

## NATIONAL ASSEMBLY SECRETARIAT

### REPORT OF THE STANDING COMMITTEE ON SCIENCE AND TECHNOLOGY ON THE NATIONAL METROLOGY INSTITUTE OF PAKISTAN BILL, 2021.

I, Chairman of the Standing Committee on Science and Technology, have the honour to present his report on the Bill to provide for the establishment of National Metrology Institute of Pakistan [The National Metrology Institute of Pakistan Bill, 2021] (Government's Bill) referred to the Committee on 1<sup>st</sup> February, 2021.

2. The Committee comprises the following: -

1. Mr. Sajid Mehdi	Chairman
2. Engr. Usman Khan Tarakai	Member
3. Mr. Noor Alam Khan	Member
4. Mr. Jawad Hussain	Member
5. Ch. Farrukh Altaf	Member
6. Ch. Shoukat Ali Bhatti	Member
7. Mr. Farrukh Habib	Member
8. Mr. Rahat Aman Ullah Bhatti	Member
9. Mr. Abdul Shakoor Shad	Member
10. Ms. Sobia Kamal Khan	Member
11. Mr. Hussain Elahi	Member
12. Dr. Mukhtar Ahmad Malik	Member
13. Mr. Saad Waseem	Member
14. Ch. Muhammad Ashraf	Member
15. Ms. Zaib Jaffar	Member
16. Dr. Samina Matloob	Member
17. Mr. Khursheed Ahmed Junejo	Member
18. Mr. Sikandar Ali Rahoupoto	Member
19. Mr. Naveed Aamir Jeeva	Member
20. Mr. Aftab Hussain Siddique	Member
21. Syed Shibli Faraz	Ex-Officio Member
Minister for Science and Technology	

3. The Committee considered the Bill as introduced in the National Assembly placed at **Annex-A**, in its meetings held on 12-03-2021, 26-08-2021 and 13-10-2021 and recommended that the Bill as introduced may be passed by the National Assembly.

Sd/-  
(Tahir Hussain)  
Secretary

Islamabad, the 21<sup>st</sup> October, 2021

Sd/-  
(Sajid Mehdi)  
Chairman

**AS REPORTED BY THE STANDING COMMITTEE**

**A  
BILL**

*to provide for the establishment of National Metrology Institute of Pakistan*

WHEREAS it is expedient to establish National Metrology Institute of Pakistan as an apex body, for the establishment of infrastructure of metrology to implement and operate a unified and coherent national measurement system as per international requirements and practices for quality assurance and management system and to support the legal metrology in Pakistan and matters ancillary thereto or connected therewith;

It is hereby enacted as follows:-

**1. Short title, extent and commencement.** — (1) This Act shall be called the National Metrology Institute of Pakistan Act, 2020.

(2) It extends to the whole of Pakistan.

(3) It shall come into force at once.

**2. Definitions.** — In this Act, unless there is anything repugnant in the subject or context,—

(i) "APMP" means the Asia Pacific Metrology Program;

(ii) "BIPM" means the Bureau Internationale Des Poids Et-Mesures i.e International Bureau of Weights and Measures;

(iii) "Board" means the Board of Governors of the Institute constituted under this Act;

(iv) "calibration" means "operation that, under specified conditions in a first step, establishes a relation between the quantity values with measurement uncertainties provided by measurement standards and corresponding indications with associated measurement uncertainties (of the calibrated instrument or secondary standard) and in a second step, uses this information to establish a relation for obtaining a measurement result from an indication."

(v) "Chairman" means the Chairman of the Board;

(vi) "chemical standards" means certified reference materials and standard solutions;

(vii) "Director-General" means the Director-General of the Institute;

(viii) "Executive Committee" means the Executive Committee of the Board, constituted under this Act;

- (ix) "Government" means the Federal Government;
- (x) "General Conference of Weights and Measures" means the Conference General des Poids et Measures (CGPM) established under the convention de Metre;
- (xi) "Institute" means the National Metrology Institute of Pakistan;
- (xii) "inter-laboratory comparison" means organization, performance and evaluation of measurements and tests on the same or similar items or measuring by two or more laboratories in accordance with predetermined conditions;
- (xiii) "IPO-Pakistan" means the Intellectual Property Organization of Pakistan;
- (xiv) "IP assets" means the intellectual property assets of the Institute, registered by IPO-Pakistan;
- (xv) "ISO" means International Organization for Standardization;
- (xvi) "ISO/IEC 17025" means international standard for general requirements for the competence of testing and calibration laboratories;
- (xvii) "member" means member of the Board;
- (xviii) "metrology" means the field of knowledge concerned with measurements and includes units of measurements and their field of application and all theoretical and practical problems relating to measurements or the science of measurement;
- (xix) "metrological traceability" means property of a measurement results, whereby the results can be related to a reference through a documented unbroken chain of calibrations, each contributing to the measurement uncertainty;
- (xx) "OIML" mean the Organization Internationale De-Metrology Legele i.e International Organization of Legal Metrology;
- (xxi) "PCSIR" means the Pakistan Council of Scientific and Industrial Research;
- (xxii) "physical standards" means measurements that serve as a basis for planning, scheduling and control of production;
- (xxiii) "PNAC" means Pakistan National Accreditation Council;
- (xxiv) "prescribed" means prescribed by rules or regulations;
- (xxv) "primary standards" means a standard that is sufficiently accurate, such that it is not calibrated by or subordinate to other standards. Primary standards are defined via other quantities like length, mass and time.

Primary standards are used to calibrate other standards referred to as working standards;

- (xxvi) "proficiency testing (PT)" means evaluation of participant's performance against pre-established criteria by means of inter-laboratory comparisons;
- (xxvii) "PSQCA" means the Pakistan Standards and Quality Control Authority, established under the Pakistan Standards and Quality Control Authority Act, 1996 (VI of 1996);
- (xxviii) "quality" means conformity to a given requirement or specification of a product or service or result;
- (xxix) "quality assurance" means a system of activities whose purpose is to provide an assurance that the overall quality control is in fact being done effectively;
- (xxx) "quality control" means a process by which bodies review the quality of all factors involved in production or service;
- (xxxi) "reference standard" means standards used to check the quality and metrological traceability of products, to validate analytical measurement methods, or for the calibration of instruments;
- (xxxii) "regulations" means regulations made under this Act;
- (xxxiii) "RMO" means Regional Metrology Organization of the Institute;
- (xxxiv) "rules" means rules made under this Act;
- (xxxv) "secondary standards" means standards which are prepared in the laboratory for a specific analysis and are standardized against a primary standard;
- (xxxvi) "services" means type of economic activity that is intangible, not stored and does not result in ownership;
- (xxxvii) "SI" means International Systems of Units as adopted by the 11th General Conference of Weights and Measurements (CGPM) through its resolution 12, in 1960;
- (xxxviii) "standards" means a level of quality or achievement, especially one that relevant expert consider normal or acceptable or a technical specification or other document available to the public, drawn up with the cooperation and consensus or general approval of all interests effected by it, based on the consolidated results of science, technology and experience