

Development and Implementation of a
Ladderized Biosafety Training Program
at the Research Institute for Tropical Medicine
Department of Health, Philippines

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Biorisk Management Office



The Research Institute for Tropical Medicine

- EO6 674 signed on March 28, 1981, formally established the Research Institute for Tropical Medicine.
- RITM was inaugurated on April 23, 1981 as a grant-in-aid from Japan.



Unveiling of the Marker by Madame IMELDA ROMUALDEZ MARCOS, The First Lady, Minister of Human Settlements and Metro Manila Governor with His Excellency Hideho Tanaka, Japanese Ambassador to the Philippines, The late Minister Enrique M. Garcia and RITM Director Dr. Alberto G. Romualdez, Jr.



- In 1964, studies by research scientists of the Philippine-Japan Joint Commission on Cholera Research led to a better understanding of epidemiology and control of El Tor Cholera.
- In 1979, bilateral agreement between the governments of Japan and the Philippines was signed.



Vision: Locally and internationally recognized leading institution for research, training, clinical and diagnostic services, and biological production in infectious disease by 2022.

Mission: Protect Filipinos against infectious diseases through the conduct of globally competitive research, training, clinical and diagnostic services and production of biological.



**Disease
Outbreak
Investigation**

**Surveillance
& Research**



**Clinical
Care**

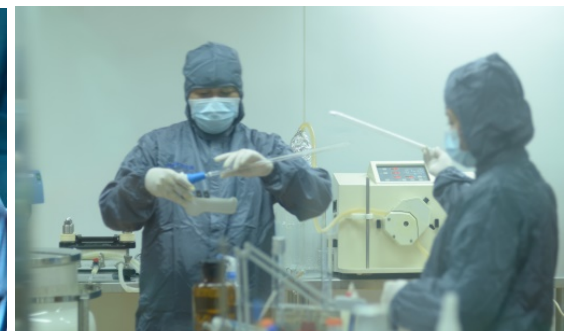


**Laboratory
Diagnostic
Services**

Training



**Biological
Production**

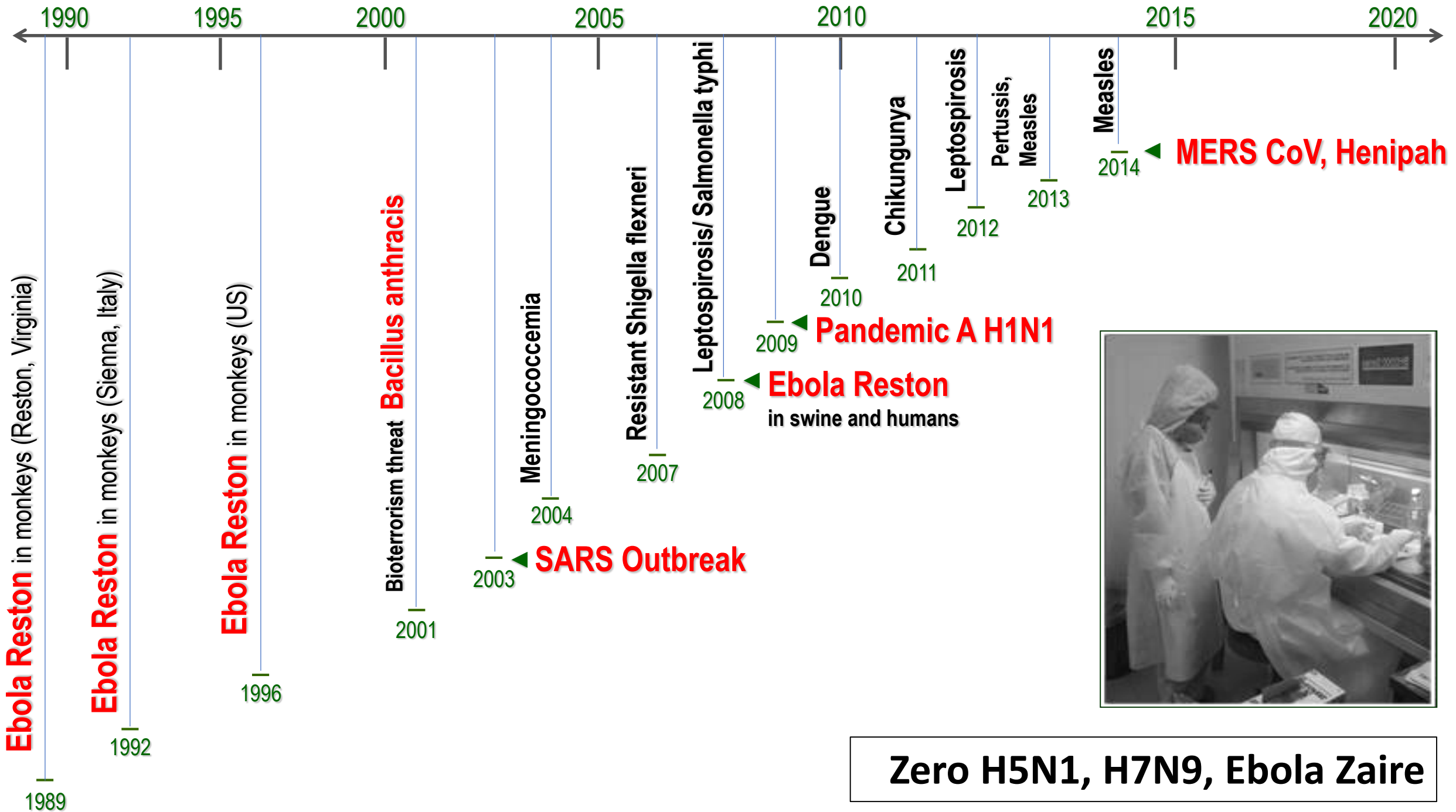


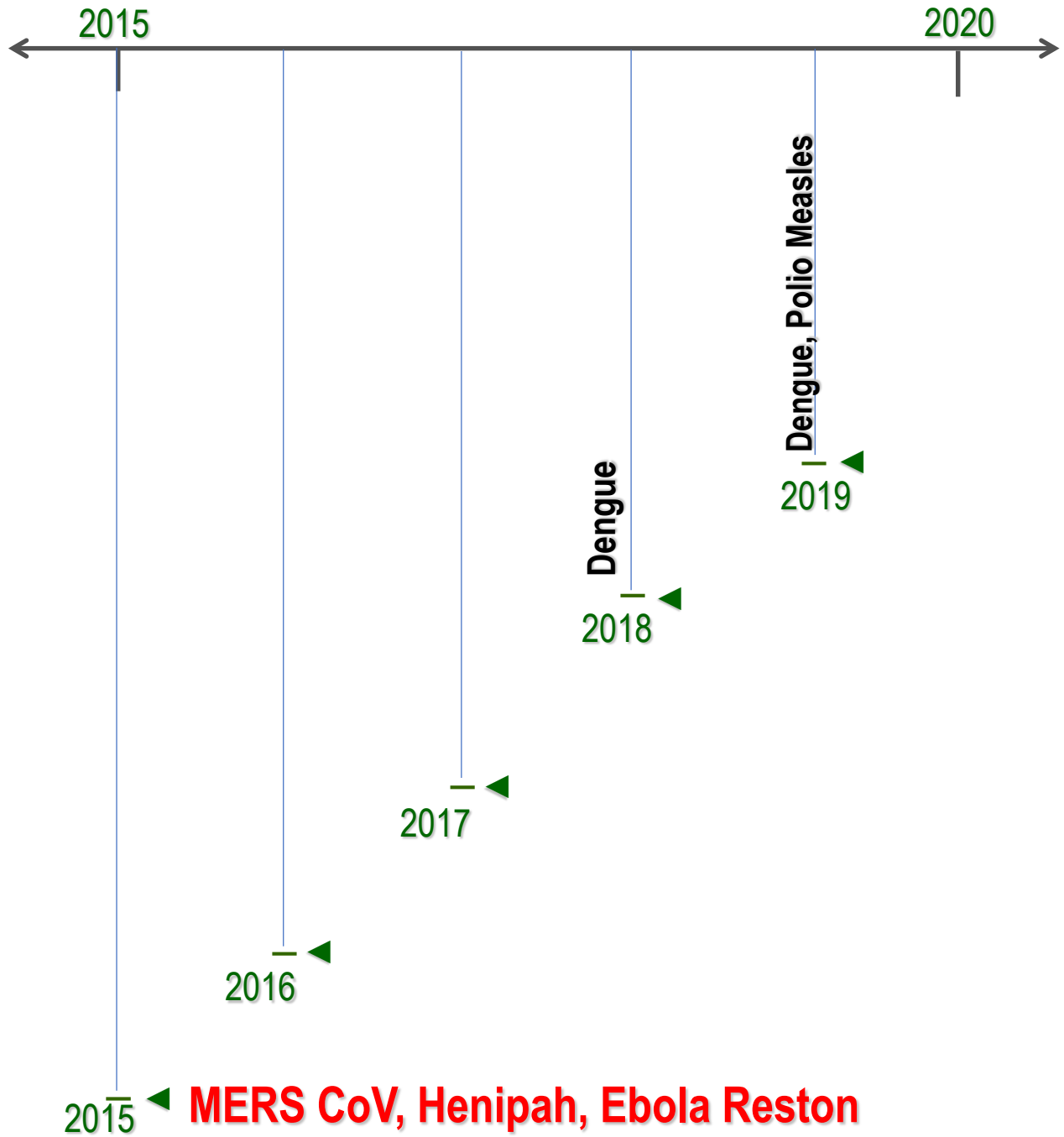


Executive Order 674
Signed: March 23, 1981
Inaugurated: April 23, 1981

Advisory Board
Ethical Review Board

- 2016** — Renaming of the Biosafety and Biosecurity Committee to **Biorisk Management Office**
- 2003** — Reconstitution of the **Sub-Committee on Biosafety**
- 1998** — Amendment to Hospital Order No. 212 S. 1998
- 1997** — Reorganization of Some Working Committees of the Safety Committee
- 1995** — Reorganization of the Safety Committee and Integration of the Different Working Committees
- 1994** — Creation of the RITM Waste Management Subcommittee under Safety Committee
Reconstitution of the Safety Committee
- 1990** — Reorganization of the RITM Safety Committee
- 1989** — Amendment of the Office Order No 147-C S. 1988 / RITM Safety Committee
- 1988** — **Creation of RITM Safety Committee**







RITM will serve as a model facility for the safe and secure handling of high-risk pathogens in the Philippines

January 08 – 12, 2007

Biosafety and Biosecurity Risk Assessment by Sandia National Laboratories

Individual laboratories often have many of the elements of a good biosafety program established informally but there is little to no institutional standardization.

- **Formal training process for new and existing employees**
- Facility wide access control protocol
- Formal incident reporting system
- Formal medical surveillance system
- Incident response plan
- Waste management plan
- System for securing isolates that use LNT

The biosafety officer should be given the authority and management support necessary to establish a strong biosafety program that addresses these topics.

The fundamental principles and guidelines on Biosafety are incorporated to the following:

- Site- specific laboratory orientation
- Human resource general orientation program
- Other short-term training courses

Current
practice

Biosafety and Biosecurity Professional / Leaders



RITM Employee

The Ladderized Biosafety Training Course Contents

Advanced Biosafety

- Biosafety Officer Biological Risk Management
 - Policy Making
 - Biosafety Review
 - Biosafety Leadership
 - Training Provided
- LRD Second Line Responders
 - Risk Assessment
 - BSL 3 Practices
 - High Containment Operation and Maintenance

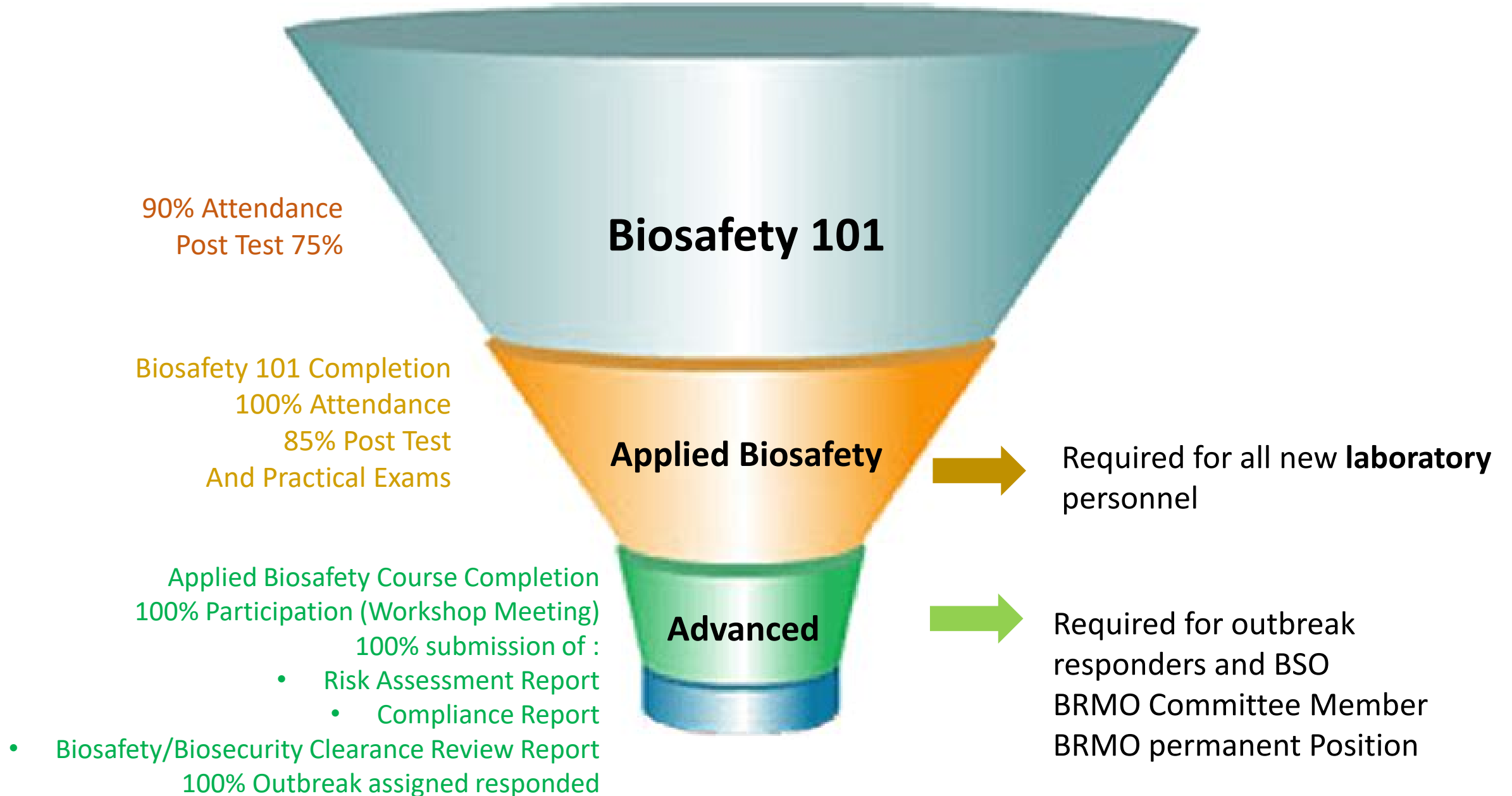
Applied Biosafety

- Biological Risk Assessment
- Personal Protective Equipment
- Biological Safety Cabinet
- Sterilization, Decontamination (Use of Autoclave)
- Waste Management
- Biological Banking
- Transport / Infectious Substance Shipping
- Minor Biological Spill Response

Biosafety Basics (Biosafety 101)

- Fundamental Biosafety and Biosafety and Biosecurity
- BSL 1,2,3 Operational Practices / Best Practices
- Biorisk Management System (AMP)
- Personal Protective Equipment
- Biological Safety Cabinet
- Sterilization, Decontamination
- Waste Disposal
- Transport / Infectious Substance Shipping
- Chemical Safety
- Animal Biosafety / Arthropod Biosafety
- Infection Control
- Emergency Response

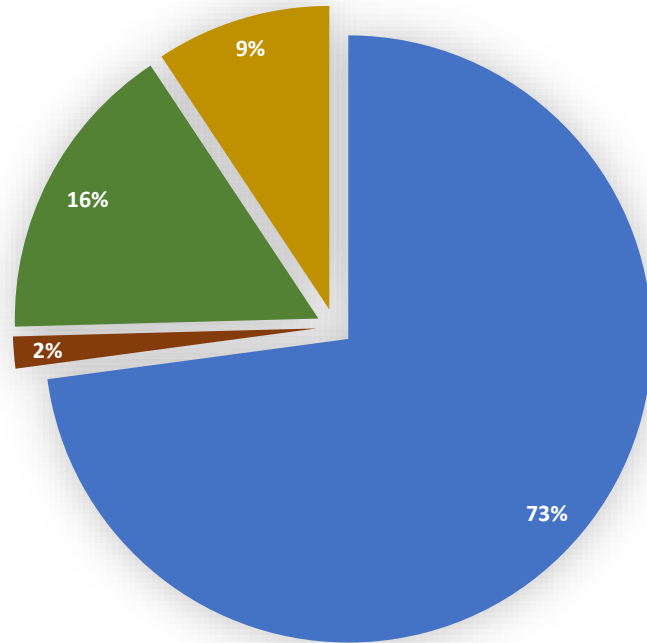
Open for all employees, specially the newly hired



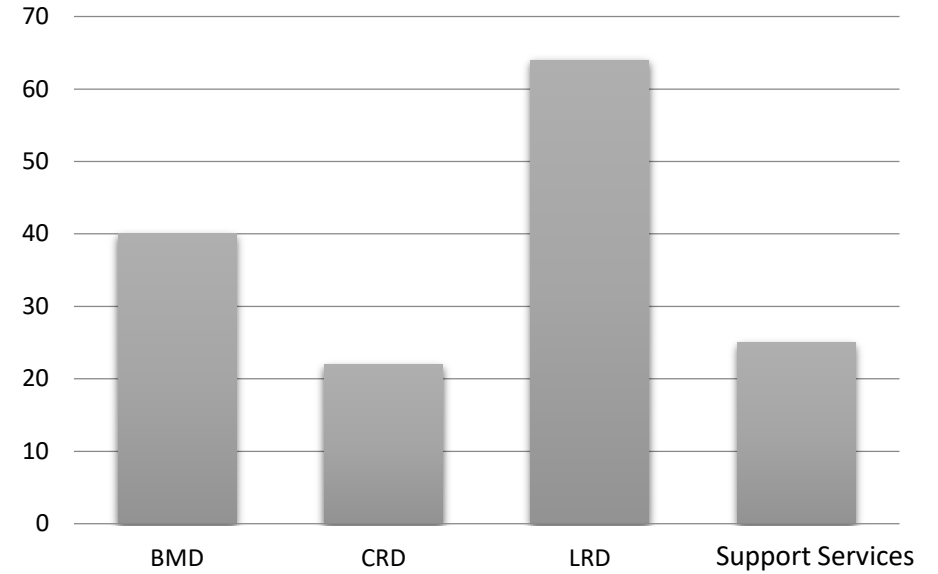
1st Biosafety 101 2015

Participants

- Laboratory Personnel
- Administrative
- Engineering and laboratory support services
- Surveillance and Research



Number of Participants per Division



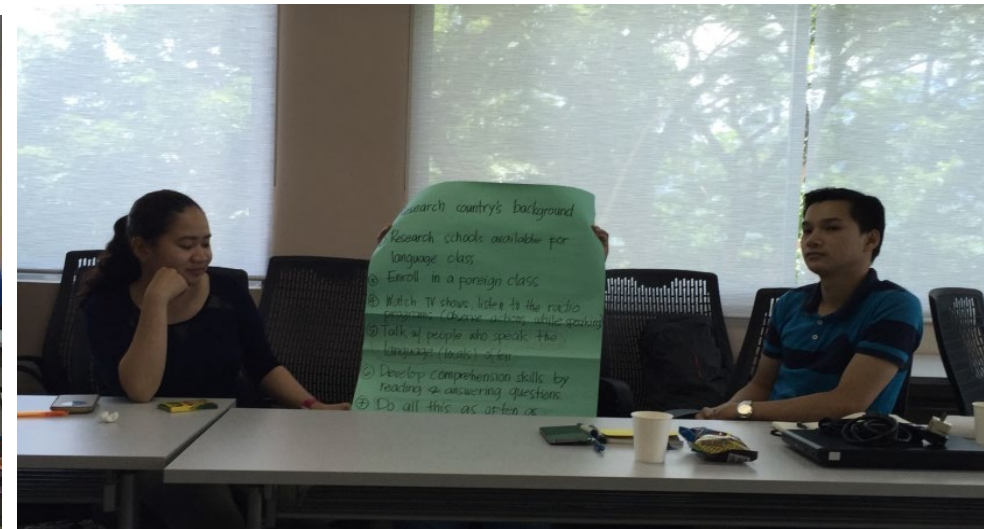
Participants



So What ?

- RITM has expressed its dedication and commitment in biosafety and biosecurity.
- It marked the initial step towards strengthening BRM and a biosafety culture within RITM
- RITM has set example among laboratories around the Philippines.
- RITM Biosafety 101 became a template of training at awareness level among new employees

Facilitating Adult Learning Orientation and Workshop for Biosafety Officers who will be conducting the Applied Biosafety Training Program



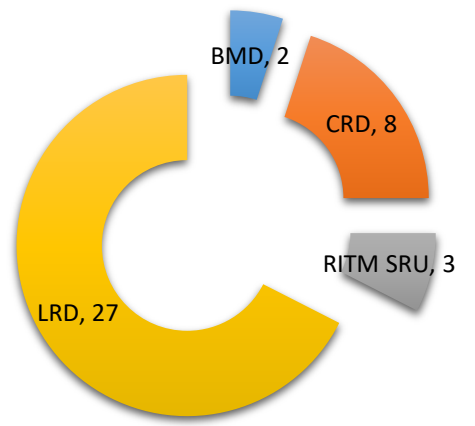
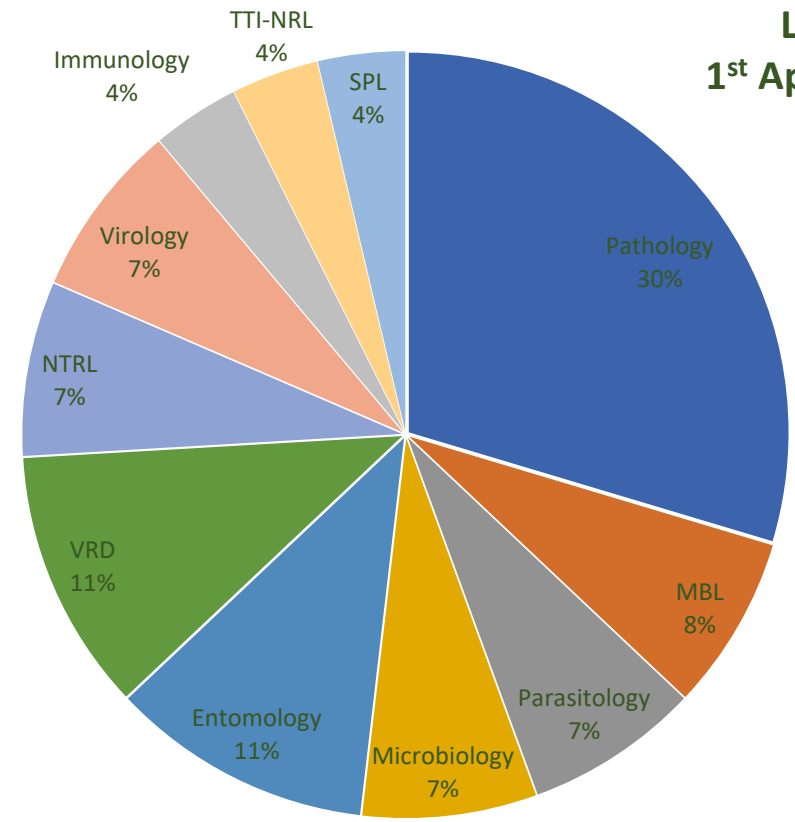
Review of the Principles of biosafety
Microbiological risk assessment
Engineering Control
Personal Protective Equipment
Operational practices
Biorisk performance
Safety culture

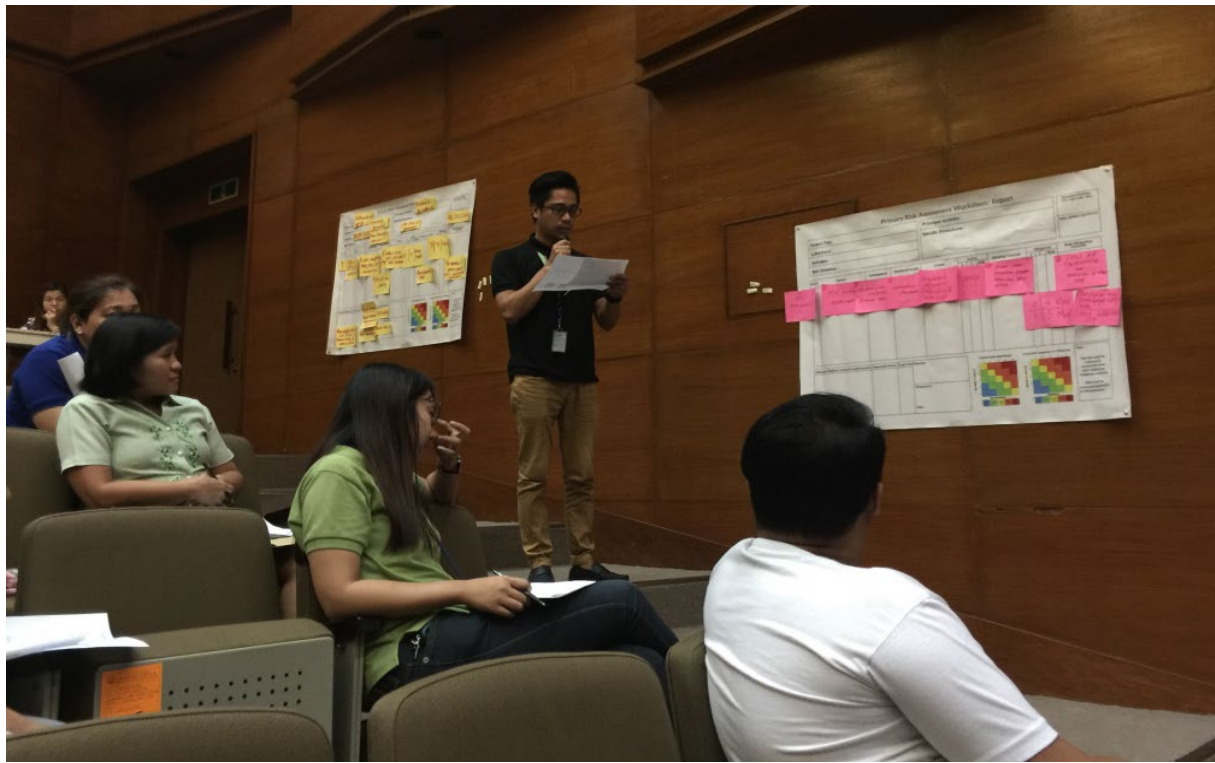


Level 2: Applied Biosafety Training
Curriculum

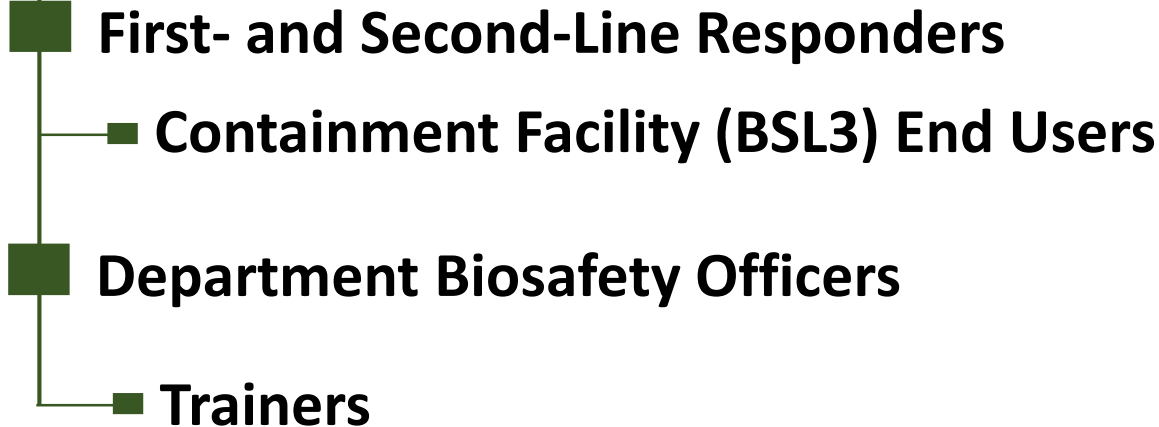
- Laboratory Design and work flow
- Biological Safety Cabinets
- Autoclaves
- BSL 1 and 2 Practices
- Sterilization and Disinfection
- Infectious Substance Shipping
- Emergency Response

LRD Participants 1st Applied Biosafety Training Course





Level 3: Advanced Biosafety Training



Participant's Requirement

- ✓ Certificate of Completion
- Applied Biosafety
- ✓ Endorsement from the Division Head
- ✓ Office Order

Lecturer / Facilitator

local certified professional

Duration

2 years

Advanced Biosafety Training for Responders

First- and Second-Line Responders

- Risk Assessment and Risk Management
- BSL 3 Standards and Practices
- Containment Facility Operation and Maintenance





On the Job Training Program for Biosafety Officer

- Biological Risk Management
 - Risk Assessment
 - BRM review
- Policy Making
- Biosafety / Biosecurity Review of protocol and clearance
- Biosafety Training (lecturer and facilitators)

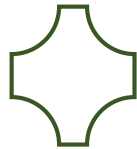


Qualification

Biosafety Officer

1. Bachelor of Science Degree in biological, biomedical or allied health courses, or BS Biomedical Engineering, Civil Engineering, Environmental Engineering
2. Holding a permanent position in RITM
3. Three years relevant work experience in laboratory
4. Completed the requirements of the Ladderized Biosafety Training program for RITM employee
Biosafety 101
Applied Biosafety Training
5. Does not hold a major responsibility under other committee or organization within the institute.
6. Has the ability to promote and communicate biosafety and biosecurity program throughout the institute.

BRM committee member

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1. Has served the institute as Department BSO for at least 2 years and actively involved in BRMO activities,
 2. Five years relevant work experience in laboratory, currently performing supervisory task.
 3. Professional Certification on Biosafety/Biosecurity
 4. Professional Training on Biosafety and Biosecurity
 5. Advocate of biosafety and biosecurity within the institute.

Summary of Trained Participants

Ladderized Training Program

Trainings 2016 to 2018	Number of Participants	Passed	TOTAL	Completed the Course
1 st Biosafety 101 (SEPTEMBER 2015)	110	110	591	450 (76%)
2 nd Biosafety 101 (JUNE 2016)	164	116 (71%)		
3 rd Biosafety 101 (JUNE 2017)	144	68 (47%)		
4 th Biosafety 101 (JUNE 13, 2018)	68	62 (91%)		
5 th Biosafety 101 (JUNE 2019)	105	94 (90%)		
1 st Biosafety 102 (Applied Biosafety 2016)	42	42	107	98 (92%)
2 nd Biosafety 102 (Applied Biosafety 2017)	31	28 (90%)		
3 rd Biosafety 102 (Applied Biosafety NTRL 2019)	34	28 (82%)		
Outbreak Responders (Batch 1 and 2)	27	27	27	100%
Department Biosafety Officer Training (Batch 1)	14	14	14	100%

Trainings Initiated to Advance RITM Biosafety Officers and Responders

Pathogen Asset Control System (PACS) Training

20

Certified Trainers of Infectious Substances Shipping

10

Respirator For Testing (Training for Personnel To conduct Fit Testing)

23

Laboratory Facility Design Workshop

20

Biosafety Training (EU CBRN CoE)

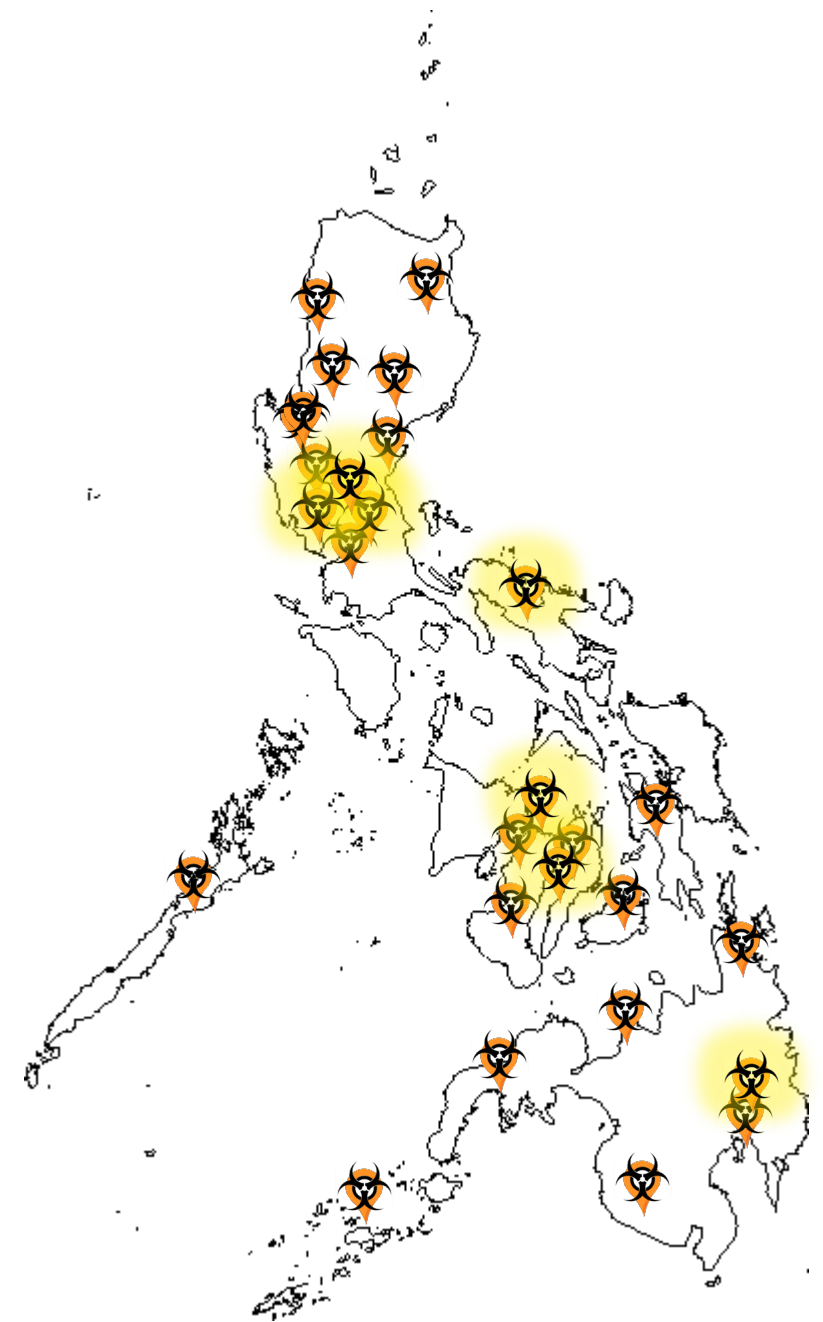
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Impact

- Number of people trained
- Support from the Management
- High evaluation rating

People who understand, apply
and share biosafety and
biosecurity



Office of RITM Director

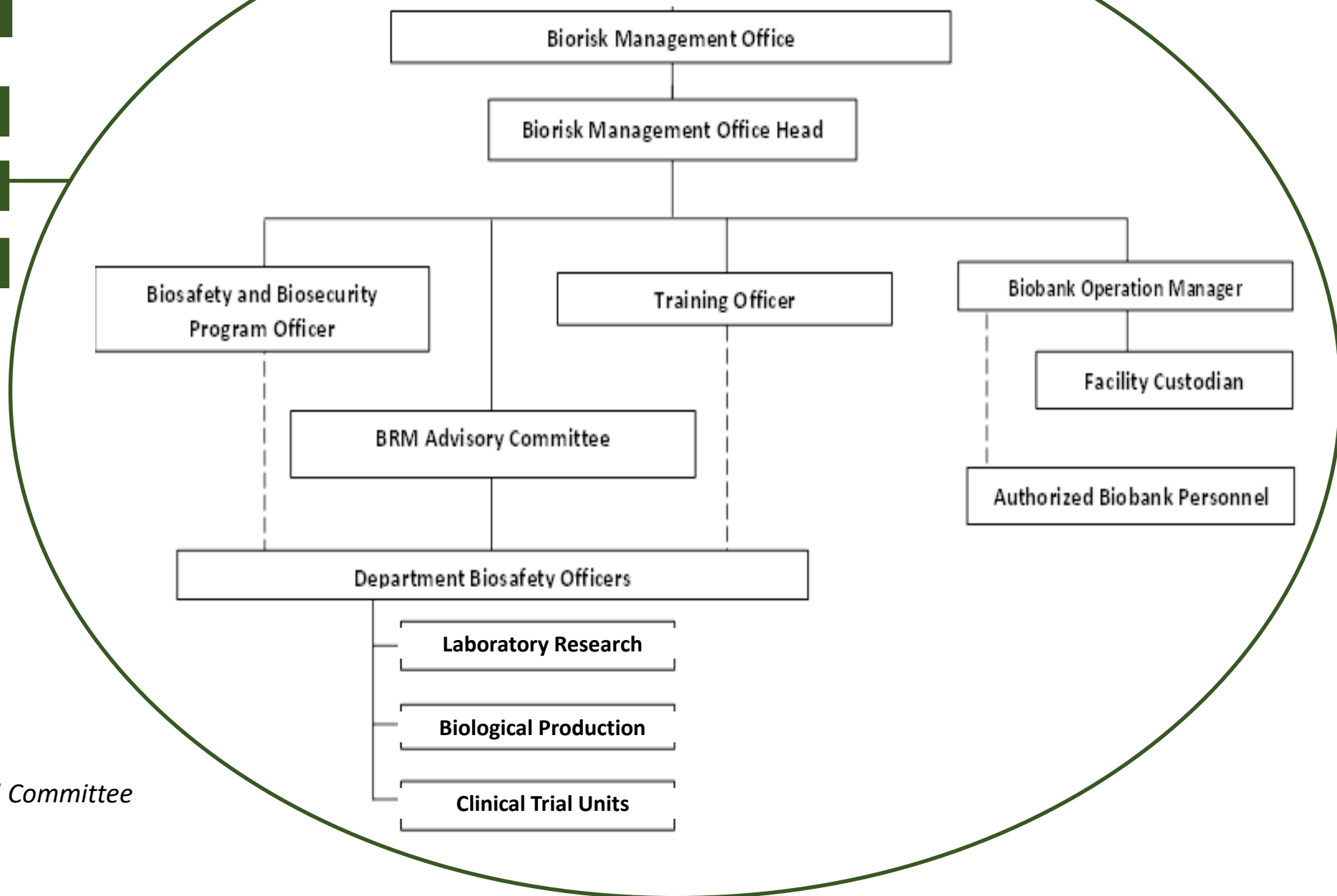
Safety Committee

IPCC

BRMO

OHS

Organization Structure



IPCC – Infection Prevention and Control Committee

BRMO – Biorisk Management Office

OHS – Occupational Health and Safety

RITM is the WHO TDR Supported Regional Training Center for Biosafety

Trainings 2016 to 2018	Number of Participants
Roll Out of Biosafety Training (Training of Trainers) – National Blood Services Program	(12) 102
RTC Biosafety Training Course – Palawan	16
RTC Biosafety Training Course – Academe and Private Laboratories	14*
Biorisk Management Workshop for SNL and ILI	24



BRMO trains BOQ regional officers



In photo: RITM-BRMO leads training workshop for BOQ regional officers

The **Biorisk Management Office (BRMO)** of the **Research Institute for Tropical Medicine (RITM)** spearheaded the first **Biosafety, Biorisk Management, and Infectious Substance Shipping Training Workshop for the Regional Officers of the Bureau of Quarantine (BOQ)** at the Bali Village Hotel, Tagaytay City on May 6-10, 2019.

Bureau of Quarantine trained by RITM biosafety officers on Biosafety, Biosecurity, Biorisk Management and Infectious Substance Shipping

RTC conducts 1st International Training Course on Biosafety



Training participants doing a return demonstration of the donning and doffing of PPEs during one of the sessions.

The World Health Organization (WHO)-supported Regional Training Center (RTC) for Good Health Research Practices, through the RITM Biorisk Management Office, conducted the first International Training Course on Biosafety on May 21-23, 2019 at The Bellevue Hotel, Alabang.

RITM as the WHO TRD Supported Training Center for Biosafety has trained representatives from the Western Pacific Region (Vietnam, Cambodia, Indonesia, Laos and the Philippines) on Biosafety, Biosecurity and Biorisk Management

Summary

- Training is vital component of an effective Biorisk Management Program
- Training program must be customized according to the needs of the organization
- Management's support is the key towards successful implementation.
- Employees could be trained in house in preparation to be a biosafety professional



Mabuhay!



Department of Health
RESEARCH INSTITUTE FOR TROPICAL MEDICINE

