

IMAS 14.20

First Edition
23 December 2003
Incorporating amendment number(s) 1, 2 & 3

Evaluation of mine risk education programmes and projects

Director,
United Nations Mine Action Service (UNMAS),
380 Madison Avenue, M11023
New York, NY 10017
USA

Email: mineaction@un.org
Telephone: (1 212) 963 1875
Fax: (1 212) 963 2498
Website: www.mineactionstandards.org

Warning

This document is current with effect from the date shown on the cover page. As the International Mine Action Standards (IMAS) are subject to regular review and revision, users should consult the IMAS project website in order to verify its status at (<http://www.mineactionstandards.org/>, or through the UNMAS website at <http://www.mineaction.org>).

Copyright notice

This UN document is an International Mine Action Standard (IMAS) and is copyright protected by the UN. Neither this document, nor any extract from it, may be reproduced, stored or transmitted in any form, or by any means, for any other purpose without prior written permission from UNMAS, acting on behalf of the UN.

This document is not to be sold.

Director
United Nations Mine Action Service (UNMAS)
380 Madison Avenue, M11023
New York, NY 10017
USA

Email: mineaction@un.org
Telephone: (1 212) 963 1875
Fax: (1 212) 963 2498

Contents

Contents	iii
Foreword	iv
Introduction	v
Evaluation of mine risk education programmes and projects	1
1. Scope	1
2. References	1
3. Terms, definitions and abbreviations	1
4. The purpose of evaluation	2
5. The evaluation process	3
6. Guiding principles	3
6.1. Stakeholder involvement	3
6.2. Coordination	4
6.3. Integration	4
6.4. Community participation and empowerment	4
6.5. Information management and exchange	4
6.6. Appropriate targeting	4
6.7. Education	5
6.8. Training	5
7. Responsibilities	5
7.1. United Nations	5
7.2. National Mine Action Authority (NMAA)	5
7.3. Mine Risk Education (MRE) organisation	5
7.4. Donors	6
Annex A (Normative) References	7
Annex B (Informative) Terms, definitions and abbreviations	8
Amendment record	12

Foreword

International standards for humanitarian demining programmes were first proposed by working groups at an international technical conference in Denmark, in July 1996. Criteria were prescribed for all aspects of demining, standards were recommended and a new universal definition of 'clearance' was agreed. In late 1996, the principles proposed in Denmark were developed by a UN-led working group and the International Standards for Humanitarian Mine Clearance Operations were developed. A first edition was issued by the UN Mine Action Service (UNMAS) in March 1997.

The scope of these original standards has since been expanded to include the other components of mine action and to reflect changes to operational procedures, practices and norms. The standards were re-developed and renamed as International Mine Action Standards (IMAS) with the first edition produced in October 2001.

The United Nations has a general responsibility for enabling and encouraging the effective management of mine action programmes, including the development and maintenance of standards. UNMAS, therefore, is the office within the United Nations responsible for the development and maintenance of IMAS. IMAS are produced with the assistance of the Geneva International Centre for Humanitarian Demining.

The work of preparing, reviewing and revising IMAS is conducted by technical committees, with the support of international, governmental and non-governmental organisations. The latest version of each standard, together with information on the work of the technical committees, can be found at <http://www.mineactionstandards.org/>. Individual IMAS are reviewed at least every three years to reflect developing mine action norms and practices and to incorporate changes to international regulations and requirements.

Introduction

The purpose of evaluations is to assess the value of Mine Risk Education (MRE) programmes, and to confirm whether MRE projects have been conducted as planned. Evaluations provide feedback and information on programme strategies and project outputs, and confirm whether they have satisfied the needs and priorities of the affected populations. Evaluations provide important recommendations which may be used to improve future MRE programmes and projects.

Evaluation usually takes place at the end of an MRE project or on completion of a significant phase of the project; monitoring is an ongoing activity conducted throughout the project. Evaluation and monitoring are complementary activities, closely linked but with separate and distinct functions. Monitoring is the process by which the MRE activities and the outputs of the project are quality assured in accordance with the plan, whereas evaluation focuses on the achievement of objectives, the impact of the project, accountability and lessons learned.

Evaluations may be carried out by MRE organisations themselves, or they may be carried out by an external body or agency.

Evaluation of mine risk education programmes and projects

1. Scope

This standard establishes principles and provides guidance on the evaluation of Mine Risk Education (MRE) programmes and projects.

2. References

A list of normative references is given in Annex A. Normative references are important documents to which reference is made in this standard and which form part of the provisions of this standard.

3. Terms, definitions and abbreviations

In IMAS, the words 'shall', 'should' and 'may' are used to convey the intended degree of compliance. This use is consistent with the language used in ISO standards and guides:

- a) 'shall' is used to indicate requirements, methods or specifications that are to be applied in order to conform to the standard;
- b) 'should' is used to indicate the preferred requirements, methods or specifications; and
- c) 'may' is used to indicate a possible method or course of action.

The term 'Mine Risk Education' (MRE) refers to activities which seek to reduce the risk of injury from mines and Explosive Remnants of War (ERW) by raising awareness and promoting behavioural change; including public information dissemination, education and training, and community mine action liaison.

The term 'MRE organisation' refers to any organisation, including governmental, non-governmental, civil society organisations (e.g. women's union, youth union, red cross and red crescent societies), commercial entities and military personnel (including peace-keeping forces), which is responsible for implementing MRE projects or tasks. The MRE organisation may be a prime contractor, subcontractor, consultant or agent. The term 'MRE sub-unit' refers to an element of an organisation, however named, that is accredited to conduct one or more prescribed MRE activities such as a public information project, a schools based education project or a community mine action liaison project evaluation.

The term 'National Mine Action Authority (NMAA)' refers to the government department(s), organisation(s) or institution(s) in each mine-affected country charged with the regulation, management and co-ordination of mine action. In most cases the national Mine Action Centre (MAC) or its equivalent will act as, or on behalf of, the NMAA. In certain situations and at certain times it may be necessary and appropriate for the UN, or some other recognised international body, to assume some or all of the responsibilities, and fulfil some or all of the functions, of a NMAA. In such cases the UN should provide appropriate technical support including suitably qualified personnel, experienced in MRE.

The term 'project' refers to an activity, or series of connected activities, with an agreed objective. A project will normally have a finite duration and a plan of work. The resources needed to successfully accomplish the objective will normally be defined and agreed before the start of the project.¹

1. In mine action, the method of defining the objective, the means of achieving the objective and the resources needed are usually referred to as a 'project proposal' or 'project document'.

The term 'programme' implies the medium to long-term activities of an organisation in the fulfilment of its vision and strategic objective. A mine action programme consists of a series of related mine action projects. Similarly, an MRE programme consists of a series of related MRE projects.

A list of terms, definitions and abbreviations used in this Guide is given in Annex B. A complete glossary of all the terms, definitions and abbreviations used in the IMAS series of standards is given in IMAS 04.10.

4. The purpose of evaluation

Evaluation is "... a process that tries to determine as systematically and objectively as possible the worth or significance of an intervention or policy. The appraisal of worth or significance is guided by reference to defined criteria such as relevance, 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 programme partners and donors. Note, the word 'objectively' is used to indicate the need to achieve a balanced analysis, recognising bias and reconciling perspectives of different stakeholders (all those interested in and affected by programmes, including beneficiaries as primary stakeholders) by using different sources and methods."²

The purpose of evaluation may include:

- a) improvement of the programme or project being evaluated;
- b) generating knowledge and learning for wider application (lessons learned and missed opportunities); and
- c) making project results transparent and accountable.

More specifically, in the case of MRE, evaluation should be measured against the objectives stated in the original MRE project document, and may include:

- a) reflecting on the rate of accidents;
- b) measuring the acquisition of knowledge, attitudes, practices, behavioural change, reduction in *risk* and reduction of accidents in the target communities which have resulted from MRE activities;
- c) assessing the impact of using specific MRE methods and tools; and
- d) identifying the extent to which the target communities' MRE needs and expectations have been addressed by the project.

Five specific evaluation criteria should be used: (a) relevance, (b) effectiveness, (c) efficiency, (d) impact, and (5) sustainability:

- a) is the project *relevant* - the extent to which the MRE project is suited to the particular needs, expectations and priorities of the target group, NMAA, implementing organisation and, where applicable the donor;
- b) is the project *effective* - the extent to which the project achieves its objectives and goals;
- c) is the project *efficient* - the extent to which the project outputs (qualitative and quantitative) are achieved in relation to the inputs, in particular resources and costs;

2. UNICEF, *Programme Policy and Procedures Manual*, 2001.

- d) what is the *impact* - the benefits and costs of the MRE project, whether directly or indirectly, intended or unintended. Political, socio-economic, environmental and cultural issues should be addressed; and
- e) is the activity *sustainable* - the probability that the benefits achieved by the MRE project will continue after donor funding and/or specialist assistance (such as international technical advisors) has been withdrawn. Projects should be financially and technically sustainable.

5. The evaluation process

Evaluation forms an important part of the five stages of the MRE project cycle: (1) data collection and needs assessment, (2) planning, (3) implementation, (4) monitoring and (5) evaluation.

Evaluation will normally: review and revisit the needs and information gathered during the data collection and needs assessment phase; review the objectives and indicators defined in the planning phase, and assess the MRE outputs confirmed through monitoring. Understanding this linkage with previous stages of the MRE project cycle is fundamental to the success of effective evaluation. Evaluation is not merely an 'add-on activity'.

The timing of an evaluation will depend on its stated purpose and how its recommendations will be used. Evaluations may be conducted at a pre-determined point during the project, at the end of the project or some time after project completion.³

"Evaluations may be *formative* or *summative*. A formative evaluation is a type of process evaluation undertaken during implementation of a project to provide information that should be a guide to improve the project. A formative evaluation takes place in the early stage of the project and collects information on operations or processes so that needed changes or modifications can be made to the project. Formative evaluations are used to provide feedback to programme managers and other personnel about the programme components that are working and those that need to be changed."⁴ A summative evaluation is an evaluation that assesses the results of a project and measures the outcome and impact of activities against stated objectives.⁵

6. Guiding principles

As explained in the 'Guide for the management of mine risk education' (IMAS 07.11), the series of standards for MRE are based on a set of requirements or principles for MRE which are considered at each phase of the project cycle and provide a framework for the layout of the standards. Each of these requirements are addressed in turn below to provide guidance for the evaluation of MRE.

6.1. Stakeholder involvement

Mine affected communities are the primary stakeholders in mine action. Other stakeholders are mine action organisations, governments and public institutions, aid agencies, and community groups. Stakeholder participation is necessary at each stage of the project cycle, to ensure that:

- a) the needs of mine-affected communities and groups are addressed;
- b) national and local economic and development priorities are taken into account; and

3. Sometimes evaluations are conducted at the start of the project and these are normally referred to as assessments or base line studies and are dealt with as part of data collection and needs assessment in IMAS 08.50.

4. Source: UNFPA United Nations Population Fund, Office of Oversight and Evaluation. *Glossary of Monitoring and Evaluation Terms*, available at: www.unfpa.org/oe/toolkit/glossary.pdf

5. *ibid.*

- c) mine action supports and enables humanitarian and development activities.

Evaluation should assess the degree to which the stakeholders were engaged at each stage of the MRE project cycle.

6.2. Coordination

MRE should be well coordinated, both between and within projects. Effective coordination will enable consistency of pedagogical content, optimise the use of resources, and minimise any duplication of effort. Evaluation should assess the degree to which the MRE project was coordinated.

The presentation and outreach of the findings and recommendations of the project evaluation should be well coordinated.

6.3. Integration

MRE activities should be fully integrated with the other mine action, humanitarian and development activities to achieve a synergistic effect. Evaluation should assess the degree to which the MRE project was integrated with other activities.

6.4. Community participation and empowerment

The affected communities should be actively involved in the evaluation:

- a) evaluation should assess the level of involvement of affected communities in the MRE project;
- b) members of affected communities should normally be consulted in the evaluation process; and
- c) communities that have been involved in the evaluation process should be given feedback on the results of the evaluation. It may also be appropriate to use communities to present the evaluation findings and recommendations to relevant audiences (e.g. regional authorities and governing bodies, community leadership/authorities and general members).

6.5. Information management and exchange

Evaluation should assess the quality of the information gathered, the way it has been analysed and its use and appropriateness for project planning and impact measurement in different phases of the project.

Evaluation should assess whether the exchange of information between affected communities and mine action organisations has been efficient and effective in the community mine action liaison process. For example, the time taken to transfer information from communities to demining organisations, the quality of that information and how that information has been utilised.

6.6. Appropriate targeting

Evaluation should assess whether appropriate targeting has been achieved and maintained by the MRE project, and it should assess the impact of the project on the target groups. In particular:

- a) evaluation should include the views and recommendations of the target groups;
- b) the different groups within any target community should be represented in the sample used for evaluation, regardless of the methodology used; and

- c) evaluation should assess the selection of target groups and the process of selection.

Equity amongst different groups should be examined as part of the evaluation, with any distinctions based on gender, ethnic, linguistic or political affiliations noted. Any bias practice (both in the project and/or in the evaluation itself) that may exist for deliberate reasons should be justified and explained.

6.7. Education

Where applicable, the evaluation should consider the quality of educational methodology and materials. This may include examining messages, training and curricula components. Particularly, there should be an evaluation of the accuracy, quality, appropriateness and consistency of safety messages.

6.8. Training

Evaluation staff who are likely to be exposed to mine and ERW hazards shall undergo landmine safety training.

The competency of MRE staff and the effectiveness of the staff training programme may be assessed as part of the evaluation. This will include an evaluation of the training objectives, defined at the planning stage.

7. Responsibilities

Where specific roles and responsibilities are not identified, the reader should refer to IMAS 07.11, Guide for the management of MRE.

7.1. United Nations

The UN and international organisations have a significant role to play in both facilitating and endorsing evaluations. By endorsing an evaluation, the UN places importance on the findings and recommendations of the evaluation.

The UN may assist in the evaluation of MRE projects and may disseminate the results.

7.2. National Mine Action Authority (NMAA)

The NMAA, or an organisation acting on its behalf should:

- a) encourage the evaluation of MRE projects and ensure that MRE organisations have made provision for project evaluation;
- b) evaluate the national MRE programme and its own activities as part of the national mine action plan;
- c) facilitate the exchange of information, issuing evaluation reports and lessons learned between other MRE organisations and other relevant stakeholders, such as the national government and donors, ensuring no breach of confidentiality occurs. It may compile results and disseminate as 'lessons learned'; and
- d) encourage that findings of evaluations are acted upon.

7.3. Mine Risk Education (MRE) organisation

The organisations undertaking MRE should:

- a) make an evaluation of their own progress in achieving project objectives and should evaluate the impact of their intervention. This implies a need to adequately plan for evaluation and make available the necessary resources required;
- b) ensure that relevant stakeholders are involved in the evaluation process. In particular it should ensure community participation and encourage the use of the evaluation as an educational process for building the capacity of community members and the staff of MRE organisations;
- c) ensure that evaluators (including external consultants) are properly briefed and supported and behave in a professional and impartial way, in accordance with IMAS and/or national standards for evaluation; and
- d) ensure that results of the evaluation are applied. Evaluation should be linked back to the needs assessment and project planning stages to ensure appropriate follow-up action is taken.

The organisations undertaking MRE shall ensure that results of the evaluation are disseminated: that reports should be transparent and made available (with the agreement of the stakeholders, where necessary) and that general lessons learned from the evaluation should be shared through the NMAA or other MRE coordination mechanisms.

7.4. Donors

Donor organisations should:

- a) ensure that projects have an evaluation component and the necessary resources to undertake them; and
- b) evaluate the projects they have funded and should take into account evaluation findings and recommendations for future funding of mine action programmes.

Annex A (Normative) References

The following normative documents contain provisions, which, through reference in this text, constitute provisions of this part of the standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of the standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid ISO or EN:

- a) IMAS 04.10 Glossary of mine action terms, definitions and abbreviations; and
- b) IMAS 07.11 Guide for the management of mine risk education.

The latest version/edition of these references should be used. GICHD hold copies of all references used in this standard. A register of the latest version/edition of the IMAS standards, guides and references is maintained by GICHD, and can be read on the IMAS website (www.mineactionstandards.org). National employers, mine action authorities, and other interested bodies and organisations should obtain copies before commencing mine action programmes.

Annex B (Informative) Terms, definitions and abbreviations

B.1. community liaison

community mine action liaison

liaison with mine/ERW affected communities to exchange information on the presence and impact of mines and ERW, create a reporting link with the mine action programme and develop risk reduction strategies. Community liaison aims to ensure community needs and priorities are central to the planning, implementation and monitoring of mine action operations.

Note: Community liaison is based on an exchange of information and involves communities in the decision making process, (before, during and after demining), in order to establish priorities for mine action. In this way mine action programmes aim to be inclusive, community focused and ensure the maximum involvement of all sections of the community. This involvement includes joint planning, implementation, monitoring and evaluation of projects.

Note: Community liaison also works with communities to develop specific interim safety strategies promoting individual and community behavioural change. This is designed to reduce the impact of mines/ERW on individuals and communities until such time as the hazard is removed.

B.2. demining

humanitarian demining

activities which lead to the removal of mine and ERW hazards, including technical survey, mapping, clearance, marking, post-clearance documentation, community mine action liaison and the handover of cleared land. Demining may be carried out by different types of organizations, such as NGOs, commercial companies, national mine action teams or military units. Demining may be emergency-based or developmental.

Note: in IMAS standards and guides, mine and ERW clearance is considered to be just one part of the demining process.

Note: in IMAS standards and guides, demining is considered to be one component of mine action.

Note: in IMAS standards and guides, the terms demining and humanitarian demining are interchangeable.

B.3. education

the imparting and acquiring over time of knowledge (awareness or possession of facts, ideas, truths or principles), attitude and practices through teaching and learning. [Oxford Concise English Dictionary]

B.4. evaluation

a process that attempts to determine as systematically and objectively as possible the merit or value of an intervention.

Note: The word 'objectively' indicates the need to achieve a balanced analysis, recognising bias and reconciling perspectives of different stakeholders (all those interested in, and affected by programmes, including beneficiaries as primary stakeholders) through use of different sources and methods.

Note: Evaluation is considered to be a strategic exercise.

Note: Definition when used in relation to programmes. (*UNICEF Policy and Programming Manual*)

the analysis of a result or a series of results to establish the quantitative and qualitative effectiveness and worth of software, a component, equipment or system, within the environment in which it will operate.

Note: Definition when used in context of equipment test and evaluation.

**B.5.
guide**

an IMAS guide provides general rules, principles, advice and information.

**B.6.
International Mine Action Standards (IMAS)**

documents developed by the UN on behalf of the international community, which aim to improve safety and efficiency in mine action by providing guidance, by establishing principles and, in some cases, by defining international requirements and specifications.

Note: They provide a frame of reference which encourages, and in some cases requires, the sponsors and managers of mine action programmes and projects to achieve and demonstrate agreed levels of effectiveness and safety.

Note: They provide a common language, and recommend the formats and rules for handling data which enable the free exchange of important information; this information exchange benefits other programmes and projects, and assists the mobilisation, prioritisation and management of resources.

**B.7.
mine**

munition designed to be placed under, on or near the ground or other surface area and to be exploded by the presence, proximity or contact of a person or a vehicle. [MBT]

**B.8.
mine action**

activities which aim to reduce the social, economic and environmental impact of mines and ERW.

Note: Mine action is not just about demining; it is also about people and societies, and how they are affected by landmine and ERW contamination. The objective of mine action is to reduce the risk from landmines and ERW to a level where people can live safely; in which economic, social and health development can occur free from the constraints imposed by landmine and ERW contamination, and in which the victims' needs can be addressed. Mine action comprises five complementary groups of activities:

- a) MRE;
- b) humanitarian demining, i.e. mine and ERW survey, mapping, marking and clearance;
- c) victim assistance, including rehabilitation and reintegration;
- d) stockpile destruction; and
- e) advocacy against the use of APM.

Note: A number of other enabling activities are required to support these five components of mine action, including: assessment and planning, the mobilisation and prioritisation of resources, information management, human skills development and management training, QM and the application of effective, appropriate and safe equipment.

**B.9.
mine awareness**

see Mine Risk Education (MRE).

B.10.

Mine Risk Education (MRE)

activities which seek to reduce the risk of injury from mines/ERW by raising awareness and promoting behavioural change; including public information dissemination, education and training, and community mine action liaison.

B.11.

monitoring

in the context of mine action, the term refers to the authorised observation, inspection or assessment by qualified personnel of worksites, facilities, equipment, activities, processes, procedures and documentation without taking responsibility for what is being monitored. Monitoring is usually carried out to check conformity with undertakings, procedures or standard practice and often includes recording and reporting elements.

in the context of MRE, the term refers to ... the process of measuring or tracking what is happening. This includes:

- a) measuring progress in relation to an implementation plan for an intervention – programmes/projects/activities, strategies, policies and specific objectives; and
- b) measuring change in a condition or set of conditions or lack thereof (e.g., changes in the situation of children and women or changes in the broader country context).

Note: Definition from UNICEF Policy and Programming Manual.

B.12.

MRE organisation

any organisation, including governmental, non-governmental, civil society organisations (e.g. women's union, youth union, red cross and red crescent societies), commercial entities and military personnel (including peace-keeping forces), which is responsible for implementing MRE projects or tasks. The MRE organisation may be a prime contractor, subcontractor, consultant or agent. The term 'MRE sub-unit' refers to an element of an organisation, however named, that is accredited to conduct one or more prescribed MRE activities such as a public information project, a schools based education project or a community mine action liaison project evaluation.

B.13.

National Mine Action Authority (NMAA)

the government department(s), organisation(s) or institution(s) in each mine-affected country charged with the regulation, management and coordination of mine action.

Note: In most cases the national MAC or its equivalent will act as, or on behalf of, the NMAA.

Note: In certain situations and at certain times it may be necessary and appropriate for the UN, or some other recognised international body, to assume some or all of the responsibilities, and fulfil some or all the functions, of a NMAA.

B.14.

public information dissemination

information concerning the mine and ERW situation, used to inform or update populations. Such information may focus on particular issues, such as complying with the mine ban legislation, or may be used to raise public support for the mine action programme. Such projects usually include risk reduction messages, but may also be used to reflect national mine action policy.

B.15.

Unexploded Ordnance (UXO)

EO that has been primed, fuzed, armed or otherwise prepared for use or used. It may have been fired, dropped, launched or projected yet remains unexploded either through malfunction or design or for any other reason.

B.16.

United Nations Mine Action Service (UNMAS)

the focal point within the UN system for all mine-related activities.

Note: UNMAS is the office within the UN Secretariat responsible to the international community for the development and maintenance of IMAS.

Note: UNICEF is the focal point for MRE, within the guidelines of UNMAS overall coordination.

B.17.

village demining

self-supporting mine and/or ERW clearance and hazardous area marking, normally undertaken by local inhabitants, on their own behalf or the behalf of their immediate community. Often described as a *self-help initiative or spontaneous demining*, village demining usually sits outside or in parallel with formal mine action structures, such as *demining* undertaken by militaries or *humanitarian demining* such as is supported by the UN, international and national non-governmental organisations, private enterprise and governments, among others.

Amendment record

Management of IMAS amendments

The IMAS series of standards are subject to formal review on a three-yearly basis, however this does not preclude amendments being made within these three-year periods for reasons of operational safety and efficiency or for editorial purposes.

As amendments are made to this IMAS they will be given a number, and the date and general details of the amendment shown in the table below. The amendment will also be shown on the cover page of the IMAS by the inclusion under the edition date of the phrase *'incorporating amendment number(s) 1 etc.'*

As the formal reviews of each IMAS are completed new editions may be issued. Amendments up to the date of the new edition will be incorporated into the new edition and the amendment record table cleared. Recording of amendments will then start again until a further review is carried out.

The most recently amended IMAS will be the versions that are posted on the IMAS website at www.mineactionstandards.org.

Number	Date	Amendment Details
1	1 Dec 2004	1. Formatting changes. 2. Minor text editing changes. 3. Changes to terms, definitions and abbreviations where necessary to ensure that this IMAS is consistent with IMAS 04.10.
2	23 Jul 2005	1. Annex B, change to the definition of 'Mine Risk Education (MRE)' to be consistent with IMAS 04.10.
3	1 Aug 2006	1. Minor changes/additions to the first and second paragraph of the foreword. 2. Inclusion of the term 'mines and ERW '. 3. Removal of the term 'threat' from throughout the IMAS.