



# OIML PILOT TRAINING CENTER

Seminar on Legal Metrology Management System

9<sup>th</sup> - 11<sup>th</sup> August 2016, Guangzhou, P.R. China



## COUNTRY REPORT

Papua New Guinea

National Institute of Standards & Industrial Technology

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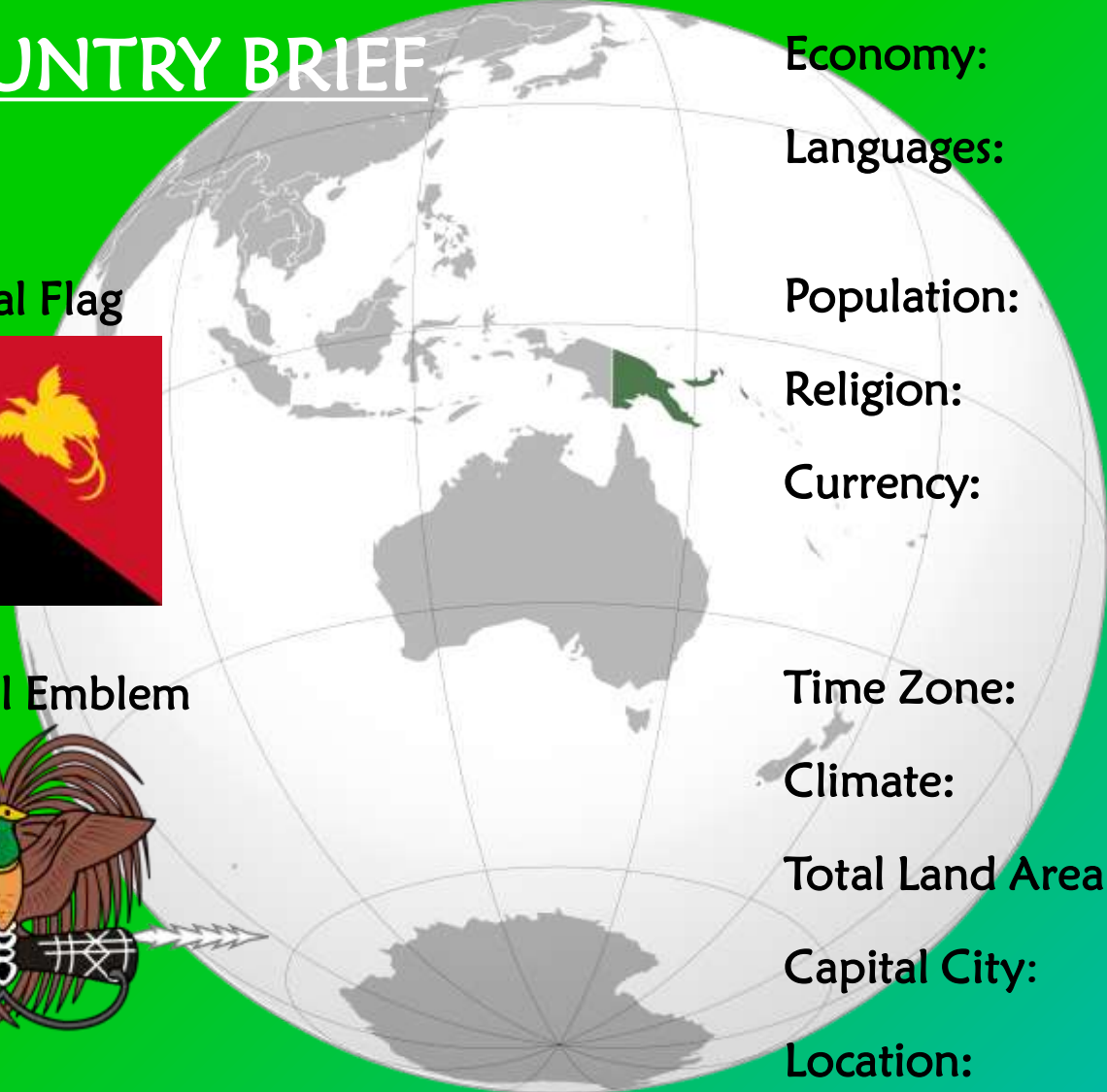


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# 1. COUNTRY BRIEF



**Economy:** Papua New Guinea

**Languages:** English, Tok Pisin, Hiri Motu  
 More than 800 different languages

**Population:** 7.8 million (approx. as at July 2016)

**Religion:** Christianity Predominance

**Currency:** Kina & Toea (1 Kina = 100 Toea i.e. K1.00 = 100t  
 Notes: K100, K50, K20, K10, K5, K2,  
 Coins: K1, 50t, 20t, 10t, 5t, 2t, 1t)

**Time Zone:** AEST (UTC + 10)

**Climate:** Wet & Dry (Temp: 23 – 28 °C, RH: 70 – 90 %)

**Total Land Area:** 463 000 square meters

**Capital City:** Port Moresby

**Location:** 9° 30' 0" S, 147° 7' 0" E

National Flag



National Emblem





## 2. PNG NISIT TIMELINE

1970s

- 1978 National Standards Council established under National Standards Act 1978
- 1979 National Standards Council became operations

1990s

- 1993 NISIT enacted by the National Parliament
- 1994 Began operation with less than 15 staff

2000

- Major Restructure with staff ceiling of more than 30

2010

- 2015 Submitted for Restructure
- 2016 Restructure Approved with staff ceiling at 120

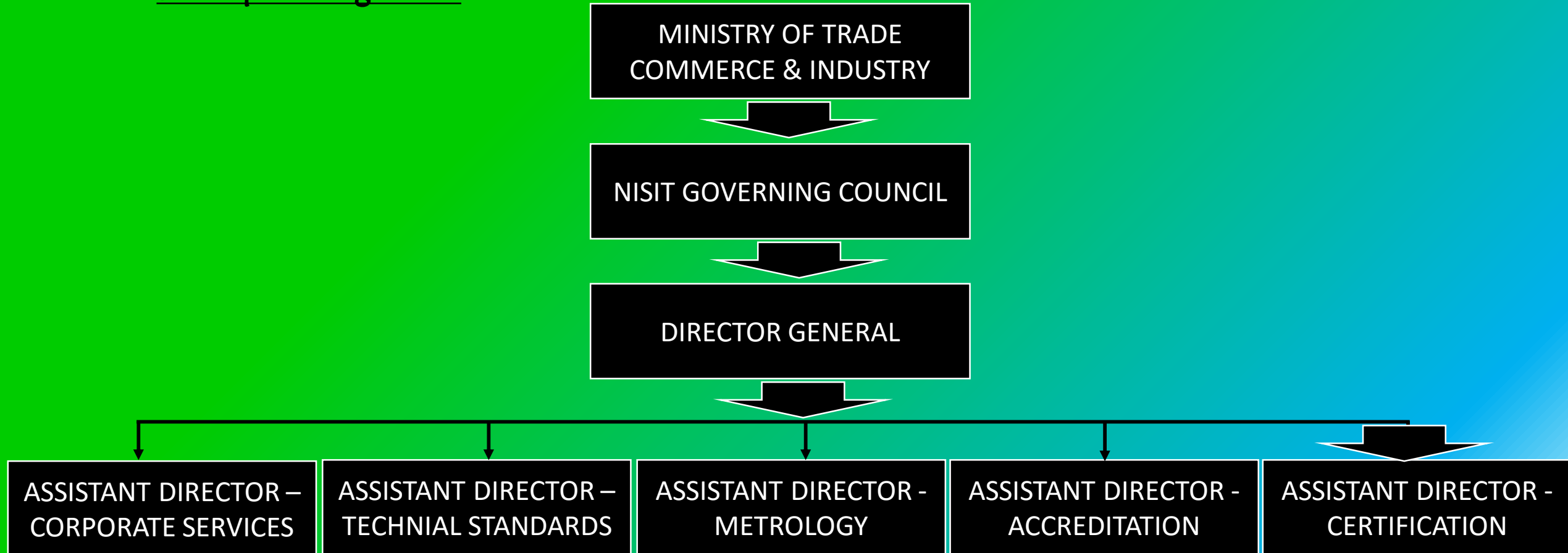
2020

- 2020 To submit for the next restructure.



## 3. NISIT ORGANIZATIONAL STRUCTURE

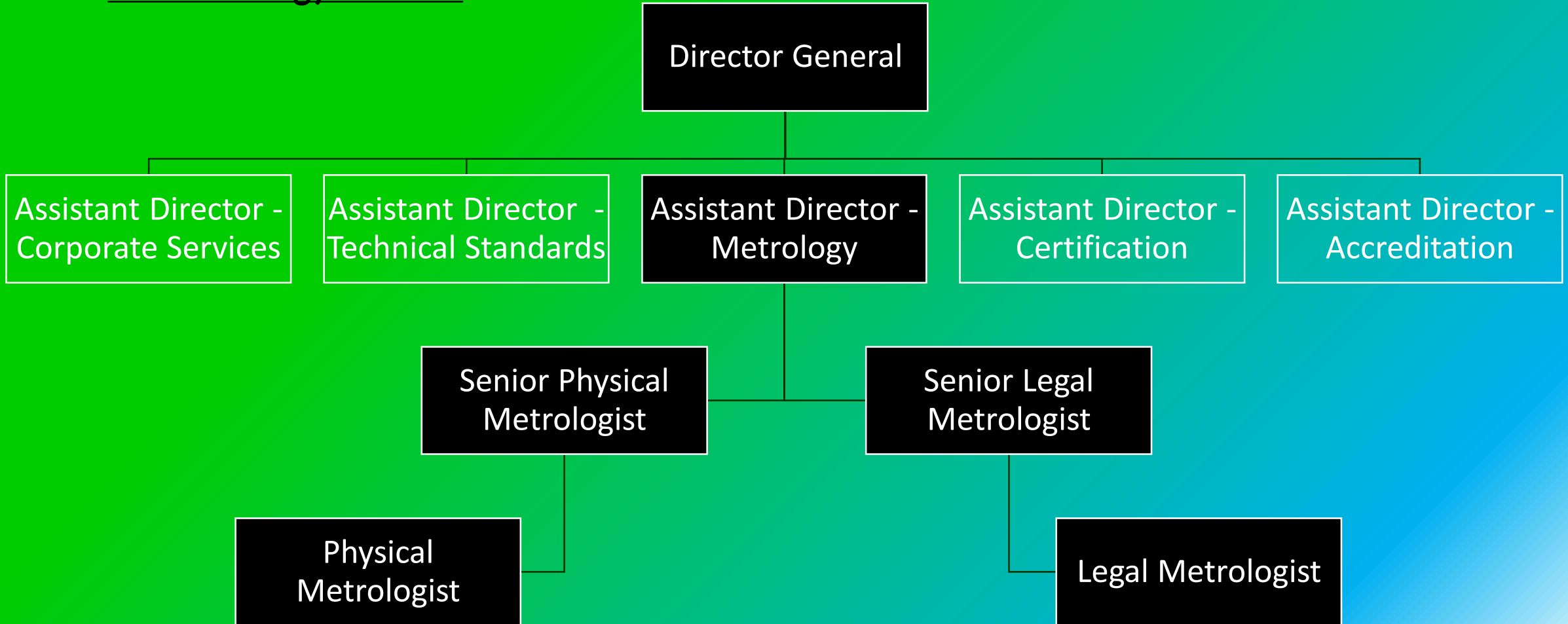
### 3.1 Top Management





## 3. NISIT ORGANIZATIONAL STRUCTURE

### 3.2 Metrology Division

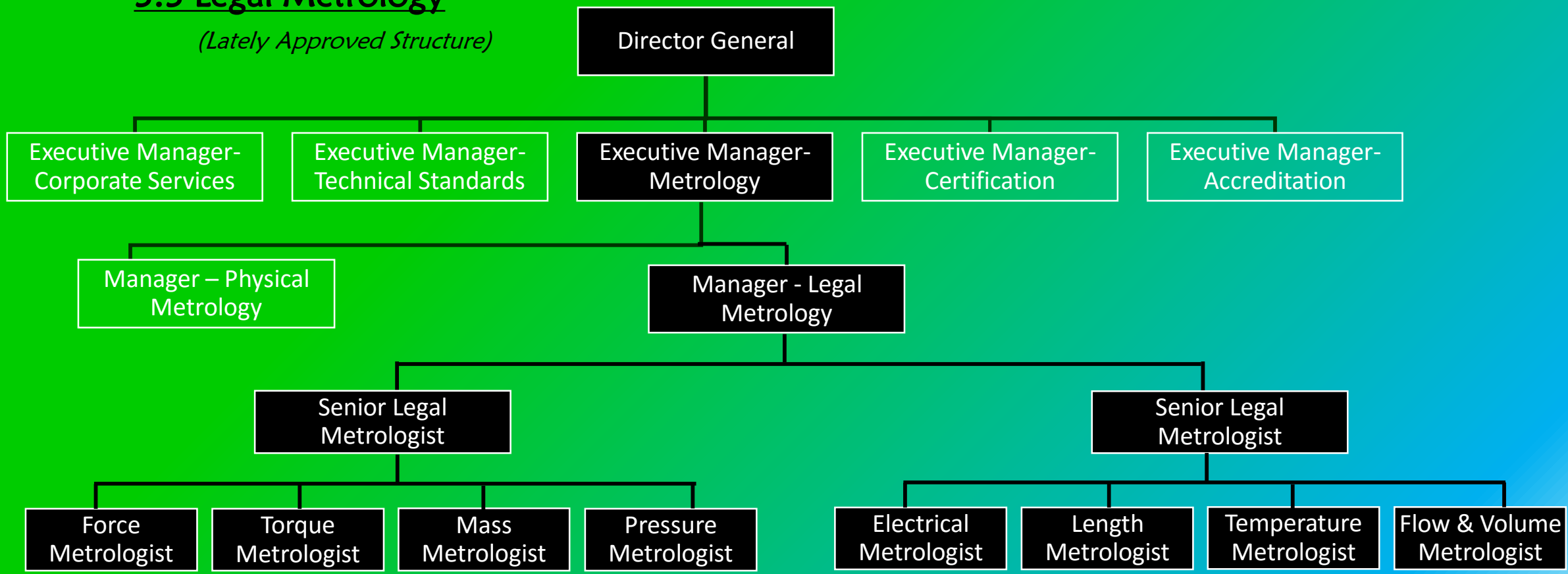




# 3. NISIT ORGANIZATIONAL STRUCTURE

## 3.3 Legal Metrology

*(Lately Approved Structure)*

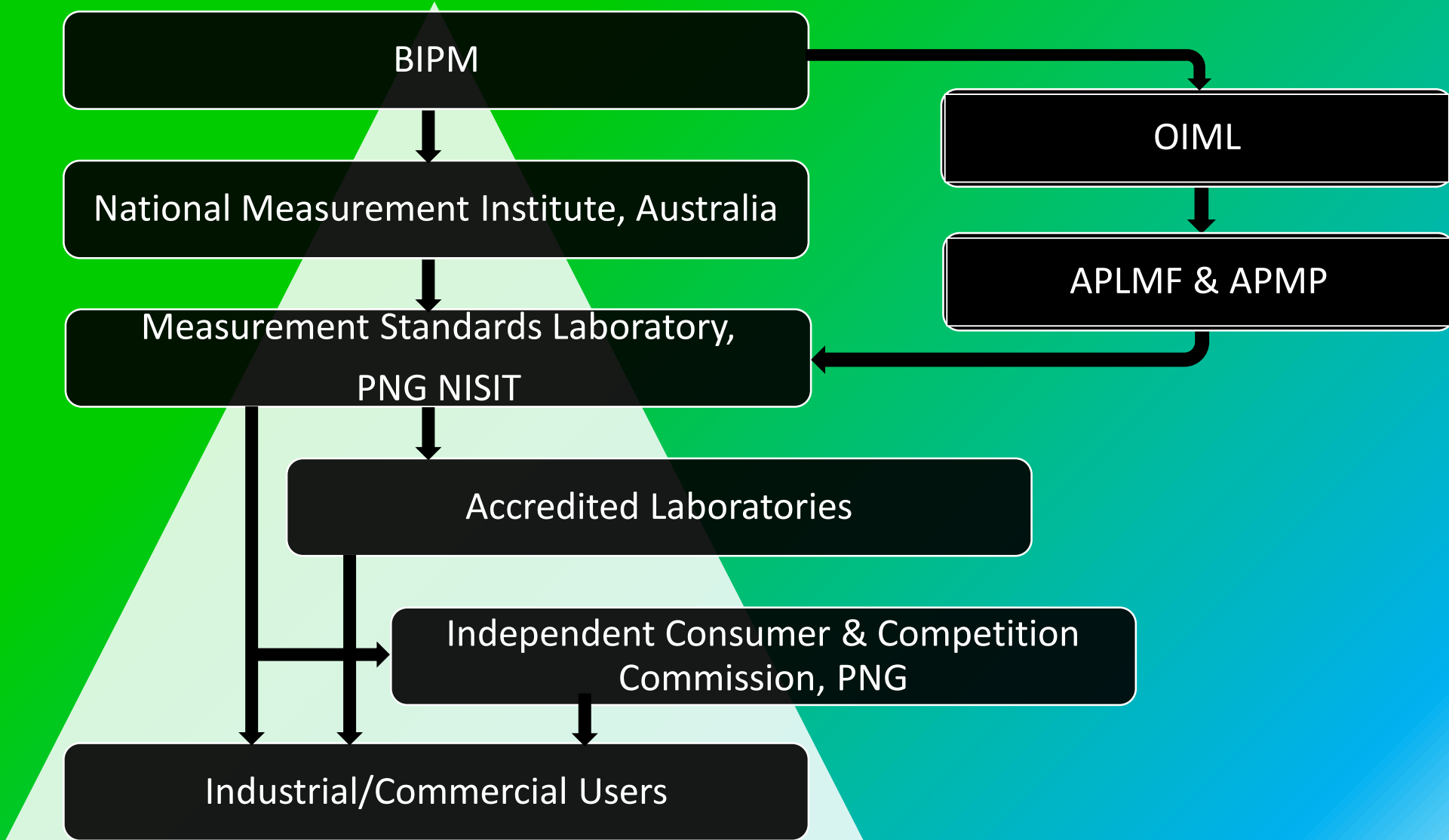




# LEGAL METROLOGY SECTION, METROLOGY DIVISION PNG National Institute of Standards & Industrial Technology



## 4. TRACEABILITY







## 1. CENTRAL METROLOGY AUTHORITY

### (I) Which authority was given the task to be the Central Metrology Authority?

Metrology Division of PNG NISIT was enacted by an Act of Parliament (NISIT Act 1993) to be the sole custodian of the PNG Legal Units of Measurement. The PNG Legal Units of Measurement have been recognized for use in association with SI Units.

### (II) Is it responsible for all the laws resp. by-laws dealing with metrology?

No. PNG NISIT is not responsible for all laws dealing with metrology in the country.

- (i) Trade Measurement Act is regulated by Independent Consumer & Competition Commission
- (ii) PNG Power regulates the Electricity Meters,
- (iii) Water PNG regulates the Water Meters,
- (iv) Workplace & Industrial Safety is regulated by Department of Labor,
- (v) Medical Instruments are regulated by Department of Health,
- (vi) Rice Moistures Verification are Done by National Agriculture Research Institute, etc..

There is no centralized metrological regulation in the country.



1. CENTRAL METROLOGY AUTHORITY *(cont!)*

(III) Is it responsible for the supervision/monitoring of institutes or bodies?

PNG NISIT should be doing that per the NISIT Act 1993 but it is not the case at the moment.

(IV) Is it a member of a regional metrology organization resp. regional legal metrology organization.

- (i) Yes PNG NISIT is a Full Member to APMP
- (ii) PNG NISIT is also a Full Member to APLMF

(V) Is it a member of the Meter Convention and the OIML?

- (i) PNG NISIT is a Corresponding Member to OIML
- (i) PNG NISIT is not a member to the Meter Convention



## 1. CENTRAL METROLOGY AUTHORITY *(cont!)*

### (VI) Is there any advisory board for Central Metrology Authority?

The Director of PNG NISIT manages the affairs of PNG NISIT with advises from:

- (i) The Minister of Department of Trade, Commerce and Industry
- (ii) PNG NISIT Council Representative from Department of Trade, Commerce and Industry
- (iii) PNG NISIT Council Representative from PNG Chamber of Commerce and Industry
- (iv) PNG NISIT Council Representative from the University of Papua New Guinea
- (v) PNG NISIT Council Representative from PNG University of Technology
- (vi) And six other PNG NISIT council members representing government regulatory authorities, the manufacturing sector, mining sector, and consumer protection organizations.

The Units, Standards and Calibration Committee (USCC), now dead or ineffective, was to establish and coordinate the National Measurement System of Papua New Guinea. It was to establish working groups when required and supervise their activities relevant to harmonizing measurement.



## 2. LEGAL DOCUMENTS

(I) Is there one law or are there several lawing the metrology?

There is no single law on metrology. However, NISIT Act 1993 as the custodian of the physical standards provides for the requirement and practices of metrological activities.

(II) Is there one by-law or are there several by-laws dealing with metrology?

There are several by-law dealing with metrology. There are several state approved by-laws but tailored to their core functions.

(III) Is there a list of regulated measuring instruments? (If yes, which measuring instruments are covered?)

- |   |                                      |
|---|--------------------------------------|
| (i) Fuel Dispensers & Liquid Flow Meters. | (vi) Pressure Relief Valves & gauges |
| (ii) Supermarket Scales                   | (vii) Clinical Thermometers          |
| (iii) Taxi Meters                         | (viii) Check Weighers                |
| (iv) Electricity Meters                   | (ix) Water Meters                    |
| (v) Weights                               | (x) Temperature Enclosures           |



## 2. LEGAL DOCUMENTS *(cont!)*

### (IV) Are prepackages regulated?

Yes, Prepackage Act is maintained by the Independent Consumer & Competition Commission

### (V) Is there any legal document related to legal units?

Yes, it is captured in the Nisit Act 1993 but obscured. The repealed National Standards Regulation 1978 made provisions to the PNG legal units but the NISIT Act 1993 doesn't clearly emphasize that. Therefore, there is a need for the revision of the Act and so put into effect the corresponding Regulation to emphasize that.

Among others, here are some of the clauses in the functions of the PNG NISIT Act 1993.

- (i) To establish, develop, and maintain measurement standards of physical quantities.
- (ii) To provide a fundamental and legal metrology service and
- (iii) To hold custody of PNG National Physical Measurement Standards as it considers necessary to enable the verification of means of measurement
- (iv) To examine and approve patterns of instruments for use in trade.



### 3. NATIONAL LEGAL METROLOGY POLICY

(I) Is there a written national legal metrology policy? (If yes, what is covered by this policy? Is it valid for a certain time period?)

No, there is no legal metrology policy.

(II) Who is responsible for the development of the national legal metrology policy?

Legal Metrology Section of the Metrology Division is starting to develop the national legal metrology policy.

(III) Which interested parties took part in the development?

To develop the national legal metrology policy we are to involve the following people

- (i) Experts from OIML, APLMF and regional Legal Metrology Authorities,
- (ii) Relevant regulating bodies and industries,
- (iii) Outstanding academics and bureaucrats,
- (iv) And the General Public.



#### 4. NATIONAL METROLOGY INSTITUTES

- (I) **Is there a National Legal Metrology Institute? Or is the National Metrology Institute responsible for Legal Metrology, too? Or is there another institution responsible for Legal Metrology?**  
The Legal Metrology section is one of the two division making up Metrology Division of PNG National Institute of Standards and Industrial Technology.
- (II) **What are the tasks of the responsible institute resp. institution in relation to legal metrology?**  
Currently, Legal Metrology section jointly do inspection, verification and calibration on measuring equipment with Physical Metrology section.
- (III) **Are there any Designated Institutes dealing with Legal Metrology?**  
No, there is none. However, Independent Consumer & Competition Commission empowered by the Trade Measurement Act performs most legal metrology duties but without the relevant qualification and facilities.



## 5. ALL KINDS OF BODIES

### (I) Which kinds of Legal Metrology bodies do exist in your country?

- (i) Supermarket Scales – PNG Independent Consumer & Competition Commission,
- (ii) Fuel Dispensers– PNG Independent Consumer & Competition Commission,
- (iii) Water Meters – Water PNG,
- (iv) Electricity Meters – PNG Power,
- (v) Pressure Relief Valves – Department of Labor and Occupational Safety
- (vi) And Items (i), (ii), (iii) and (v) are also verified by the Metrology Division.

### (II) How are they financed?

The are financed by their own departments from fees collected from service charges and government grants.

### (III) Is there an obligation to demonstrate competence?

Yes. But since they are the same organization doing the work there is already “Conflict of Interest”. Their primary focus is on their core business, thus competency is neglected.





5. ALL KINDS OF BODIES *(cont!)*

(IV) Is there any supervision resp. monitoring of such bodies?

PNG NISIT has not done any supervision &/or monitoring of such bodies. We would like to start after we have set up all the necessary frameworks.

(V) Are standardization bodies (or at least one) taking part in the legal metrology system in your country?

PNG NISIT's position on Legal Metrology has never been more vibrant than now. It is our focus to gain from this seminar the understanding and concept of how Legal Metrology should work together with Standards Bodies and other necessary bodies to deliver required services.

(VI) Are Accreditation bodies (or at least one) taking part in the legal metrology system in your country?

As mentioned above in (V).



## 6. GENERAL QUESTIONS

- (I) How many people are working for the legal metrology management system in your country (CMA, LMA, NMI, NLMI)?

We have a good number (more than 5) of regulating bodies but we don't have accurate figures to give. In the Metrology Division (Legal Metrology inclusive) we have five (5) staff and now we have an approved structure with eleven (11) officers in the Legal Metrology Section.

- (II) Are fees for legal metrology services fixed by the state?

Yes. The fees are reviewed and approved by their respective board.

- (III) How does your Legal Metrology Management System deal with measuring instruments coming from other countries.

Because our Legal Metrology System is “Fragmented & Dysfunctional” there are no clear provisions on how to deal with measuring instruments coming into the country.



6. GENERAL QUESTIONS *(cont!)*

- (IV) Do you see any need for improvements of your Legal Metrology Management System?  
There is a great need for the establishment of the Legal Metrology Management System.
- (V) Would you like to have any support or future information exchange with colleagues concerning specific topics?  
Yes.
- (VI) What would you like to discuss with other participants during the group discussions.  
There are many topics needs to be asked and discussed but importantly I would like to know how to establish the Legal Metrology System. This will be to:
- (i) Write up or develop Legal Metrology Policy and Legislation,
  - (ii) Understand how to operate as Central Metrology Authority
  - (iii) If possible, withdrawing powers and provisions related to metrological duties from other government mandated agencies.



## 7. RAISING AWARENESS OF METROLOGY

### (I) How important do you think of raising awareness of Metrology?

Raising awareness on metrology is very important. Plans are already set to be rolled out as outlined below.

### (II) Which way do you think is most efficient to do?

Our strategies laid out are as per priority listing;

- (i) Organize a special meeting during the 2017 Metrology Day and invite experts from APMP, APLMF, OIML and BIPM to speak to the government and the relevant organizations, academic institutions, industries and the public.
- (ii) Do a paper survey, where the survey forms are sent to specific government agencies, stake holders, industries, academic institution and laboratories.
- (iii) Visit each one of the above to part-take in the survey and gauge their views on how they hope we should do the survey.



## 7. RAISING AWARENESS OF METROLOGY *(cont!)*

### (III) What is your successful story?

- (i) PNG NISIT has approved structure and correspondingly approved to relocate to a new building.
- (ii) Collaborations with the relevant agencies has began. Understanding of a new way forward has been roadmapped.
- (iii) The NISIT Act 1993 Review is still pending and its timely the legal metrology framework is clearly enacted in there.

### (IV) What do you expect to learn from others?

From many things;

- (i) How to Set the Fees on the Legal Metrology Service.
- (ii) How to demarcate duties of Inspectors, Verifying and Calibration Officers, and their duty schedules.
- (iii) The necessary training and qualification of legal metrology officers. Any attachment arrangement available for staff to undergo.



## 8. TRAINING COURSE OR SEMINAR TOPIC MOSTLY NEEDED IN THE FUTURE

### (I) What subject do your urgent need for training?

- (i) Attachment Training on Legal Metrology Management System.
- (ii) Training on Type and Pattern Approval.
- (iii) Verification Officers and Inspectors Training.

### (II) Which seminar topic do you care for the most?

- (i) Establishing the Framework for Legal Metrology System.
- (ii) Powers of the Inspectors and Verifying Authorities.
- (iii) Measurement Traceability (MPEs and Uncertainties).

### (III) Speak of Capacity Building, what is the strongest needs of your organization?

- (i) Technical Advice on setting up a Legal Metrology Laboratory or Facility.
- (ii) A Tonne Truck and tonne blocks up to 3 tonne.
- (iii) A Mobile (Vehicle) Unit for Fuel Dispenser Verifications



# LEGAL METROLOGY SECTION, METROLOGY DIVISION PNG National Institute of Standards & Industrial Technology



6. ENDING



THANK YOU VERY MUCH FOR YOUR KIND ATTENTION!!!

