these requirements.

The heart of MINT is the functionality to create and visualise dashboards. *'A dashboard is a visual display of the most important information needed to achieve one or more objectives, consolidated and arranged on a single screen so the information can be monitored at a glance'*.⁹⁹ A dashboard is thus an ensemble of elements visualising data, such as tables, graphs, gauges, etc. Each of these elements needs to be paid attention to – in particular, the following questions have to be answered:

- which indicator should be represented, and what is its exact definition?
- what data is required to compute the indicator, and where do we get the data from?
- how can the data be aggregated and which analytical dimensions are required (eg time)?
- how shall the indicator be represented, both numerically (eg absolute value, ratio, percentage) and visually (eg time series, bar chart, gauge, etc)?
- how will the indicator be updated and tracked?

Once these questions are addressed, the indicator can be designed in MINT, given that the required data is available in an online system and can technically be accessed.

The design of a dashboard itself is a complex task, and describing it in detail is out of the scope of this handbook. However, a few considerations have to be stressed:

- a dashboard should always be targeted to a specific audience. A MA programme director is likely to be interested in another type – or another level – of information than an operations officer. Hence, a dashboard has to be designed with the audience in mind.
- all the elements on a dashboard should focus on a specific topic. For example, output-level indicators on operational efficiency in a MA programme (such as those mentioned in Step 5) would make up one dashboard, and an organisation's key performance indicators on the progress made towards yearly objectives would make up a second dashboard. This is in line with the audience targeting mentioned above.

- the elements displayed on a dashboard have to be put in context. A single measure is nothing more than a number if there is no context shown, for example in terms of its change over time. Without such a comparison, it is impossible to evaluate if a measure actually represents an improvement or a decline.
- dashboards should be visually appealing, not overloaded, and the right types of visual display should be chosen for each measure or indicator conveyed.



While the monitoring of strategic and operational indicators is one key area facilitated by a system like MINT, it can also be used for detailed data analysis. In an evaluation process for example, collected data can give insights into the reasons why a project or programme led to specific results.

MINT

MINT is a web-based software solution developed by the GICHD for supporting mine action intelligence. This includes the online creation and visualisation of:

- reports and graphs
- indicators
- dashboards

These elements can be defined on any mine action data source. An example is the creation of dashboards based on data from IMSMA.

MINT is designed for supporting a multi-organisation or multi-programme view, eg individual organisations and programmes have their own spaces, but aggregation of data among programmes is also possible. As such, MINT also represents a

way of sharing data in the broader mine action community. Combining different data sources in order to get a broader overview can be key in the monitoring of outcome indicators.

FIGURE 20 SCREENSHOT OF A DASHBOARD DESIGNED IN MINT



STEP 10

SUSTAINING A QMS

The final step considers sustainment of a QMS. A QMS should be seen as a long-term effort for an organisation or a programme. However, long-term QMS maintenance only makes sense if it is really useful and provides good results. This we have to check regularly. Beyond the steps described above, there are some more critical components we have to consider for sustainability:¹⁰⁰

Demand: if there is no demand for quality, why maintain a QMS? Government bodies, donors, tendering agencies, NMAA, MAC, implementing partners, senior managers of any organisation or company, and civil society representatives should demand high quality and define it – for themselves and for their partners and suppliers. There has to be a structured requirement for quality, including legislation, regulations, and standards. Good quality has to be rewarded; demand can be stimulated if quality is included in national strategies and policies, and in tendering processes.

Complete and credible information: data collection, analysis and reporting should be aligned throughout the various levels of a programme, and even throughout the various levels of government. Information should feed into the same national database, to make best use of it for continual improvement. A QMS must be able to produce information that can be good or bad news. Performance information should be transparent. The producers of bad news have to be protected from reprisals ('don't kill the messenger').

Capacity: Sound technical and managerial skills are required to maintain a QMS. Data collection, retrieval and analyses systems need to be up and running. Policies, objectives and processes have to be defined and continually improved. Organisations and programmes have to commit financial resources to upkeep a QMS. Further, institutional experience and memory are helpful in the long-term.

Incentives: Senior managers have to acknowledge and reward success, organisational and programme-wide learning has to be valued.

Challenges to the QMS include:

- human resources (eg lack of training for people running the system, or keeping well-trained staff). The demand for capacity building never ends. Keep champions on your side and help them.
- cost and feasibility. Establish the understanding that a QMS needs sustained resources (see also chapter below). Look for every opportunity to link performance and outcome information to budget and resource allocation decisions.
- maintaining indicator stability over time. This does not exclude continual improvement.
- definition and monitoring of both performance and results. Performance monitoring has to be complemented with evaluations to ensure better understanding of outcomes.
- priority of outcomes: which are more important, programme-specific outcomes or outcomes for society/the industry?
- fear and resistance from managers. Setting up a QMS needs champions and has to be a transparent and inclusive process.¹⁰¹

Managing resources

ISO 9004 provides particular information on resource management for the QMS. The main points are:

- identify the internal and external resources that are needed for the achievement of the organisation's objectives in the short and long term. Policies and methods for resource management should be consistent with the strategy.
- ensure that resources (such as equipment, facilities, materials, energy, knowledge, finance and people) are used effectively and efficiently. For this, it is necessary to have processes in place to provide, allocate, monitor, evaluate, optimize, maintain and protect those resources.
- ensure the availability of resources for future activities. For this, managers should identify and assess the risks of potential scarcity, and continually monitor current use of resources to find opportunities for improvement of their use. In parallel, research for new resources, optimized processes and new technologies should take place.
- periodically review the availability and suitability of the identified resources, including outsourced resources, and take action as necessary. The results of these reviews should also be used as inputs into the organisation's reviews of its strategy, objectives and plans.¹⁰²

Finally

A QMS should not lead to an atmosphere of policing and mutual control checks, or to compiling massive amounts of paper and data that remain un-analysed and un-used. The end goal of the QMS should always be measurably improved efficiency and effectiveness of the programme. These results also help to get the necessary resources to maintain the QMS.

Sustaining the QMS will only be successful if there is a clear steering structure at the programme level and serious senior management commitment. Good – and continually improved – processes are also vital for a successful QMS. The engagement of staff can best be maintained if positive results stemming from the QMS are collected, and then communicated to and shared with, all people involved.

There is no doubt that the establishment of an effective QMS can do more to increase efficiency, establish and maintain confidence, and support enthusiasm and satisfaction, in a mine action organisation or programme than almost any other single action.

Developing a new QMS, or enhancing an existing one, does require hard work and commitment, but all the evidence is that staff, managers, donors and other individuals, organisations and institutions with an interest in the performance of the quality managed organisation will respond positively.

The GICHD strongly recommends the adoption of the principles, policies and practices described in this handbook and remains ready and able to provide support when and where it is needed.



ENDNOTES

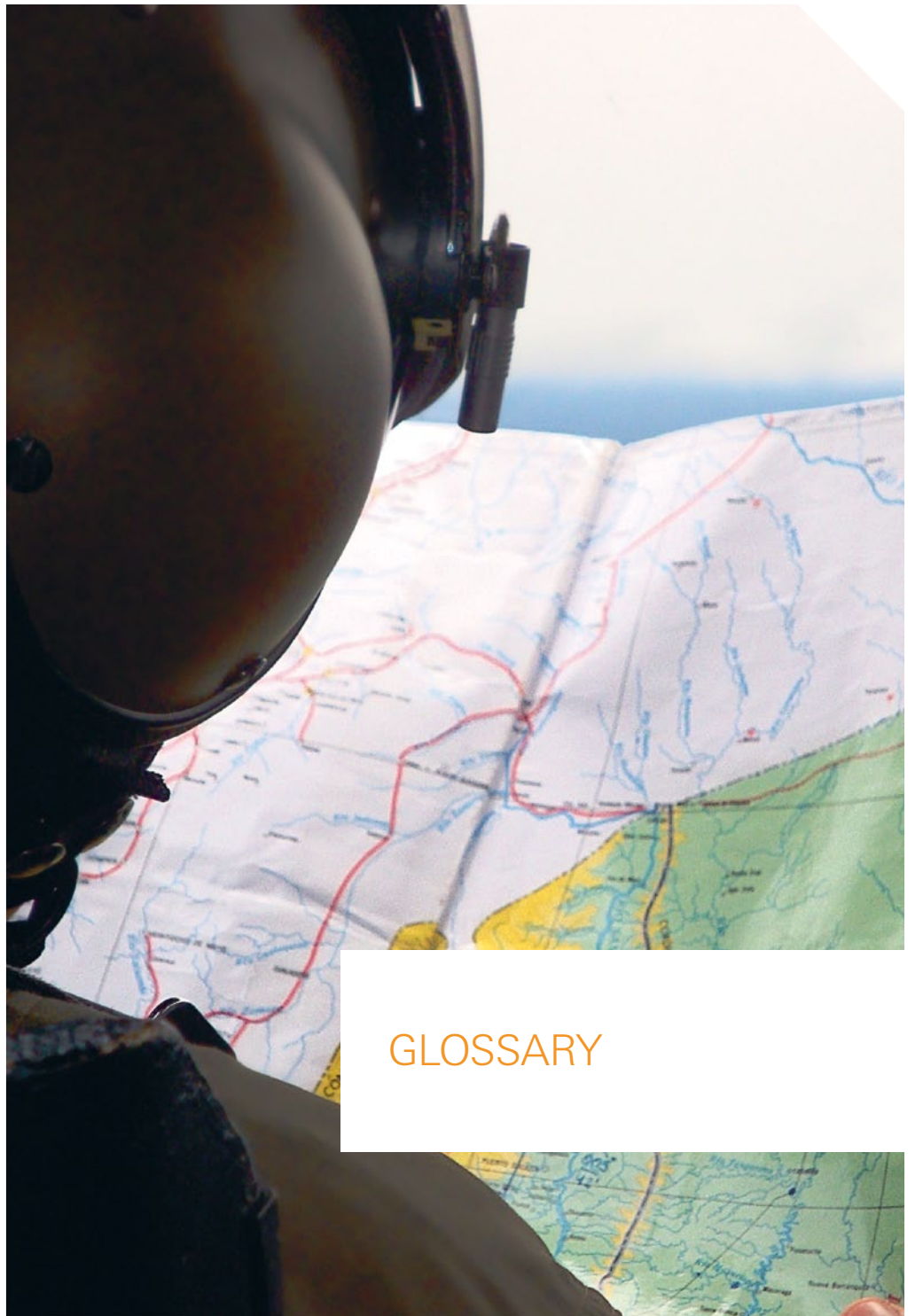
- 1 Efficiency: relationship between the result achieved and the resources used (ISO 9000:2005). We should aim to achieve our results in the most economical way.
- 2 Effectiveness: extent to which planned activities are realised and planned results achieved (ISO 9000:2005). We need hard facts to prove that we actually achieved the outputs and outcomes we wanted to achieve.
- 3 Beneficiaries include women, girls, boys and men.
- 4 Product is the general word encompassing both 'goods' (physical products) and services (intangible products).
- 5 International Organization for Standardization (ISO) 9000:2005 and International Mine Action Standards (IMAS) 04.10.
- 6 Particularly the Anti-personnel Mine Ban Convention (APMBC), the Convention on Cluster Munitions (CCM), and the Convention on Certain Conventional Weapons (CCW).
- 7 For example *Quality Circles*, see chapter on tools of this handbook.
- 8 www.gichd.org (accessed: 8.10.2013).
- 9 European Foundation for Quality Management, www.efqm.org (accessed: 8.10.2013).
- 10 www.mineactionstandards.org (accessed: 8.10.2013). IMAS are issued by the UN and approved by an international board. They are international guidelines and do not belong to a country, and thus cannot be legal documents unless a country formally adopts them. IMAS adhere to international norms like ISO, ILO, NATO and Conventions such as the APMBC, CCW and CCM. They have been developed in line with the recommendations and processes contained within ISO 9001:2008 and the ISO Risk Management system (ISO Guide 51).
- 11 NMAS are issued by a country's National Mine Action Authority. They are legal documents; they define national requirements NMAS adhere to both IMAS and national laws. They are approved by a national board.
- 12 SOP are issued by the operators. They adhere to NMAS/IMAS and set the methods to achieve the requirements. They are usually specific to one operator.
- 13 ISO 9000:2005.
- 14 IMAS 04.10 and OECD/DAC: Glossary of Key Terms in Evaluation and Results Based Management, 2002, accessible at <http://www.oecd.org/development/peer-reviews/2754804.pdf> (accessed: 8.10.2013).
- 15 The size of the sample usually depended on the level of confidence in the clearance gained through prior QA inspection visits.
- 16 Such as the minimum calibre or weight of objects that are required to be found and removed/destroyed.
- 17 IMAS 07.30 provides details on accreditation, including organisational and operational accreditation, application, desk assessment and on-site assessment, modifications to the accreditation as well as suspension and termination.
- 18 This includes ensuring the impeccable functioning of the deminers most important tool, the metal detector. A good reference for this is the CEN Workshop Agreement – Test and Evaluation of Metal Detectors, accessible at <http://www.mineactionstandards.org/cwa/cwa-in-english/> (accessed: 8.10.2013). CEN Workshop Agreements will soon be relabelled and included into IMAS, for example as technical notes.

- 19 The term 'mine detection dogs' is being replaced by the more accurate term 'animal detection systems' (ADS).
- 20 There are CEN Workshop Agreements on Test and Evaluation of Demining Machines and for QM for Mechanical Demining, accessible at <http://www.mineactionstandards.org/cwa/cwa-in-english/> (accessed: 8.10.2013). CEN Workshop Agreements will soon be relabelled and included into IMAS, for example as technical notes.
- 21 Further information on the value and limitations of post clearance inspections can be found in: GICHHD: A Review of External Post-clearance Inspection in Mine Action, March 2012, accessible at <http://www.gichd.org/fileadmin/pdf/publications/Review-Ext-PostClear-Inspection-Mar2012.pdf> (accessed: 8.10.2013).
- 22 Information and decision-making feedback loops will be covered repeatedly in later sections of this handbook. Their creation and use form a fundamental part of any *effective* quality management system.
- 23 A good overview of models is provided in: van Assen, Marcel, van den Berg, Gerben, Pietersma, Paul: Key Management Models. The 60+ models every manager needs to know.
- 24 www.iso.org (accessed: 8.10.2013).
- 25 These national standards bodies represent ISO in their country, a full list is available at http://www.iso.org/iso/home/about/iso_members.htm (accessed: 8.10.2013).
- 26 In addition, there are a number of standards associated to QM, like ISO 19011 Guidelines for auditing management systems, ISO 17021 Conformity assessment – Requirements for bodies providing audit and certification of management systems, ISO 10012 Measurement management systems – Requirements for measurement processes and measuring equipment, ISO 10002 Quality management – Customer satisfaction – Guidelines for complaints handling in organizations, ISO 10007 Quality management systems – Guidelines for configuration management, etc.
- 27 CEN Workshop Agreements will soon be relabelled and included into IMAS, for example as technical notes.
- 28 ISO 9000:2005.
- 29 This should include gender and diversity considerations.
- 30 In development, particularly regarding development results, the terminology used is *evidence* and *evidence-based decisions*.
- 31 Resources are available on the CD-ROM contained in this publication and on the GICHHD website.
- 32 www.efqm.org (accessed: 8.10.2013).
- 33 ISO 9000:2005.
- 34 GIZ is a federal enterprise supporting the German Government in achieving its objectives in the field of international development cooperation. It is one of the world's largest and leading providers of international cooperation services for sustainable development, active in more than 130 countries worldwide, with over 17.000 staff.
- 35 GIZ (formerly GTZ) has developed an almost 300-page manual for CW called *Capacity Works: the Management Model for Sustainable Development*. It contains a description of the model and a large choice of tools that help managers to work on the success factors.
- 36 Extracts from the website http://www.giz.de/en/aboutgiz/quality_management.html (accessed: 8.10.2013).

- 37 There may be some organisations receiving public funds (including from donors) in a mine action programme, particularly demining firms, who think it appropriate to focus purely on outputs, not worrying about how those outputs are used or by whom. That is because they are working under a contract to a client (eg a national MAC or UN agency). But if that client has public service outcomes as an aim – making farmland available to poor rural households; ensuring peacekeepers and humanitarian personnel can work in safety; and so on – then quality for the demining firm implies helping the customer achieve those outcomes.
- 38 Gender issues and sex and age disaggregated data (SADD) must be analysed and taken into account in all phases of the project cycle to ensure that the different needs of women, girls, boys and men are identified and met.
- 39 A proper gender analysis at this stage is critical to understanding the social and gender dynamics that could help or hinder the effective delivery of mine action services.
- 40 <http://www.nist.gov/baldrige/> (accessed: 8.10.2013).
- 41 <http://www.un.org/disarmament/convarms/Ammunition/IATG/> (accessed: 8.10.2013).
- 42 <http://www.smallarmsstandards.org/> (accessed: 8.10.2013).
- 43 <http://www.oecd.org/dac/> (accessed: 8.10.2013).
- 44 For example the Glossary of Key Terms in Evaluation and Results Based Management, 2002, accessible at <http://www.oecd.org/dac/2754804.pdf> (accessed: 8.10.2013).
- 45 <http://www.hapinternational.org/> (accessed: 8.10.2013).
- 46 <http://www.jointstandards.org/> (accessed: 8.10.2013).
- 47 <http://www.sphereproject.org/> (accessed: 8.10.2013).
- 48 <http://www.sphereproject.org/resources/download-publications/?search=1&keywords=&language=English&category=22> (accessed: 8.10.2013).
- 49 <http://www.urd.org/article/the-association> (accessed: 8.10.2013).
- 50 <http://www.compasqualite.org/en/index/index.php> (accessed: 8.10.2013).
- 51 <http://www.alnap.org/about.aspx> (accessed: 8.10.2013).
- 52 See Kusek, Jody Zall, Rist, Ray C.: Ten Steps to a Results-based Monitoring and Evaluation System, The World Bank, 2004, p.39ff, accessible at http://www-wds.worldbank.org/servlet/WDSContentServer?WDSPIB/2004/08/27/000160016_20040827154900/Rendered/PDF/296720PAPER0100steps.pdf (accessed: 8.10.2013).
- 53 ISO 9000:2005.
- 54 ISO 9000:2005.
- 55 ISO 31000 Risk management – Principles and guidelines, provides extensive guidance on assessments of internal and external context.
- 56 These organisations or companies can be found through the ISO and the national standards institutes' websites.
- 57 A detailed case study of the German EOD QMS is a resource to this handbook.
- 58 www.tuv.de (accessed: 8.10.2013).
- 59 Other international standards for environmental management (ISO 14001) and occupational health and safety (OHSAS 18001) exhibit many of the same basic elements found in ISO 9001 (quality management), and are often integrated together within an organisation, sharing common procedures and processes.

- 60 For further information, see GICHD: A Guide to Liability and Insurance in Mine Action, 2011, accessible at <http://www.gichd.org/fileadmin/pdf/publications/Guide-Liability-Insurance-June2011.pdf> (accessed: 8.10.2013).
- 61 ISO 9000:2005.
- 62 ISO 9000:2005.
- 63 GICHD (Gabriella McMichael and Asa Massleberg): Landmines and land rights in South Sudan, November 2010, accessible at http://www.gichd.org/fileadmin/pdf/ma_development/wk-landrights-oct2010/LMAD-wk-Sudan-case-study-Nov2010.pdf (accessed: 8.10.2013).
- 64 ISO 9000:2005 3.2.4.
- 65 Policy examples of an NGO, the United Nations Mine Action Coordination Centre of the Democratic Republic of the Congo and a commercial company are included in the Resources.
- 66 ISO 9000:2005.
- 67 ISO 9000:2005.
- 68 ISO 9000:2005.
- 69 ISO 9000:2005.
- 70 For further reading on this issue, please see GICHD: A Guide to Contracting in Mine Action – Second Edition, May 2012, accessible at <http://www.gichd.org/fileadmin/pdf/publications/Guide-to-Contracting-May2012.pdf> (accessed: 8.10.2013).
- 71 Such as Damelio, Robert: The Basics of Process Mapping 2nd Edition, Productivity Press, 2011, accessible at <http://www.crcpress.com/product/isbn/9781563273766> (accessed: 8.10.2013).
- 72 A good list of KPI can be found in Marr, Bernard: Key Performance Indicators. The 75 measures every manager needs to know, FT publishing, 2012.
- 73 OECD/DAC: Glossary of Key Terms in Evaluation and Results Based Management, 2002, p.29, accessible at <http://www.oecd.org/development/peer-reviews/2754804.pdf> (accessed: 8.10.2013).
- 74 Morra Imas, Linda G., Rist, Ray C.: The Road to Results. Designing and Conducting Effective Development Evaluations, The World Bank, 2009, p. 110ff.
- 75 For further information reading on priority setting, please see GICHD: Priority Setting in Mine Action, Policy Briefs 1-4, November 2011, accessible at <http://www.gichd.org/lima/reports-publications/detail/publications/priority-setting-in-mine-action-issue-briefs/> (accessed: 8.10.2013).
- 76 ISO 9000:2005 0.2 (f).
- 77 ISO 9000:2005 3.2.13.
- 78 ISO 9000:2005.
- 79 ISO 9000:2005.
- 80 ISO 9000:2005 3.6.2.
- 81 ISO 9000:2005 3.6.6.
- 82 ISO 9000:2005 3.6.5.
- 83 ISO 9000:2005 3.6.4.
- 84 Described in more detail in the chapter on QM tools.
- 85 ISO 9000:2005.

- 86 For example Kusek, Jody Zall, Rist, Ray C.: Ten Steps to a Results-based Monitoring and Evaluation System, The World Bank, 2004.
- 87 NATO: Glossary of terms and definitions (English and French), AAP-06, Edition 2013, accessible at <http://nsa.nato.int/nsa/zPublic/ap/aap6/AAP-6.pdf> (accessed: 8.10.2013).
- 88 OECD/DAC: Glossary of Key Terms in Evaluation and Results Based Management, 2002.
- 89 OECD/DAC: Glossary of Key Terms in Evaluation and Results Based Management, 2002.
- 90 Morra Imas, Linda G., Rist, Ray C.: The Road to Results. Designing and Conducting Effective Development Evaluations, The World Bank, 2009, p.8ff.
- 91 http://www.mineactionstandards.org/fileadmin/user_upload/MAS/documents/imas-international-standards/english/series-14/IMAS-14-10-Ed1-Am2.pdf (accessed: 8.10.2013).
- 92 <http://www.oecd.org/development/evaluation/dcdndep/41612905.pdf> (accessed: 8.10.2013).
- 93 <http://www.uneval.org/normsandstandards/> (accessed: 8.10.2013).
- 94 http://www.mineactionstandards.org/fileadmin/user_upload/MAS/documents/imas-international-standards/english/series-12/IMAS-12-10-Ed2-Am2.pdf (accessed: 8.10.2013).
- 95 <http://www.unicef.org/tdad/unicefppmanualfeb07.pdf> (accessed: 8.10.2013).
- 96 ISO 9000:2005.
- 97 ISO 9000:2005; ISO 9004 provides a generic model for self-assessment of the QMS. EFQM and other excellence models work on the basis of self-assessment.
- 98 Gartner IT Glossary, accessible at <http://www.gartner.com/it-glossary/> (accessed: 8.10.2013).
- 99 Few, Stephen: Information Dashboard Design: The Effective Visual Communication of Data, 2006.
- 100 The mentioned and other components are described in Kusek, Jody Zall, Rist, Ray C.: Ten Steps to a Results-based Monitoring and Evaluation System, The World Bank, 2004 (p. 151 ff), which means they have been tested and approved in the broader field of development evaluation.
- 101 See Kusek, Jody Zall, Rist, Ray C.: Ten Steps to a Results-based Monitoring and Evaluation System, The World Bank, 2004, p. 159ff.
- 102 ISO 9004:2009.
- 103 NATO: Glossary of terms and definitions (English and French), AAP-06, Edition 2013, accessible at <http://nsa.nato.int/nsa/zPublic/ap/aap6/AAP-6.pdf> (accessed: 8.10.2013).
- 104 OECD/DAC: Glossary of Key Terms in Evaluation and Results Based Management, 2002, accessible at <http://www.oecd.org/development/peer-reviews/2754804.pdf> (accessed: 8.10.2013).



GLOSSARY

DEFINITIONS (ISO 9000:2005)

3.1.1 QUALITY

Degree to which a set of inherent characteristics fulfils requirements.

Note: The term 'quality' can be used with adjectives such as poor, good or excellent. 'Inherent', as opposed to assigned, means existing in something, especially as a permanent characteristic.

3.1.2 REQUIREMENT

Need or expectation that is stated, generally implied or obligatory.

Note: 'Generally implied' means that it is custom or common practice for the organization, its customers and other interested parties, that the need or expectation under consideration is implied. Requirements can be generated by different interested parties.

3.1.4 CUSTOMER SATISFACTION

Customer's perception of the degree to which the customer's requirements have been fulfilled.

Note: Customer complaints are a common indicator of low customer satisfaction but their absence does not necessarily imply high customer satisfaction. Even when customer requirements have been agreed with the customer and fulfilled, this does not necessarily ensure high customer satisfaction.

3.2.1 SYSTEM

Set of interrelated or interacting elements.

3.2.2 MANAGEMENT SYSTEM

To establish policy and objectives and to achieve those objectives.

3.2.3 QUALITY MANAGEMENT SYSTEM

Management system to direct and control an organization with regard to quality.

3.2.4 QUALITY POLICY

Overall intentions and direction of an organization related to quality as formally expressed by top management.

Note: Generally the quality policy is consistent with the overall policy of the organization and provides a framework for the setting of quality objectives. Quality management principles presented in this International Standard can form a basis for the establishment of a quality policy.

3.2.5 QUALITY OBJECTIVE

Something sought, or aimed for, related to quality.

Note: Quality objectives are generally based on the organization's quality policy. Quality objectives are generally specified or relevant functions and levels in the organization.

3.2.8 QUALITY MANAGEMENT

Coordinated activities to direct and control an organization with regard to quality.

Note: Direction and control with regard to quality generally includes establishment of the quality policy and quality objectives, quality planning, quality control, quality assurance and quality improvement.

3.2.9 QUALITY PLANNING

Part of quality management focused on setting quality objectives and specifying necessary operational processes and related resources to fulfill the quality objectives.

Note: Establishing quality plans can be part of quality planning.

3.2.10 QUALITY CONTROL

Part of quality management focused on fulfilling quality requirements.

Note: IMAS addition – ‘QC relates to the inspection of a finished product. In the case of humanitarian demining, the ‘product’ is safe cleared land’ (IMAS 04.10, 3.228).

2.2.11 QUALITY ASSURANCE

Part of quality management focused on providing confidence that quality requirements will be fulfilled.

Note: IMAS addition – ‘The purpose of QA in humanitarian demining is to confirm that management practices and operational procedures for demining are appropriate, are being applied, and will achieve the stated requirement in a safe, effective and efficient manner. Internal QA will be conducted by demining organizations themselves, but external inspections by an external monitoring body should also be conducted’ (IMAS 04.10, 3.227).

3.2.12 QUALITY IMPROVEMENT

Part of quality management focused on increasing the ability to fulfill quality requirements.

Note: The requirements can be related to any aspect such as effectiveness, efficiency or traceability.

3.2.13 CONTINUAL IMPROVEMENT

Recurring activity to increase the ability to fulfil requirements.

Note: The process of establishing objectives and finding opportunities for improvement is a continual process through the use of audit findings and audit conclusions, analysis of data, management reviews or other means and generally leads to corrective action or preventive action.

3.2.14 EFFECTIVENESS

Extent to which planned activities are realized and planned results achieved.

3.2.15 EFFICIENCY

Relationship between the result achieved and the resources used.

3.3.1 ORGANIZATION

Group of people and facilities with an arrangement of responsibilities, authorities and relationships.

Note: The arrangement is generally orderly. An organization can be public or private. This definition is valid for the purposes of quality management system.

3.3.5 CUSTOMER

Organization or person that receives a product.

Note: A customer can be internal or external to the organization.

3.3.7 INTERESTED PARTY

Person or group having an interest in the performance or success of an organization.

Note: A group can comprise an organization, a part thereof, or more than one organization.

3.4.1 PROCESS

Set of interrelated or interacting activities which transform inputs into outputs.

Note: Inputs to a process are generally outputs of other processes. Processes in an organization are generally planned and carried out under controlled conditions to add value. A process where the conformity of the resulting product cannot be readily or economically verified is frequently referred to as a 'special process'.

3.4.3 PROJECT

Unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including the constraints of time, cost and resources.

Note: An individual project can form part of a larger project structure. In some projects the objectives are refined and the product characteristics defined progressively as the project proceeds. The outcome of a project can be one or several units of product.

3.6.1 CONFORMITY

Fulfilment of a requirement.

Note: The term 'conformance' is synonymous but deprecated.

3.6.2 NON-CONFORMITY

Non-fulfilment of a requirement.

3.6.4 PREVENTIVE ACTION

Action to eliminate the cause of a potential non-conformity or other undesirable potential situation.

Note: There can be more than one cause for a potential non-conformity. Preventive action is taken to prevent occurrence whereas corrective action is taken to prevent recurrence.

3.6.5 CORRECTIVE ACTION

Action to eliminate the cause of a detected non-conformity or other undesirable situation.

Note: There can be more than one cause for a non-conformity. Corrective action is taken to prevent recurrence whereas preventive action is taken to prevent occurrence. There is a distinction between correction and corrective action.

3.6.6 CORRECTION

Action to eliminate a detected non-conformity.

Note: A correction can be made in conjunction with a corrective action. A correction can be, for example, rework or regrade.

3.8.2 INSPECTION

Conformity evaluation by observation and judgement, accompanied as appropriate by measurement, testing or gauging.

3.8.3 TEST

Determination of one or more characteristics according to a procedure.

3.8.7 REVIEW

Activity undertaken to determine the suitability, adequacy and effectiveness of the subject matter to achieve established objectives

Note: Review can also include the determination of efficiency.

3.9.1 AUDIT

Systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled

Note: Internal audits, sometimes called first-party audits, are conducted by, or on behalf of, the organization itself for management review and other internal purposes, and may form the basis for an organization's declaration of conformity. In many cases, particularly in smaller organizations, independence can be demonstrated by the freedom from responsibility for the activity being audited. External audits include those generally termed second- and third-party audits.

Second-party audits are conducted by parties having an interest in the organization, such as customers, or by other persons on their behalf. Third-party audits are conducted by external, independent auditing organizations, such as those providing certification/ registration of conformity to ISO 9001 or ISO 14001. When two or more management systems are audited together, this is termed a combined audit. When two or more auditing organizations cooperate to audit a single auditee, this is termed a joint audit.

DEFINITIONS (NATO)¹⁰³

MONITORING (1)

The act of listening, carrying out surveillance on, and/or recording the emissions of one's own or Allied forces for the purpose of maintaining and improving procedural standards and security, or for reference, as applicable.

MONITORING (2)

The act of listening, carrying out surveillance on, and/or recording of enemy emissions for intelligence purposes.

EVALUATION (1)

The structured process of examining activities, capabilities and performance against defined standards or criteria.

Note: In the context of military forces, the hierarchical relationship in logical sequence is: assessment, analysis, evaluation, validation and certification.

EVALUATION (2)

In intelligence usage, a step in the processing phase of the intelligence cycle constituting appraisal of an item of information in respect of the reliability of the source, and the credibility of the information.

DEFINITIONS (OECD/DAC)¹⁰⁴

AUDIT

An independent, objective assurance activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to assess and improve the effectiveness of risk management, control and governance processes.

Note: a distinction is made between regularity (financial) auditing, which focuses on compliance with applicable statutes and regulations; and performance auditing, which is concerned with relevance, economy, efficiency and effectiveness. Internal auditing provides an assessment of internal controls undertaken by a unit reporting to management while external auditing is conducted by an independent organization.

BENEFICIARIES

The individuals, groups, or organizations, whether targeted or not, that benefit, directly or indirectly, from the development intervention.

EFFECTIVENESS

The extent to which the development intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance.

EFFICIENCY

A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results.

EVALUATION

The systematic and objective assessment of an on-going or completed project, programme or policy, its design, implementation and results. The aim is to determine

the relevance and fulfillment of objectives, development efficiency, effectiveness, impact and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of both recipients and donors. Evaluation also refers to the process of determining the worth or significance of an activity, policy or program. An assessment, as systematic and objective as possible, of a planned, on-going, or completed development intervention.

Note: Evaluation in some instances involves the definition of appropriate standards, the examination of performance against those standards, an assessment of actual and expected results and the identification of relevant lessons.

INDICATOR

Quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor.

MONITORING

A continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing development intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds.

OUTCOME

The likely or achieved short-term and medium-term effects of an intervention's outputs.

OUTPUTS

The products, capital goods and services which result from a development intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.

PARTNERS

The individuals and/or organizations that collaborate to achieve mutually agreed upon objectives.

Note: The concept of partnership connotes shared goals, common responsibility for outcomes, distinct accountabilities and reciprocal obligations. Partners may include governments, civil society, non-governmental organizations, universities, professional and business associations, multilateral organizations, private companies, etc.

PERFORMANCE

The degree to which a development intervention or a development partner operates according to specific criteria/standards/guidelines or achieves results in accordance with stated goals or plans.

PERFORMANCE INDICATOR

A variable that allows the verification of changes in the development intervention or shows results relative to what was planned.

PERFORMANCE MEASUREMENT

A system for assessing performance of development interventions against stated goals.

PERFORMANCE MONITORING

A continuous process of collecting and analyzing data to compare how well a project, program, or policy is being implemented against expected results.

QUALITY ASSURANCE

Quality assurance encompasses any activity that is concerned with assessing and improving the merit or the worth of a development intervention or its compliance with given standards.

Note: examples of quality assurance activities include appraisal, RBM, reviews during implementation, evaluations, etc. Quality assurance may also refer to the assessment of the quality of a portfolio and its development effectiveness.

RESULTS

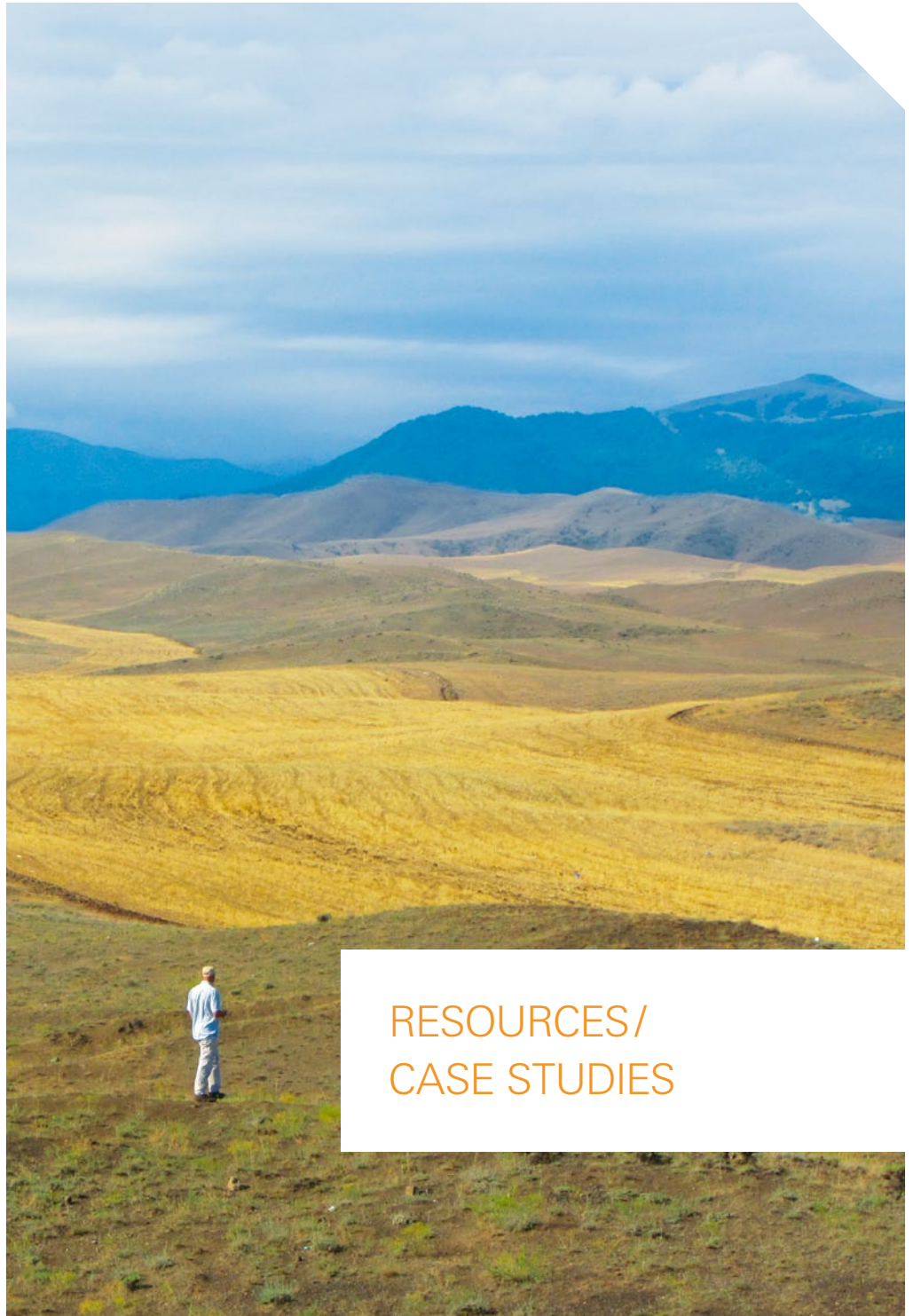
The output, outcome or impact (intended or unintended, positive and/or negative) of a development intervention.

RESULTS-BASED MANAGEMENT (RBM)

A management strategy focusing on performance and achievement of outputs, outcomes and impacts.

STAKEHOLDERS

Agencies, organizations, groups or individuals who have a direct or indirect interest in the development intervention or its evaluation.



RESOURCES/
CASE STUDIES

The following resources and case studies are available on the CD-ROM in the back of this publication:

- Literature, standards and links
- GICHD questionnaire for gap assessment
- Examples Quality Policies
 - ▶ Quality Policy of an NGO
 - ▶ Quality Policy United Nations Mine Action Coordination Centre of the Democratic Republic of the Congo (French and English)
 - ▶ Quality Policy of a commercial company
- Case studies:
 - ▶ Achieving ISO 9001 certification: A non-governmental organisation's experience
 - ▶ The Quality Management System in the German Explosive Ordnance Disposal programme
 - ▶ Quality Management in the Mine Action Programme for Afghanistan (MAPA)

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