Malaysian Sustainable Palm Oil Certification Standards

SANATH KUMARAN K AND MOHD HASBOLLAH SUPARYONO
Malaysian Palm Oil Certification Council, 15th Floor, Bangunan Getah Asli (Menara), 148 Jalan Ampang, 50450 Kuala Lumpur, Malaysia

Credible oil palm certification assessments encompass much more than just auditing the planting, maintenance, harvesting, and milling practices and operations by accredited third party auditors. In the context of the Malaysian palm oil industry, presently there are at least three certification schemes under which a management unit or entity can be certified to provide assurance of compliance to agreed sustainability standards. The three main schemes are: (i) the Malaysian Sustainable Palm Oil (MSPO) Certification Scheme, (ii) the Roundtable on Sustainable Palm Oil (RSPO) Scheme and (iii) the International Sustainability and Carbon Certification (ISCC) Scheme. The MSPO Certification Scheme was developed as the national scheme in Malaysia for oil palm plantations, independent and organised smallholdings, and palm oil processing facilities which can be certified against the requirements of the MSPO Standards. MPOCC is the scheme owner and governing body for the MSPO Certification Scheme. The MSPO Standards used under the scheme cover a range of Principles and Criteria that consider the environmental, social and economic aspects in oil palm plantation management, palm oil milling and supply chain traceability systems. However, the depth and level of details in the MSPO Principles, Criteria, Indicators and its requirements vary in consideration of plantings by independent smallholders and organised smallholders. To complete the value chain of the Malaysian palm oil sector, the MSPO Supply Chain Certification Standard (SCCS) was launched on 1 October 2018. This paper reviews the establishment of MPOCC, the institutional set-up of the MSPO Certification Scheme, and the development and key compliance requirements of the MSPO Standards. The paper also highlights some of the issues and challenges faced by the scheme.

Keywords: MSPO, MPOCC, certification scheme, oil palm, sustainability standards.

Oil palm certification has been used as a mechanism for the monitoring of oil palm management practices, tracing of raw material supply and labelling of palm oil products. In the recent decade oil palm certification is increasingly seen as an important initiative and a tool to promote good oil palm management and to address the negative perception propagated by western interests, particularly deforestation and loss of wildlife arising from development of oil palm plantations. Globally, there are only a few oil palm specific certification schemes, notably RSPO (Roundtable on Sustainable Palm Oil), a multi-stakeholder voluntary scheme and mandatory standards such as ISPO (Indonesian Sustainable Palm Oil) and MSPO (Malaysian Sustainable Palm Oil) that apply to oil palm. All these certification schemes promise that they will make distinctions of responsible oil palm management if the management system has comprehensive standards and rigorous control mechanisms with inclusive involvement of economic, environmental and social stakeholders.

INSTITUTIONAL SET-UP OF MPOCC

Incorporated as a company in December 2014,
The Malaysian Palm Oil Certification Council (MPOCC) is an independent non-profit organisation and the owner of the MSPO Certification Scheme. MPOCC has been tasked with the implementation and operation of the national scheme throughout the country. The objectives of MPOCC are to:

(i) establish and operate a sustainable palm oil certification scheme in Malaysia;
(ii) engage with non-governmental organisations, institutions of higher learning, trade associations, and accreditation and certification bodies in Malaysia; and
(iii) establish a mechanism for the certification of entities complying to the requirements of auditable sustainability standards.

The management of MPOCC is governed by a Board of Trustees, comprising representatives from the oil palm industry associations, government, academic and research development institutes, non-governmental organisations, smallholders' organisation and civil society. MPOCC is responsible for the development and implementation of the MSPO Certification Scheme and scheme documents, and for raising awareness through briefings and training sessions to system users, stakeholders, auditors of the certification bodies and assessors of the Department of Standards Malaysia, the national accreditation body. The MPOCC's main objective is to facilitate and to increase the uptake of MSPO certification in terms of certified area and production of certified palm oil.

**HISTORY OF MSPO STANDARDS AND KEY MILESTONES**

The MSPO Standards used currently under the MSPO Certification Scheme had been developed by two committees facilitated by the Malaysian Palm Oil Board (MPOB) as the Standards Writing Organisation (SWO) then, between 2011 and 2013. The Technical Working Committee for MSPO was responsible for drafting the oil palm certification standards which were submitted to the National Committee for MSPO for finalisation and approval. The finalised standards were further vetted by the Technical Committee on Fats and Oils Safety, before being put up for public comment. The final drafts of the MSPO Standards were submitted to SIRIM Berhad (the then Standards Development Agency – SDA) and were put up on the SIRIM (Standard and Industrial Research Institute of Malaysia) website in 2012 and again in 2013 for public comments. The public comments received were collated and incorporated into the final drafts of the MSPO Standards. The entire process was under the purview of the Department of Standards Malaysia which plays the role as the National Standards Body, providing confidence to various stakeholders, through credible standardisation and accreditation services for global competitiveness.

In 2013, the standards were finally submitted to the Department of Standards Malaysia to be adopted as the Malaysian Standards (MS). The MS Standards were approved by the Honourable Minister of Science, Technology and Innovation on 5 September 2013 and launched by the Honourable Deputy Prime Minister on 19 November 2013 during the MPOB International Palm Oil Congress and Exhibition (PIPOC) 2013. Following that, in 2014, several pilot audits were carried out and under this initiative, large companies, estates and smallholders which complied with the requirements of the MSPO Standards were awarded MSPO certification. During this period, MPOB also conducted training sessions...
for auditors and held awareness sessions with potential clients on the requirements of the MSPO Standards and auditing procedures in the implementation of the scheme. In January 2015, the then Honourable Minister of Plantations Industries and Commodities (MPIC) had officially announced the start of the MSPO Certification Scheme. Beginning January 2016, MPOCC assumed the role as the governing body and has overall responsibility for the development and operation of the MSPO Certification Scheme, governed by its Board of Trustees. The task of developing and reviewing certification standards and scheme documents is now the responsibility of MPOCC.

In the year 2017, MPOCC took steps to reconstitute the Technical Working Committee on MSPO Standards to ensure that all stakeholders across the entire value chain of the oil palm sector covering Peninsula, Sabah and Sarawak are represented. One of the first task then, was to develop the MSPO Supply Chain Certification Standard (SCCS) and after a series of Expert Working Group (EWG) sessions comprising members of the downstream players, the MSPO SCCS was finalised through the Technical Working Committee on MSPO [TWC (MSPO)] in 2018. The MSPO SCCS was then submitted to the National Steering Committee on MSPO Standards in July 2018 for endorsement and later adopted for use under the MSPO Certification Scheme in October 2018. The major milestones and certification achievements in MSPO development since 2013 are presented in Figure 1.

**BENCHMARKING ASSESSMENT**

During the years 2017 and 2018, attempts to raise the profile of MSPO scheme was carried out. Firstly, MPOCC was tasked to determine if certification audits for both MSPO and RSPO schemes could be combined to reduce the resource and financial burden to the industry. The outcome was a combined audit checklist for MSPO and RSPO P&C-MYNI which was developed and tested for plantations,

---

**Figure 1  Key milestones in Malaysian Sustainable Palm Oil development**

<table>
<thead>
<tr>
<th>Year</th>
<th>Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>MSPO Standards launched</td>
</tr>
<tr>
<td>2014</td>
<td>MSPO pilot audits implemented on voluntary basis</td>
</tr>
<tr>
<td>2015</td>
<td>MPOCC task force appointed</td>
</tr>
<tr>
<td>2016</td>
<td>MSPO implementation announced</td>
</tr>
<tr>
<td>2017</td>
<td>Mandatory MSPO implementation announced</td>
</tr>
<tr>
<td>2018</td>
<td>Mandatory MSPO certification program launched</td>
</tr>
<tr>
<td>2019</td>
<td>Mandatory MSPO certification program launched</td>
</tr>
</tbody>
</table>

Achievements:
- 2013: 16,619 ha certified
- 2014: 86,522 ha certified (24 mils certified)
- 2015: 371,320 ha certified (22 mils certified)
- 2016: 108,016 ha certified (8 mils certified)
- 2017: 1,875,154 ha certified (111 mils certified)
- 2018: 1,175,054 ha certified (2019 mils certified)
- 2019: 4th CPPOF, 1st PC Pulp & Paper, 1st ASOS certified (1st ASOS certified)
organised smallholders and palm oil mills, developed through a MSPO-RSPO Working Committee (Figure 1). The Working Committee consisted of representatives from MPOCC, RSPO Secretariat, MPOB (Malaysian Palm Oil Board), various industry players and certification bodies. The guidance document for the conduct of combined audits under the MSPO and RSPO certification schemes then served as a guidance for certification bodies, potential clients as well as other stakeholders. However, compliance to accreditation requirements of both the MSPO and RSPO schemes must be adhered to.

Secondly, a baseline assessment and gap analysis of the MSPO certification scheme against ISCC sustainability requirements was carried out during 2017 and completed in 2018 (Figure 1). The comparative analysis was developed based on system documents, EU RED (European Union Renewable Energy Directive) requirements and relevant literature consisting of four main categories, viz.:

(i) governance,
(ii) sustainability,
(iii) chain of custody, and
(iv) independent smallholder.

Each category included relevant criteria groups, criteria and indicators totaling 408 possible points, of which MSPO achieved 276 points and ISCC, 359 points. MSPO scheme performed well in the areas of stakeholder participation; criteria for audit quality; management plans (including business plans, Environmental and Social Impact Assessments); peer-review procedure; conduct of internal and external audits; well defined procedure to handle conflicts and for the setting up of a dispute resolution committee; criteria for water management; field of energy and waste management; requirements for health and safety; requirements on basic labour standards. Some of the areas where MSPO scheme reached partial or non compliance are stated here. They are compliance with the ISEAL Code of Practices for Setting Social and Environmental Standards; safe-keeping of documentation and on time restrictions for issuing certificates; risk management, assessment and control; requirements related to zero deforestation and no cut-off date set to retrace historical land use change; assessing and maintaining HCV areas; methodology for calculating GHG emissions from cultivation and processing of palm oil; lack of written commitments to prevent bribery and corruption as part of legal compliances; tools or procedures to avoid or prevent double accounting of sustainable certified material; conversion factors for measuring emissions from processing; and clear requirements for trainers and training concept for group managers of independent smallholders. The above mentioned assessments are available for download from MPOCC website.

INSTITUTIONAL ARRANGEMENTS OF MSPO CERTIFICATION SCHEME

The key organisations involved in the MSPO Certification Scheme are presented in Figure 2. MPOCC as the governing body and scheme owner of MSPO is responsible for the overall operations of the scheme. The National Accreditation Body (NAB) being Standards Malaysia, is responsible for all accreditation matters of certification bodies who operate MSPO certification. Once accredited, all certification bodies (CBs) will be notified by MPOCC through an agreement and listing on MPOCC’s website. This process will enable CBs to issue accredited certificates recognised
by the scheme owner. Applicants for both oil palm management and supply chain certification will submit their applications to CBs for the conduct of audits. The details of the accreditation of CBs and the MSPO certification process are available from Standards Malaysia and MPOCC website.

ACCREDITATION REQUIREMENTS

Similar to all other sustainability certification schemes, the MSPO Certification Scheme requires that all third-party independent CBs who wish to operate under the scheme, obtain accreditation. All CBs that are competent to carry out MSPO certification must first be accredited with the Department of Standards Malaysia (Standards Malaysia). The scope of accreditation is anchored on the MS 2530:2013 Standards, the ISO 17021 document and the MPOCC Certification Scheme requirements. The accreditation system of Standards Malaysia is in accordance with the international standard, MS ISO/IEC 17011 Conformity assessment - General requirements for accreditation bodies accrediting conformity assessment bodies. Conformance to this standard ensures that the accreditation services provided are impartial, non-discriminatory and credible. All CBs accredited by the Standards Malaysia receive international recognition through the accreditation granted by the International Accreditation Forum’s (IAF) Multilateral Recognition Arrangement (MLA), and the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) accreditation body signatories that are recognised worldwide.

MSPO STANDARDS DEVELOPMENT AND KEY REQUIREMENTS

The Malaysian Sustainable Palm Oil (MSPO) Standards (MS 2530:2013 series) were developed as a voluntary and industry driven national certification standard aimed at defining the principles and criteria for sustainable palm
oil production in Malaysia. The MSPO Standards target was designed for the entire industry to be certified within the shortest possible time and to strive for continuous improvement. The MS 2530:2013 series of MSPO Standards consists of four parts; i.e. Part 1: General principles; Part 2: General principles for independent smallholders; Part 3: General principles for oil palm plantation and organised smallholders; and Part 4: General principles for palm oil mills. The four parts of the MSPO Standards have different compliance requirements applied through the various Principles, Criteria and Indicators (Table 1). The depth and level of details of the requirements vary depending on the topics and specific provisions are given for independent and organised smallholders in Parts 2 and 3 of the MS 2530:2013 series.

The MSPO Certification Scheme provides for independent third-party auditing of oil palm cultivation and mill management practices to ensure the sustainable management of oil palm plantations, processing facilities and the supply chain to meet the demand for certified sustainable palm oil. Independent CBs must comply with the ISO 17021 – Requirements for bodies providing audit and certification of management systems document to obtain accreditation from the Department of Standards, Malaysia, the national accreditation body, in order for the CBs to operate oil palm management certification under the MSPO Certification Scheme. The MSPO Standards address requirements pertaining to the principles and criteria of sustainability based on the 3P’s of the sustainable development model (People, Planet, Prosperity), which takes into consideration stakeholder participation in a balanced, open, transparent and participatory manner. As the MSPO Standards have just recently been developed and implemented, it is envisaged that it will take some time to gain full and meaningful acceptance by the various stakeholders, and in doing so, gain traction in the market.

THE MSPO STANDARDS

The MSPO Standards for oil palm management certification contain seven principles which form the general requirements of a management system framework and are based on the three benchmarks of sustainability, i.e. economic viability, social acceptability, and environmental accountability. The general requirements for the MS2530:2013 series are as follows:

- **Principle 1. Management commitment and responsibility**
  The organisation management is committed to the implementation of MSPO, as well as to continual improvement in accordance to the

| TABLE 1 | THE MALAYSIAN SUSTAINABLE PALM OIL (MSPO) STANDARDS (MS2530:2013 SERIES) |
|---|---|---|
| Part 1: General principles | 7 | 33 | Nil |
| Part 2: General principles for independent smallholders | 7 | 22 | 32 |
| Part 3: General principles for oil palm plantations and organised smallholders | 7 | 33 | 114 |
| Part 4: General principles for palm oil mills | 6 | 25 | 80 |
MSPO requirements.

- **Principle 2. Transparency**
The organisation management shall ensure that adequate information is publicly available, as well as ensure open consultation and communication with stakeholders, and traceability along the supply chain.

- **Principle 3. Compliance to legal requirements**
The organisation management must abide by the local and ratified international laws and regulations, such as land use rights and customary rights.

- **Principle 4. Social responsibility, health, safety and employment conditions**
The organisation management shall comply with adequate employment conditions, occupational safety and health requirements, as well as provide relevant training for its employees. The well-being of local communities shall be assessed and further developed, with an avenue to address complaints and grievances.

- **Principle 5. Environment, natural resources, biodiversity and ecosystem services**
The requirements that relate to environmental management, energy use, waste and pollution management, water resources, and the protection of species or habitats are to be put in place by the organisation management.

- **Principle 6. Best practices**
The organisation management shall implement standard best practices throughout its operations.

- **Principle 7. Development of new plantings**
The organisation management shall implement appropriate agronomic practices for new plantings to ensure that areas are not developed on disputed customary land or on areas with high biodiversity value.

### SUPPLY CHAIN CERTIFICATION STANDARD

For the certification of the supply chain from the raw materials to processing and manufacturing of palm oil and palm oil-based products, the MSPO Supply Chain Certification Standard (SCCS) covers management requirements and traceability of the production.

For organisation to comply with MSPO SCCS, traceability can be achieved by mass balance and/or segregation method with the relevant corresponding traceability attributes and declarations. The MSPO SCCS is designed to deliver confidence and credibility to the customers and end users that the palm oil raw material originates from sustainably managed oil palm planted areas. The MSPO SCCS is applicable to organisations which process, manufacture, supply and/or export palm oil products using raw materials originating from MSPO certified oil palm planted area and/or take legal ownership and physically handle MSPO certified palm oil products throughout the supply chain. They include among others, oil palm mills, refineries, palm kernel crushing factories, palm oleochemical plants, biodiesel plants and end-product manufacturers.

The general requirements for the supply chain management system under the MSPO SCCS are as follows:

- **Requirement 1: Management System**
The organisation shall establish its sustainability policy; appoint a management representative; shall establish and maintain accurate and up-
to-date records for a minimum of 3 years; shall establish documented procedures for its supply chain to demonstrate compliance with MSPO SCCS; and shall conduct internal audits and management review of the organisation at planned intervals.

**Requirement 2: Resource Management**
The organisation shall ensure that all personnel are competent with relevant training, skill and experience; establish an effective training plan and maintain records of the trainings provided to personnel in relation to the implementation of the MSPO SCCS.

**Requirement 3: Traceability**
The organisation shall ensure that the documents associated with transactions between the customer and supplier of the certified palm oil products and shall have documented procedure for handling non-conforming palm oil products and/or documents.

**Requirement 4: Supply Chain Models**
The organisation shall choose from the two supply chain models, viz. Segregation (SG) Model and the Mass Balance (MB) Model for its operations to be certified. The SG Model requires that the MSPO certified palm oil products shall be kept separate from the non-MSPO certified palm oil products at every stage of production, processing, refining and manufacturing throughout the supply chain. This model allows mixing of any MSPO SG certified palm oil products from various certified sources. Clear procedures and record keeping are kept at the site to ensure that the certified oil palm products are kept segregated from non-certified palm oil products including transportation and storage to strive for 100 per cent separation. The MB Model monitors the trade of MSPO certified palm oil products throughout the entire supply chain. The MB model can only be operated at site level (i.e. mass balance claims cannot be transferred from site to site administratively). The MB Model allows for mixing of MSPO and non-MSPO certified palm oil products at any stage in the supply chain provided that overall site quantities are controlled. There are no requirements for separate storage, transportation or controls in the production process for the MB Model. For oleochemicals and derivatives, kindly refer to the reference document: *Guidance for Oleochemicals and its Derivatives Under the MSPO SCCS.*

**Requirement 5: Outsourced Activities**
The organisation which outsources its activities to independent third party shall ensure that it has legal ownership of all input materials during the outsourced activities; an agreement covering the outsourced activities with each contractor and has documented control system procedures for the outsourced activities which are shared with the relevant outsourced contractor.

**Requirement 6: Claim**
The organisation shall only make claims on the products that contain MSPO certified material from oil palm planted areas which have been certified for the oil palm management certification standard as being sustainably managed. The details are in the reference document: *Issuance of MSPO Logo Usage License by*
MPOCC under the Malaysian Sustainable Palm Oil (MSPO) Certification Scheme document.

- **Requirement 7: Complaints and Grievances**
  The organisation shall implement and maintain documented procedures for dealing with any substantive and procedural complaints and grievances relating to its stakeholders.

- **Requirement 8: IT Platform**
  The organisation with supply chain certification must register its production and sale of MSPO products in the available system when the IT Platform is operational under MPOCC.

**ACHIEVEMENTS**

With the launching of the MSPO Standards in 2013, pilot audits were carried out in the following 2 years (2014-2015) on seven plantations, five mills and two smallholder clusters. The encouraging results proved that the MSPO Standards are auditable and achievable by the various entities. By end of March 2019, a total of 1,578,553.49 ha of oil palm plantations have been MSPO certified, together with 160 palm oil mills. In addition, 111 smallholder groups under the Sustainable Palm Oil Cluster (SPOC) with a total area of 28,159.34 ha have also been certified. This brings the total area of MSPO certified area to 1,606,712.83 ha in Malaysia, as of March 2019 (Table 2).

**ISSUES AND CHALLENGES**

As a new sustainability certification scheme in the market, the recognition and acceptance of the MSPO Certification Scheme, particularly in environmentally sensitive markets for Malaysian palm oil products such as the European Union, United States of America and Australia is still low. Efforts are much needed to build the confidence of consumer markets

---

**TABLE 2**

MSPO CERTIFIED STATISTICS (AS OF MARCH 2019)

<table>
<thead>
<tr>
<th>Category</th>
<th>Total area (ha)*</th>
<th>Unit certified</th>
<th>Area certified (ha)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent smallholdings certified MSPO Part 2</td>
<td>979,892</td>
<td>111 clusters</td>
<td>28,159.34</td>
<td>2.9</td>
</tr>
<tr>
<td>Organised smallholdings certified MSPO Part 3</td>
<td>1,300,913</td>
<td>118 clusters/ estates</td>
<td>256,174.25</td>
<td>19.7</td>
</tr>
<tr>
<td>Plantation certified MSPO Part 3</td>
<td>3,568,525</td>
<td>595 estates</td>
<td>1,322,379.24</td>
<td>37.1</td>
</tr>
<tr>
<td>Total</td>
<td>5,849,330</td>
<td></td>
<td>1,606,712.83</td>
<td>27.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total oil palm mills*</th>
<th>Unit certified</th>
<th>Mills capacity (MT/hr)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palm oil mills certified MSPO Part 4</td>
<td>451</td>
<td>160</td>
<td>8,604</td>
</tr>
</tbody>
</table>

*Source: MPOB (December 2018)
on MSPO certification besides publicising the MSPO Certification Scheme to raise awareness of its existence and credibility to a broad spectrum of stakeholders, both local and international. It is also acknowledged that the MSPO Standards were initially developed with limited stakeholder participation. Steps are now being taken to address this by engaging with several social and environmental non-governmental organisations (NGOs) to further strengthen the MSPO Certification Scheme. The review of the MSPO Standards which is currently being undertaken, is mandated to have a balanced multi-stakeholder representation by including the economic, environmental and social interest groups in the technical working committee and specific working groups and initiatives. Thus far, the uptake of MSPO certification has been incremental. With the announcement by the Government in May 2017 that the MSPO Certification Scheme will be made mandatory by December 2019, it is envisaged that there would be a significant increase in the uptake of MSPO certification. The large-sized plantations having enough resources and technical know-how, have come forward to become MSPO certified while the medium-sized plantations and smallholdings are slowly adopting MSPO. The MSPO incentives have been made available by the government to spur the uptake of certification among the growers, mills and refineries. This incentive available from 2018 till June 2019 has become an impetus for all entities to embrace MSPO certification.

**CONCLUSION**

Malaysia is committed to the production of sustainable palm oil (*Box 1*) and has put in place a credible MSPO Certification Scheme that provides assurance to buyers and consumers of this commitment.

The MSPO Standards have an ultimate aim of being regarded as credible sustainability standards for the palm oil industry in Malaysia to bring about positive social, environmental and economic impacts, while minimising the negative impacts, particularly on people and the environment. There is ample evidence to show that certification improves visibility and inventory management of all suppliers and provides a competitive advantage to access international markets. Certification also provides proof of a robust management system which enhances stakeholder confidence, while improving compliance to meet all legal, regulatory and sustainability requirements. The oil palm industry is indeed very dynamic, and certification is seen as an effective tool to demonstrate compliance to good practices and to the requirements of applicable certification standards. As part of continual improvement, the MSPO Standards will be subject to periodic reviews to ensure that the requirements and thresholds contained in the standards not only meet but exceed stakeholder expectations.

---

**Box 1. Malaysia and MSPO**

“Malaysia is committed to sustainable development. We have taken steps, for example in improving production methods to ensure that our palm oil production is sustainable. By December 2019, the Malaysian Sustainable Palm Oil (MSPO) standard will become mandatory. This will ensure that every drop of palm oil produced in Malaysia will be certified sustainable by 2020.”

*Excerpt from Prime Minister Tun Dr Mahathir Mohamad's speech at the general debate of the 73rd session of the United Nations General Assembly in New York, 28 September 2018.*

---

248
through a broad and participatory stakeholder engagement process.

*MPOCC tagline – certifying Malaysian palm oil for the world!

ACKNOWLEDGEMENT

The authors would like to thank MPOCC Chairman and CEO for their guidance in the preparation of this paper.

INFORMATION SOURCES

MSPO: http://www.mpocc.org.my
MSPO Certification documents: https://www.mpocc.org.my/scheme-documents
MSPO Supply Chain Certification Standard: https://www.mpocc.org.my/mspo-supply-chain-standard
Malaysian Standards Online: https://www.msonline.gov.my/default.php