



Legislating for metrology

General considerations when developing a law on metrology

Developing legislation for metrology (the law on metrology) is a key goal of the “needs assessment”, the determination of existing metrology resources and legal infrastructure, and the strategic planning discussed previously. The law on metrology, once passed and implemented, will codify the institutions and legal regulations, allowing the NMS to function and respond to the needs of the population, industry and scientific institutions of the country. The law on metrology should consider any other national laws of relevance, such the law on consumer protection, the law on accreditation, and the law on standardization.

Use of the BIPM-OIML joint publication:

“National Metrology Systems - Developing the institutional and legislative framework (OIML D 1:2020)” for guidance on specifics of the law on metrology

The *joint publication* should be utilized as a key reference to guide officials setting forth a law on metrology; it includes many more specific details than are summarized here. The document sets out the logically developed structure and the minimum elements which will usually be required in the form of a possible model law. At the outset, it is important to assess whether there is existing legislation within the country which contains some of the elements of the model law, or whether the full model law needs to be developed if a country is introducing a law on metrology for the first time. Annex B of the *joint publication* gives a model law for those countries with no existing national metrology system; this model law is structured in 28 articles which may be used directly within the law or reflected upon for developing similar but not verbatim text. Within each article, references are given to sections of the *joint publication* for possible draft text and background details on that article.

Annex A of the *joint publication* provides a “checklist” of important elements which should be considered when developing a legal framework for metrology. For countries which currently have some legal metrology laws, this checklist can be used to choose those elements that are lacking or are especially relevant based on the needs assessment determined earlier. The 36 elements of Annex A of the *joint publication* are all incorporated in the model law of Annex B. Many of these elements have been covered broadly in the inserts of this brochure.

As an example of how the elements of the checklist and the model law could work together, Element 11 of the *joint publication* discusses the concept of metrological traceability of measurement results, and states “Certified calibration results, test results and measurement results established by the national institutes in the scope of their designation should be metrologically traceable to the realization of the International System of Units (SI) and presented in compliance with the recommendations of the CGPM and OIML, and with relevant international standards”. This concept is incorporated into the model law in Articles 12, 15 and 23, which relate to the importance of metrological traceability in terms of free trade (Art. 12), industrial metrology including calibration services (Art. 15), and international agreements (Art. 23).

Organization of metrological infrastructure

It is recommended that a law on metrology be developed in such a manner that it is considered “enabling legislation”, that is, it will address general and broader parameters that are not subject to frequent changes such as administration, offences, rule-setting powers and definitions. In other words, the law on metrology should be robust and should not require frequent amendments. Specific requirements for organizations, procedures and measuring instruments should be laid down in decrees, circulars or bylaws. Binding regulations should be issued by the responsible ministry or the metrology authority. These regulations should comply with the applicable OIML Recommendations, Resolutions of the General Conference on Weights and Measures - (CGPM) and ISO/IEC standards. Finally, voluntary standards should be incorporated on an international, regional or national basis as appropriate.

Legal units of measurement, legal metrology regulations, conformity assessment, surveillance and enforcement

The legal framework is required to specify which units of measurement are authorized to be used or made mandatory, and for which applications. It is necessary to specify when the use of units other than legal units is permitted. Regulations on measurements, on prepackages and on measuring instruments ought (when practical) to be compatible with OIML Recommendations and make use of OIML requirements. Conformity assessment procedures required by these regulations should, when practical, be compatible with the conformity assessment system set up by the OIML. A general surveillance framework must be exerted by the enforcement authorities to detect non-compliance with obligations and requirements.

It is necessary that the offences that arise from non-compliance with the obligations of the law on metrology are clearly listed, along with the corresponding penalties or enforcement mechanisms. Penalties should be proportional to the severity of the offences and be consistent across the various areas of regulation. This is particularly important when various levels of jurisdiction, or regions within the country, are responsible for the surveillance, testing or enforcement requirements.

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For further information:

This insert has been developed from the BIPM and OIML joint publication:
National Metrology Systems - Developing the institutional and legislative framework.

For more complete information, please refer to this document and its references.
The document is available through the BIPM and OIML websites.

www.oiml.org

