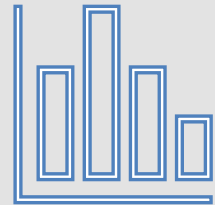


# BIPM Capacity Building & Knowledge Transfer Programme BIPM-SIM Training: KCDB 2.0

Claire Saundry  
SIM President  
20 April 2022



# Sistema Interamericano de Metrología (SIM)

**Membership:** 33 NMIs in the Western Hemisphere

**Mission:** To promote and support an integrated measurement infrastructure in the Americas which enables each member NMI to stimulate innovation, competitiveness, trade, consumer safety and sustainable development by effectively participating in the international metrology community

**International Role:** One of 6 currently recognized RMOs within the framework of the International Committee on Weights and Measures Mutual Recognition Arrangement (CIPM MRA)



# Sistema Interamericano de Metrología



## **NORAMET**

NRC –  
Canada  
CENAM –  
Mexico  
USA - NIST



## **CAMET**

BBS - Belize  
LCM – Costa Rica  
CIM – El Salvador  
CEHM – Honduras  
LANAMET – Nicaragua  
CENAMEP AIP – Panama  
CENAME - Guatemala



## **CARIMET**

ABBS – Antigua and Barbuda  
BBS – Bahamas  
BNSI – Barbados  
INDOCAL – Dominican Republic  
GBS – Grenada  
GNBS – Guyana  
BHN – Haiti  
BSJ – Jamaica  
SLBS – St. Lucia  
SKNBS- St. Kitts and Nevis  
SVGBS – St. Vincent and the Grenadines  
TTBS – Trinidad and Tobago  
DBOS - Dominica

33 Active Members  
13 Associate Members  
2 Affiliate Members



## **ANDIMET**

IBMETRO – Bolivia  
INM – Colombia  
INEN – Ecuador  
INACAL – Peru



## **SURAMET**

INTI – Argentina  
INMETRO – Brazil  
INN – Chile  
INTN – Paraguay  
LATU - Uruguay

# Sistema Interamericano de Metrología



## SIM Metrology Working Groups

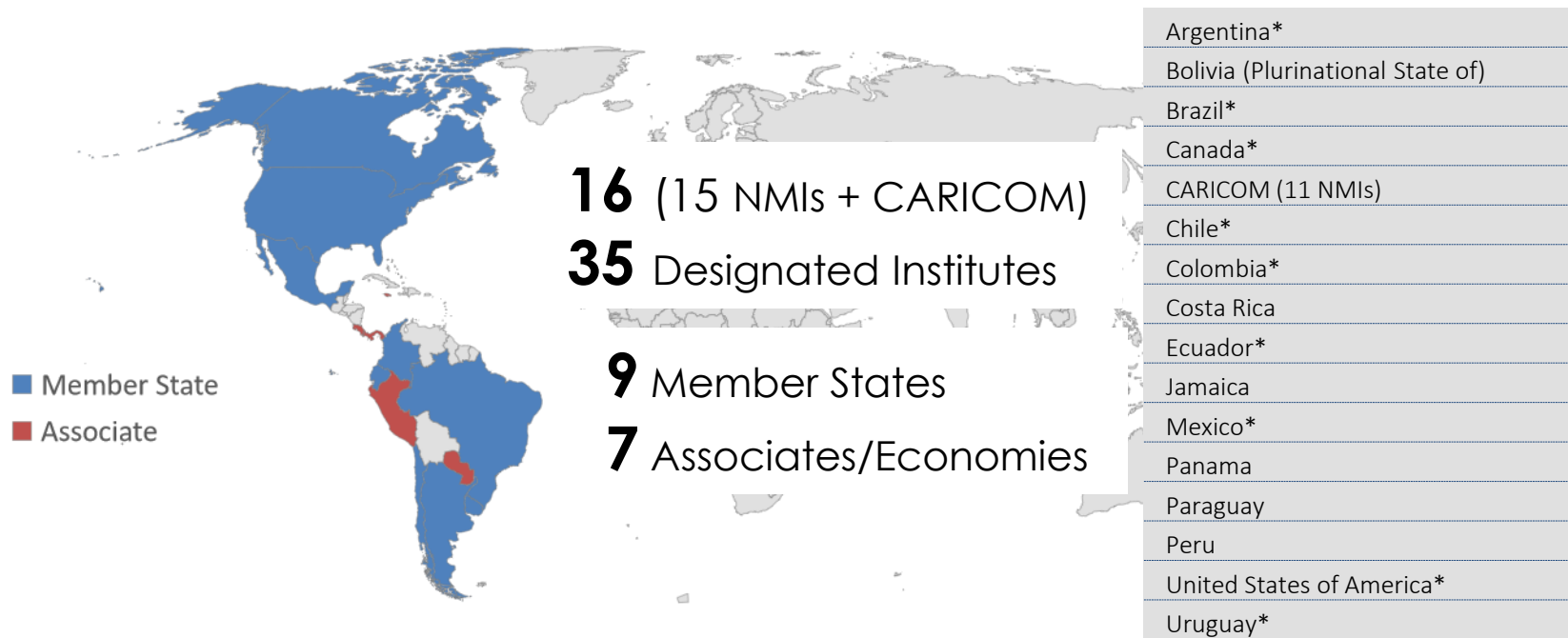
Electricity and Magnetism; Photometry and Radiometry;  
Thermometry; Length; Time and Frequency; Ionizing  
Radiation and Radioactivity; Mass & Related Quantities;  
Chemistry and Biology; Acoustics, Ultrasound and Vibration;  
Flow and Volume; Legal Metrology; Quality System;  
Statistics and Uncertainty; Metrology for Digital  
Transformation





## SIM Quality System Task Force









































It is the responsibility of SIM to review the QMS operated by its member NMIs and DIs and to report on their acceptance to the Joint Committee of the Regional Metrology Organizations and the BIPM (JCRB). The JCRB in turn uses this process to help build confidence among the Regional Metrology Organizations (RMOs) by establishing transparent QMS review guidelines, which are mutually acceptable among all RMOs.

# CIPM MRA: participation of SIM



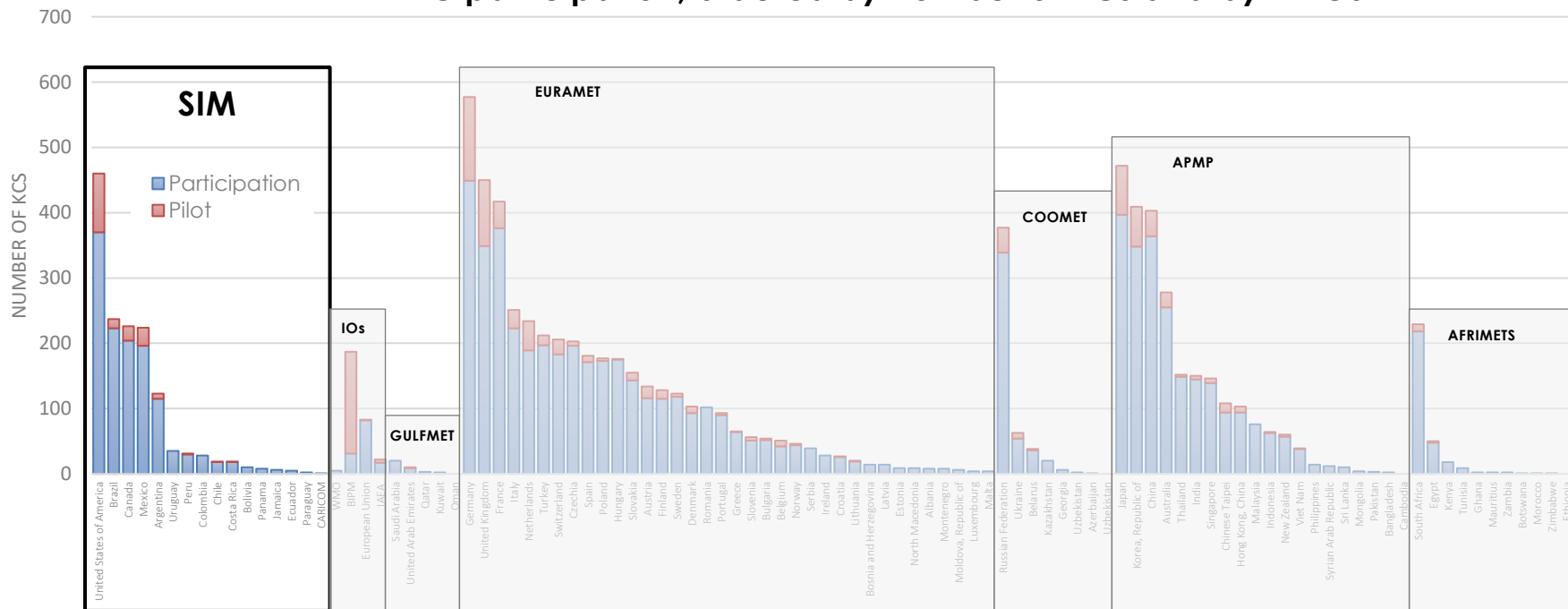
# SIM participation in the work of Consultative Committees

 - Member  
 - Observer

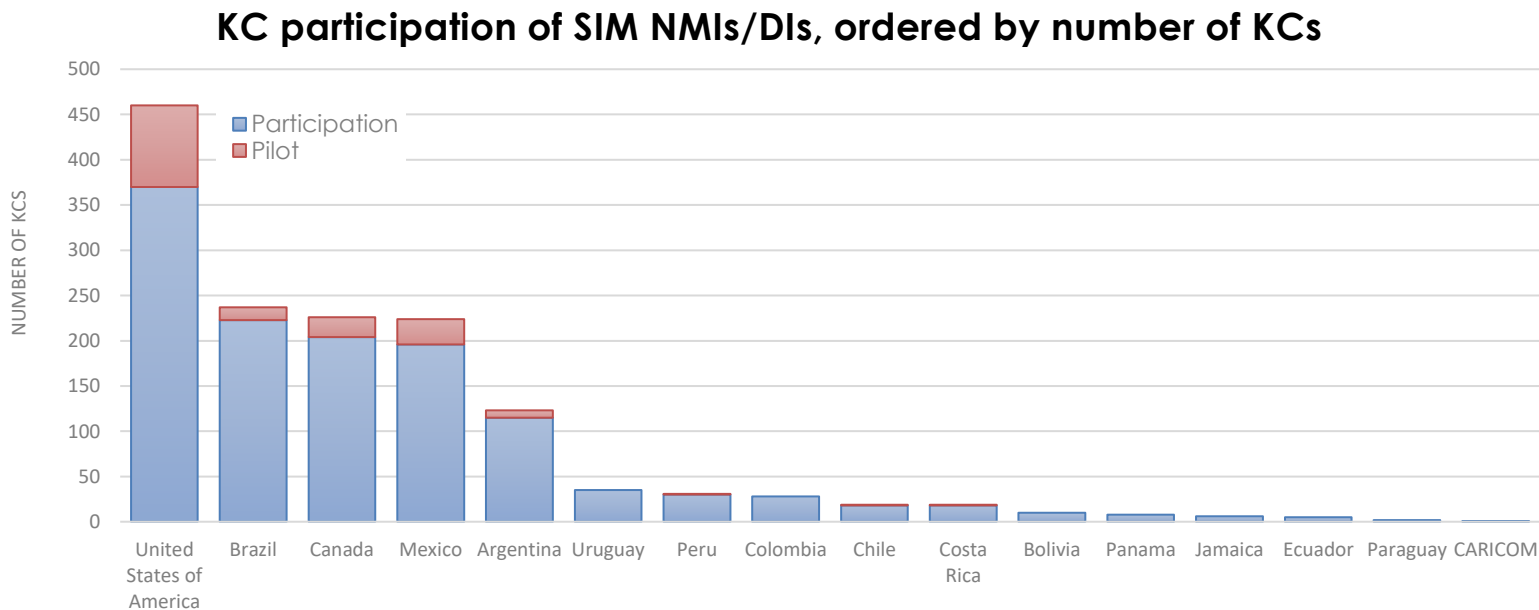
| States and Economy       | Member State or Associate | CCAUV   | CCEM  | CCL   | CCM   | CCPR  | CCQM  | CCRI  | CCT   | CCTF  | CCU   |
|--------------------------|---------------------------|---|---|---|---|---|---|---|---|---|---|
| Canada                   | Member State              |  |  |  |  |  |  |  |  |  |  |
| United States of America | Member State              |  |  |  |  |  |  |  |  |  |  |
| Mexico                   | Member State              |  |  |  |  |  |  |   |  |  |   |
| Brazil                   | Member State              |  |  |  |  |  |  |  |  |  |   |
| Argentina                | Member State              |   |  |   |   |   |  |   |   |   |   |
| Uruguay                  | Member State              |   |   |   |  |   |   |   |   |   |   |
| Chile                    | Member State              |   |   |   |   |   |   |   |   |   |   |
| Colombia                 | Member State              |   |   |   |   |   |   |   |   |   |   |
| Ecuador                  | Member State              |   |   |   |   |   |   |   |   |   |   |
| Bolivia                  | Associate State           |   |   |   |   |   |   |   |   |   |   |
| CARICOM                  | Associate Economy         |   |   |   |   |   |   |   |   |   |   |
| Costa Rica               | Associate State           |   |   |   |   |   |   |   |   |   |   |
| Jamaica                  | Associate State           |   |   |   |   |   |   |   |   |   |   |
| Panama                   | Associate State           |   |   |   |   |   |   |   |   |   |   |
| Paraguay                 | Associate State           |   |   |   |   |   |   |   |   |   |   |
| Peru                     | Associate State           |   |   |   |   |   |   |   |   |   |   |

# KCDB Statistics: *Participation in KCs*

KC participation, ordered by number of KCs and by RMOs



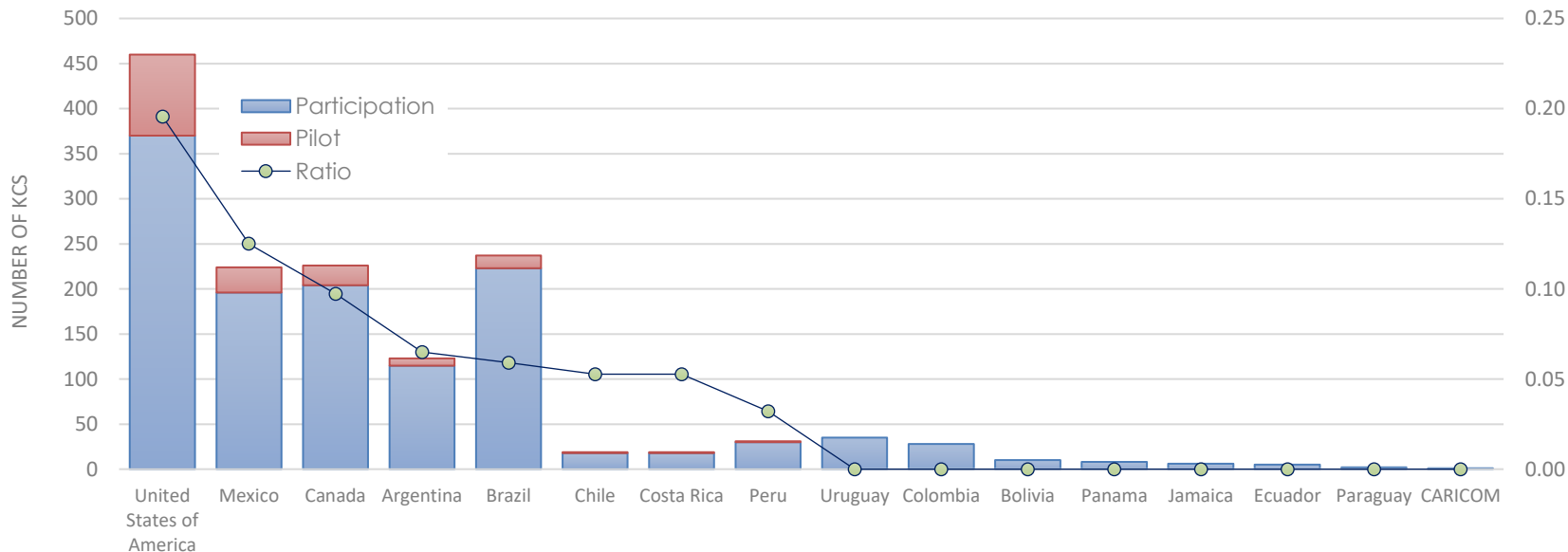
# KCDB Statistics – SIM: *Participation in KCs*





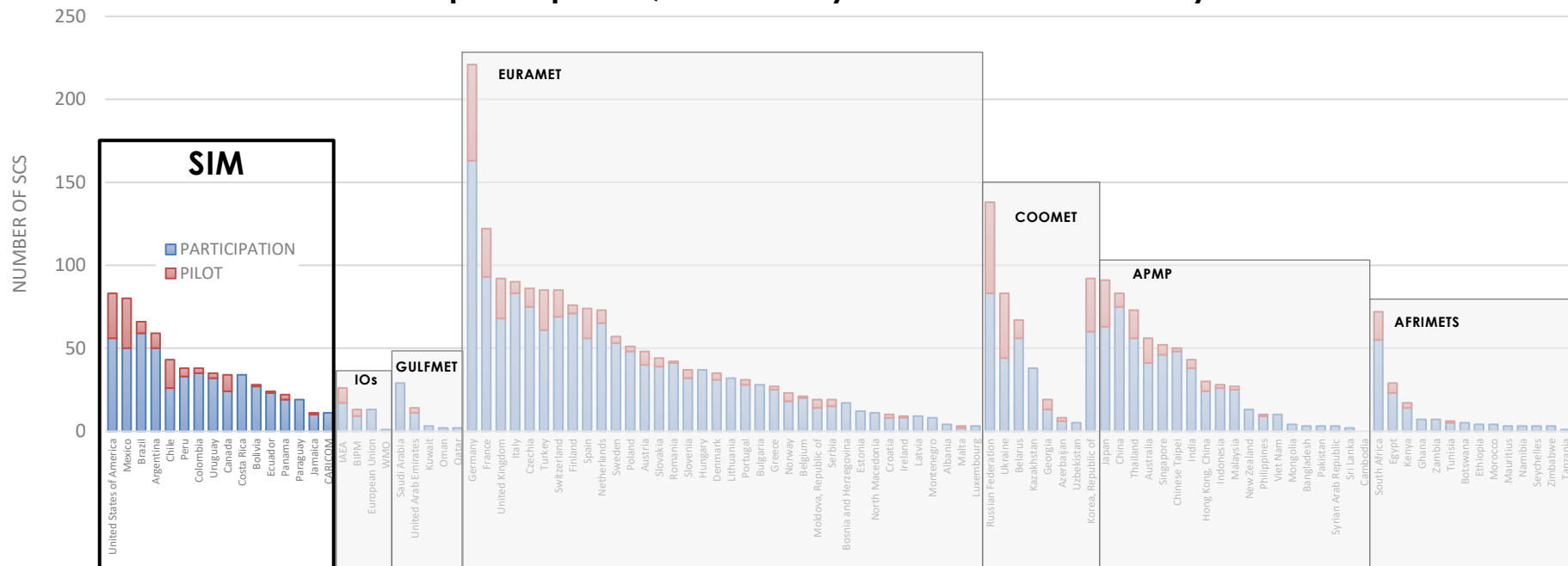
# KCDB Statistics - SIM: *KC Piloted to KC participation*

**KC participation of SIM NMIs/DIs,  
ordered by ratio of KC Piloted to KC participation**

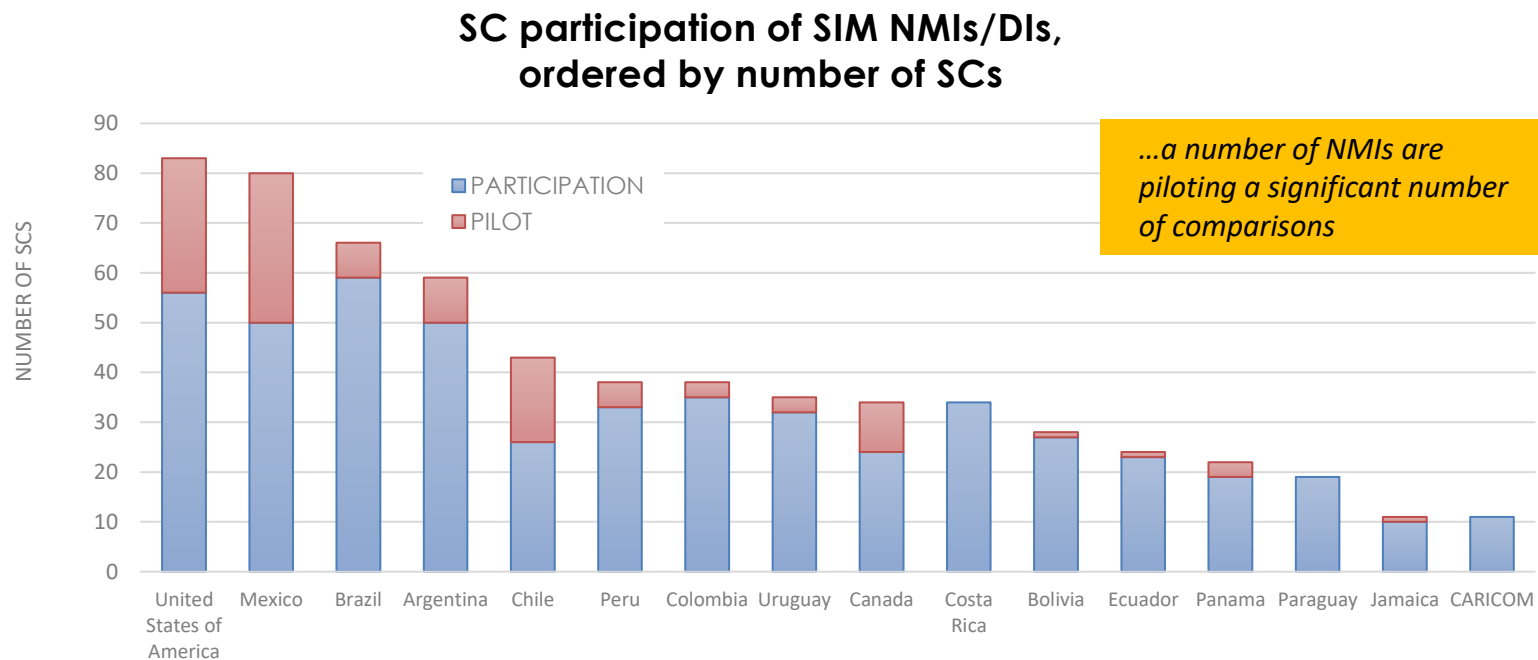


# KCDB Statistics: *Participation in SCs*

SC participation, ordered by number of SCs and by RMOs

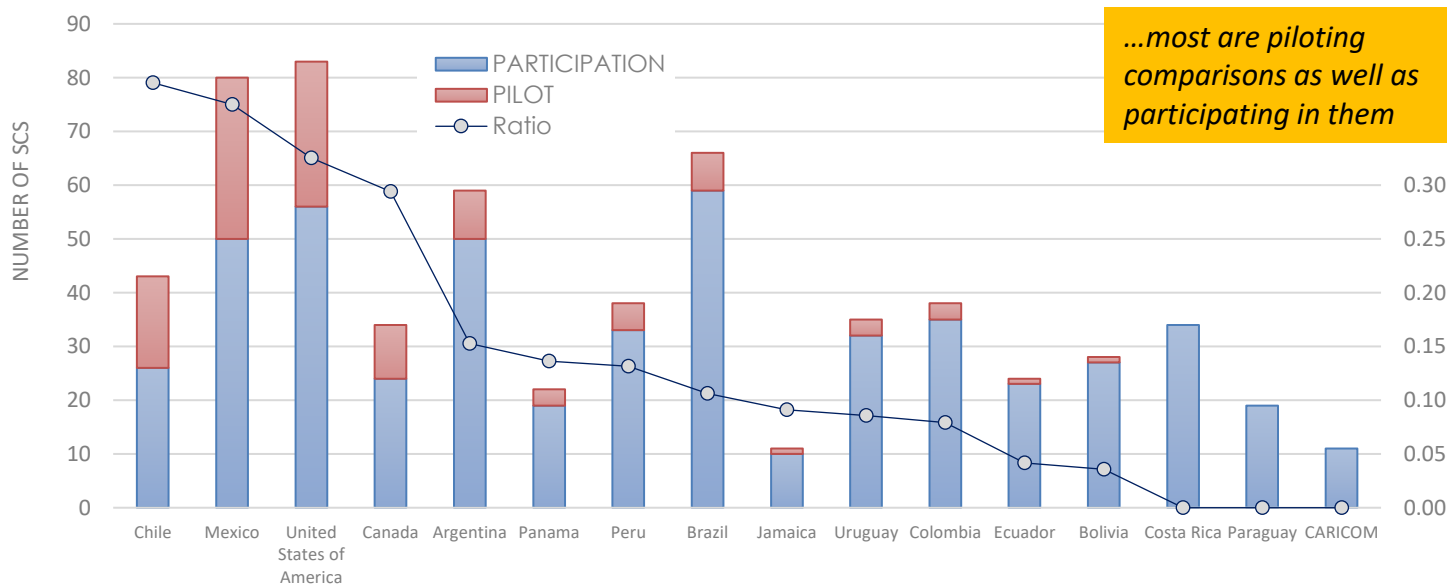


# KCDB Statistics - SIM: *Participation in SCs*



# KCDB Statistics – SIM: *SC Piloted to SC total*

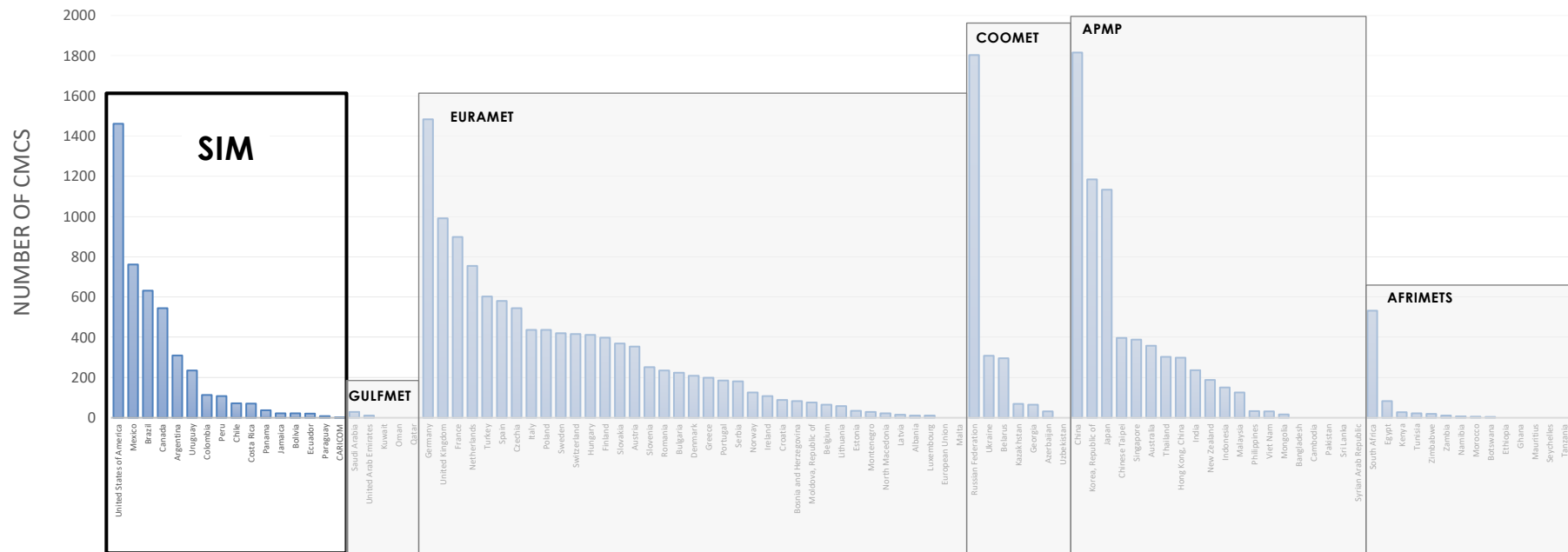
SC participation of SIM NMI/DIs,  
ordered by ratio of SC Piloted to SC participation



# KCDB Statistics : *CMCs*

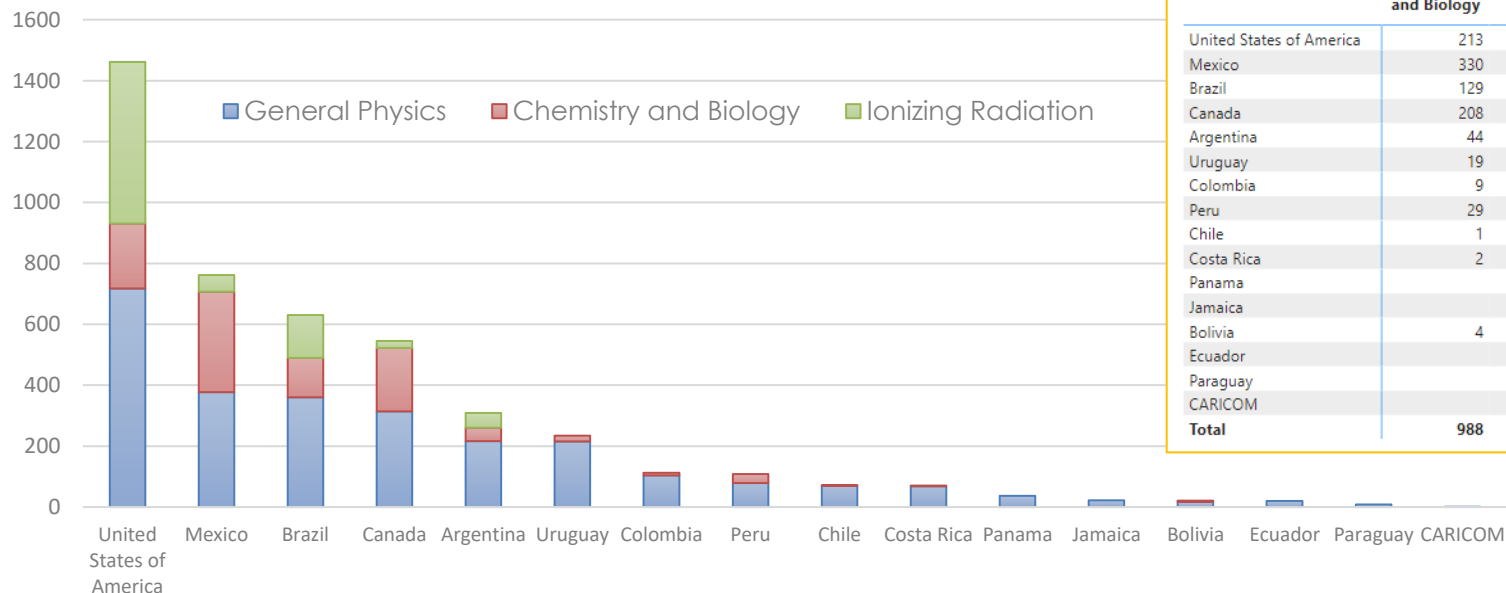
Remember, CMC numbers are not full story!

## CMCs by Member States and Associates (States/Economies)



# KCDB Statistics - SIM: *CMCs*

## SIM CMCs by Member States and Associates



*All SIM CIPM MRA participants have published CMCs*

# Points of note

- All SIM CIPM MRA participants are active in comparisons
- All SIM CIPM MRA participants have published CMCs
- Initiatives to share the workload (a prime driver of the CIPM MRA review) appear to have worked:
  - most are piloting comparisons as well as participating in them,
  - a number of NMIs are piloting a significant number of comparisons,
    - this is true for KCs and even more so for SCs
- Overall, the engagement within SIM is very healthy.

Thank you  
Gracias  
Obrigada  
Merci

Claire Saundry  
SIM President

<https://sim-metrologia.org/>

