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**THE METROLOGY INFRASTRUCTURE  
IN THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA**

This document was prepared by the Bureau of Metrology (BoM) of the former Yugoslav Republic of Macedonia. It contains national information on legal and institutional infrastructure for metrology.

It is presented for information to delegates.

## I. EXECUTIVE SUMMARY

1. In the former Yugoslav Republic of Macedonia, metrology is currently in transition from legal to industrial and scientific metrology. Although the Law on Metrology was adopted in 2002 and is adequately harmonized with EU practices and requirements, the required sub-laws, necessary for its implementation have not yet been adopted.

2. The institution responsible for metrology is the Bureau of Metrology (hereinafter referred to as the Bureau), operating as professionally independent body (office) within the Ministry of Economy. In October 2004 the Bureau started its operational activities in its new administrative and laboratory premises.

3. Its current activities are: dealing with several major projects to improve its overall capacities and to provide the State with adequate metrological support for current and future needs. It set up a laboratory and is actively cooperating with relevant EU and bilateral projects to assure adequate metrological equipment (i.e. EU-funded SMAQVa project). It requested the Government to provide additional and urgent employment for highly educated and technical staff working on national standards.

4. The policy for establishing the metrological infrastructure and the development programme for this area were jointly prepared by the Bureau and the Metrological Council and have been submitted for governmental endorsement. The Council was founded 2004 as an advisory body to the Bureau and as a technical commission entrusted with drafting technical regulations on metrological issues.

5. Within the governmental metrology system, legal metrology is the most advanced. Nevertheless, several areas still need to be improved:

- Much horizontal and instrumental specific subsidiary legislation needs to be enacted if the Law on Metrology is to be properly implemented, and to ensure harmonization with EU metrological directives
- Relations with partner organizations need to be properly formalized (contract, etc.)
- Legal metrology needs to be deregulated (i.e. areas now covered by legal verifications but in other countries normally not subject to legal control need to be converted to a voluntary system of industrial metrology) and industrial metrology promoted by setting up a system of accredited calibration laboratories
- Additional education of personnel, especially of technologically skilled persons, is needed in most areas
- Technical staff with recognized diplomas need urgently to be hired to take over the preparation of numerous legal metrology regulations, the performance of type-approval procedures, the design of verification procedures, the evaluation of performance of designated laboratories, in accordance with the latest technological solutions in measuring instruments and quality system implementation.

6. These are the key tasks for successful implementation of the Law on Metrology and several EU legal metrology directives, including that of quantitative requirements for pre-packaged products.

### Scientific metrology

7. Scientific metrology (national measurement standards) remains underdeveloped. Whereas the legal basis in the Law on Metrology is adequate, subordinate legislation on the conditions required for the development and maintenance of these measurement standards is missing. The Bureau has already taken preliminary steps to set up a system of measurement standards as far as premises and laboratory equipment are concerned. Nevertheless, securing competent, technically skilled personnel with at least a recognized diploma is at present the most urgent need (12 additional technicians). Since the infrastructure for national measurement standards is practically non-existent, a Quality system has not yet been established.

8. The time gap between having no metrological support and having measurement traceability at the highest level (national measurement standards) should be as short as possible. In the intervening period, alternative solutions need to be found. Relations should be strengthened with universities, research institutes and with the Ministry responsible for Science - in terms of developing facilities for the national standards system or discussing an educational programme in metrology.

### Industrial metrology

9. Industrial metrology also remains undeveloped. Legal metrology needs to be deregulated, and an adequate number of accredited calibration laboratories ensured. Economic operators and other users of metrological services need to be made aware of the importance of metrology, so that, for example, they understand the importance of regularly calibrating their measuring equipment. As pointed out above in connection with scientific metrology, the time gap between having no metrological support and having measurement traceability at the industrial-metrology level should be as short as possible, and interim alternative solutions need to be found.

10. The metrological activities and the importance of a properly operating national metrology system should be widely promoted, especially among ministries, industry and conformity assessment and certification bodies, other measurement laboratories and also, in particular, among the different inspectorates. It will be the priority of the Bureau to fulfil the membership requirements for joining EUROMET1 (European Collaboration in Measurement Standards).

### **Bureau of Metrology: Regular activities**

#### 11. General tasks

- Supervising usage of legal measurement units
- Ensuring traceability, production, conservation and maintenance of national measurement standards and certified reference materials
- Ensuring traceability of the reference measurement standards
- Calibration of measurement standards and instruments.

#### 12. Specific tasks

- Initial, subsequent and extraordinary verification of the measuring instruments upon the request of clients (continuous task)

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1 EUROMET is a cooperative organization between the national metrology institutes in the EU including the European Commission, EFTA and EU Accession States.

- Conformity assessment of the type (pattern) of measuring instruments upon the request of clients (continuous task)
- Issuing certificates confirming that the metrological contract conditions set by importers/clients have been met (as established by the old Law on Units of Measurement and Measuring Instruments to be respected by imported measuring instruments until adoption by the Ministry of Economy of a new regulation on the Validity of marks and certificates of conformity assessment for the types of measuring instruments); confirming the marks and seals, as well as the certificates of verification of measuring instruments of foreign origin according to the Law on Metrology (continuous task)
- Signing contracts for verification with those clients who express an interest and fulfil requirements as set out in a technical regulation according to the relevant government decisions (Starting immediately and ending in 2005)
- Participation in the procedure for the accreditation of legal entities in metrological fields upon clients' request (continuous task)
- Control/inspection of purity of goods made of precious metals (continuous task)
- Implementation of technical regulations on homologation (or "type approval") of vehicles within the framework of the UNECE Agreement concerning the Adoption of Uniform Technical Prescriptions for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions ("1958 Agreement") (continuous task)
- International cooperation with and participation in work of international organizations for metrology and homologation (continuous task).

### **Review of legislative changes in the area of metrology**

13. The Law on Metrology, which is harmonized with EU practices, was adopted in July 2003. It provides for the preparation of specific regulations, such as the following:

- Pending adoption: Regulation on the registration of trademarks and certificates of conformity assessment (*of the type of measuring instrument and marks and seals as well as certificates of verification of measuring instruments of foreign origin*); and Regulation on the procedure for initial, regular and extraordinary verification of measuring instruments.
- Ready for adoption: Regulation on ways and procedures for conformity assessment of the type approval of measuring instruments (recommended method(s) or an appropriate combination of methods for assessment of conformity of type of measuring instruments, and the content and form of certificates for conformity of the type approval of measuring instruments).

### **Review of "New Approach" Directives implemented**

14. The Ministry of Economy established subcommittees for the approximation of "New Approach" Directives within the framework of the free movement of goods. It established a working group for the approximation of the Measurement Instrument Directive and Directives on pre-packaged products. It is currently reviewing the working draft for the transposition of these directives.

### **List of designated bodies**

15. The designated bodies under the old law on measures and measuring instruments have been abolished. The Bureau of Metrology currently offers contracts to laboratories and interested legal entities from within the metrological infrastructure as “partnership relations” pending harmonization of “designated bodies” criteria with the requirements of the new Quality infrastructure framework.

16. At present, the previously designated laboratories in various areas are distributed as follows: Cronotachographs-24; Temperature-3; Electrical quantities-5; Pressure-3; Length & angle-2; Force-2; Hardness-2; Measuring instruments in centres for technical examination of vehicles-3.

### **Market surveillance**

17. Market surveillance for the implementation of the Law and of regulations adopted as per this and other Laws relating to the use of legal measurement units and placement on the market of measuring instruments is regulated by Article 39 of the Law on Metrology

### **Cooperation with national agencies**

18. The Bureau shall supervise the implementation of the provisions of this Law and regulations adopted as per this and other Laws related to:

- Use of legal measurement units
- Fulfilment of conditions for production, conservation and maintenance of national measurement standards
- Placement on the market and use of measuring instruments
- Work of legal entities designated in accordance with this Law; concrete legal actions related to the implementation of the Law fall under the responsibility of a market surveillance body.

### **International cooperation**

19. In order to join the Metre Convention, the Bureau of Metrology is preparing an application to the Bureau International des Poids et Mesures (BIPM) (International Bureau of Weights and Measures, based in Paris) through diplomatic channels for associative membership in the General Conference on Weights and Measures.

20. The draft programme for the development of the Bureau, together with a Development Policy for National Metrology Infrastructure by the Metrology Council are being prepared for further submission to the Government for approval

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