

Challenges of Biological Safety Cabinet Certification in Low to Middle Income Countries

Mary Ann Sondrini
Eagleson Institute



Eagleson Institute

Nonprofit educational organization with a mission to globally promote the principles and practices of health and safety in the life sciences community



Global BSC Certification Training Program

- 2000-2004: Peru
- 2006-Present: Former Soviet Union Countries
- 2010-Present: PEPFAR Countries



Class II Biological Safety Cabinets (BSCs)

Provide three types of protection

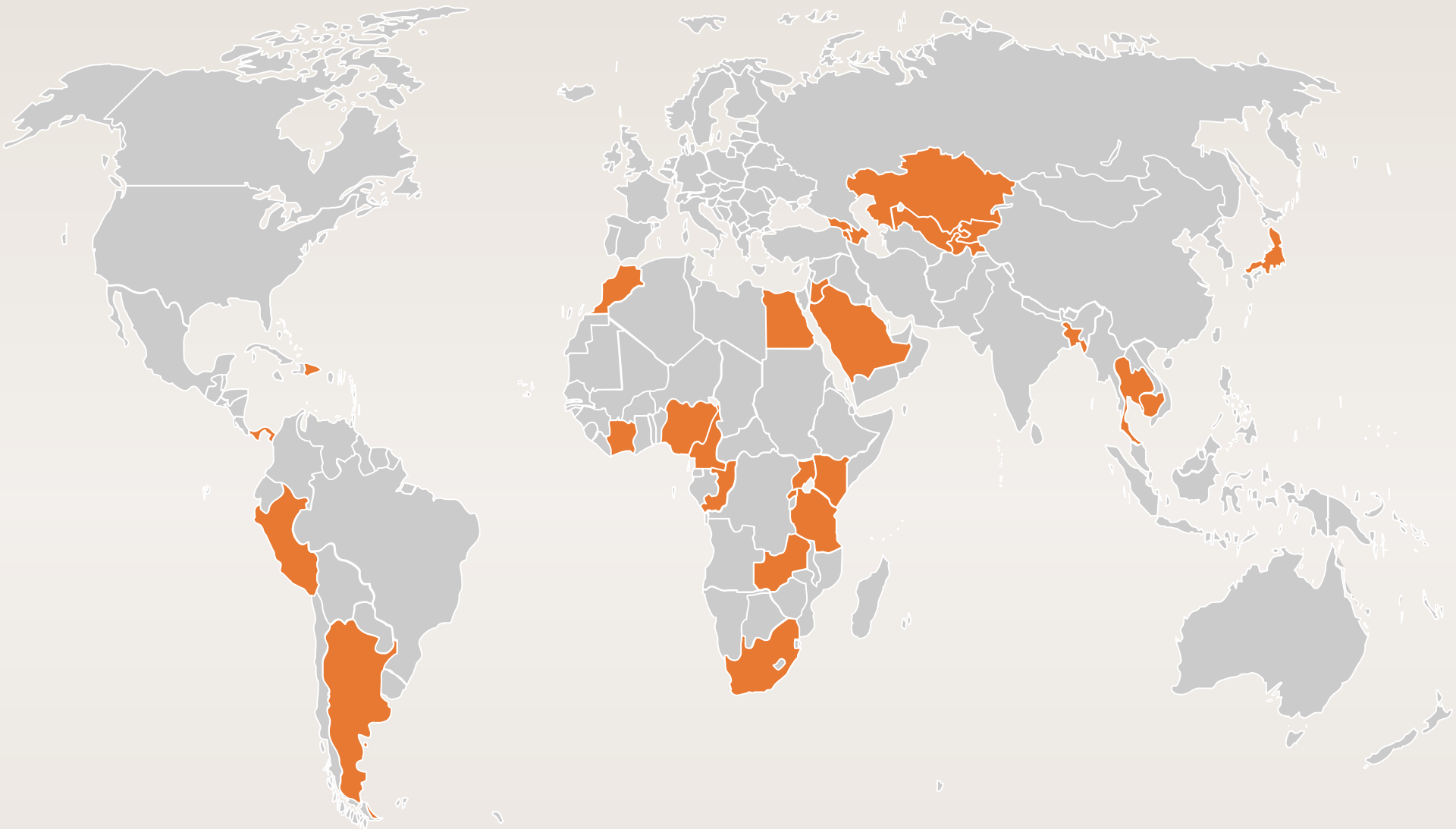
- laboratory workers from infections
- products from contamination
- the environment



Biological Safety Cabinets

- Must be certified (tested) on regular basis to balance airflows and prevent leaks in the HEPA filters





Argentina, Azerbaijan, Armenia, Bangladesh, Cambodia, Cameroon, Congo, Cote d'Ivoire, Dominican Republic, Egypt, Georgia, Japan, Jordan, Kazakhstan, Kenya, Kyrgyzstan, Morocco, Nigeria, Panama, Peru, Rwanda, Saudi Arabia, South Africa, Tajikistan, Tanzania, Thailand, Uganda, Uzbekistan, Zambia

Certification Issues in Low to Middle Resource Countries

- Very few trained personnel
- BSCs come from all parts of the world
- BSCs built to different standards
- BSCs may not be working at all
- Certifiers need to figure out how they work, diagnose problems, and develop strategy for repairing without manual
- Difficult to obtain parts

Success Stories

- Significant increase in number of BSCs being certified.
- Much more training related to proper use of BSCs is taking place.
- Certification programs are starting to grow roots.



Every Country Has It's Own Story

Kenya



Rwanda



Nigeria



Challenges in Africa

- Calibration of testing equipment



Challenges Continued

- Obtaining Consumable Supplies and Replacement Parts



Challenges Continued

- Program Leadership Needed



Challenges

- Certifier Credibility



Challenges Continued

- Difficulty installing and testing BSCs because certifiers are not contacted in advance of purchase.



Challenges Continued

- Decontamination



What is Needed Next?

1. Develop National BSC Certification Programs

- System for keeping track of BSCs and certification reports
- System for professional development and oversight of certifiers
- System for storing, transporting and calibrating certification equipment
- Budget for supplies; Time planned into work schedule
- A program leader



What is Needed Next? (continued)

2. Expand Skills to Include Decontamination, Testing Related Ventilation Equipment, and Facility Maintenance





Thank you!

Mary Ann Sondrini, EdM

Executive Director, Eagleson Institute

msondrini@eagleson.org | www.eagleson.org