



WOAH FIRABioT Project Inception Workshop

Overview of the Regional Training and Certification Program for Biosafety and Biosecurity Professionals

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Regional Centre of Excellence for Biosafety and Biosecurity – Southern Africa

Africa Region Subject Matter Expert (Af-RSME) – Biorisk Management



**NATIONAL INSTITUTE FOR
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Division of the National Health Laboratory Service



Outline

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 - Curriculum Development
 - Practical – Improvement Project
- Regional Centre of Excellence for Biosafety and Biosecurity (RCoEBB)

Africa CDC Biosafety and Biosecurity Initiative



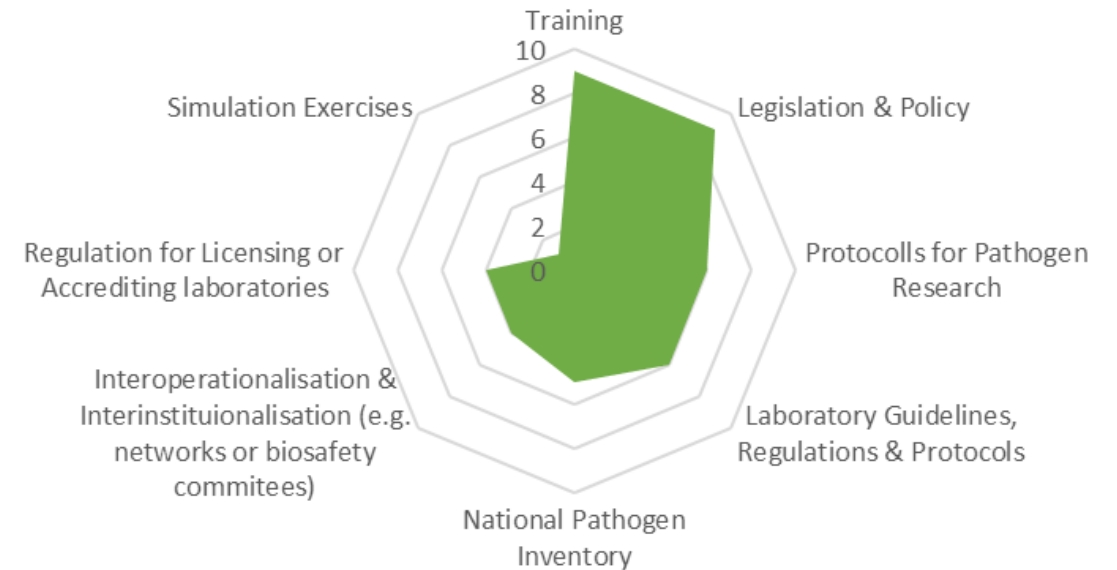
To strengthen the biosecurity and biosafety systems of African Union Member States to comply with international regulations including the International Health Regulations (IHR 2005), Biological Weapons Convention (BWC), and United Nations Security Council Resolution (UNSCR) 1540 and the GHSA action packages (APP3)

Biosafety and Biosecurity Initiative – Regional Consultative Process

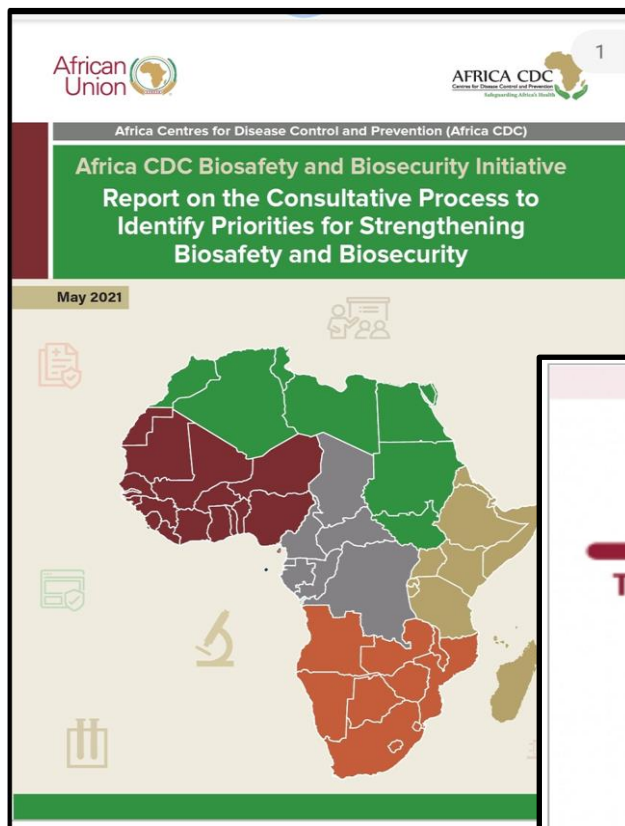
Three (3) working groups facilitated by international and regional SMEs based on common gaps that included:

- 1 Lack of or inadequate (and fragmented) legislation, regulations, and guidelines relevant to biosecurity and biosafety;
- 2 Lack of or limited training programs; Low level or awareness among researchers/scientists;
- 3 Lack of or limited capacity to adhere to international biosecurity and biosafety best practices – including infrastructure, resources and human capacity.

Comparison of Southern Africa RCC Country-Specific Priority Actions



Biosafety and Biosecurity Initiative

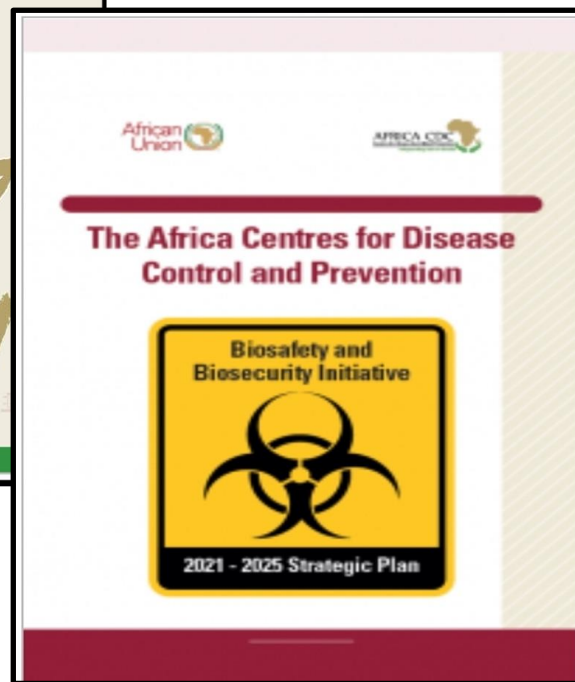


Regional Priorities Report

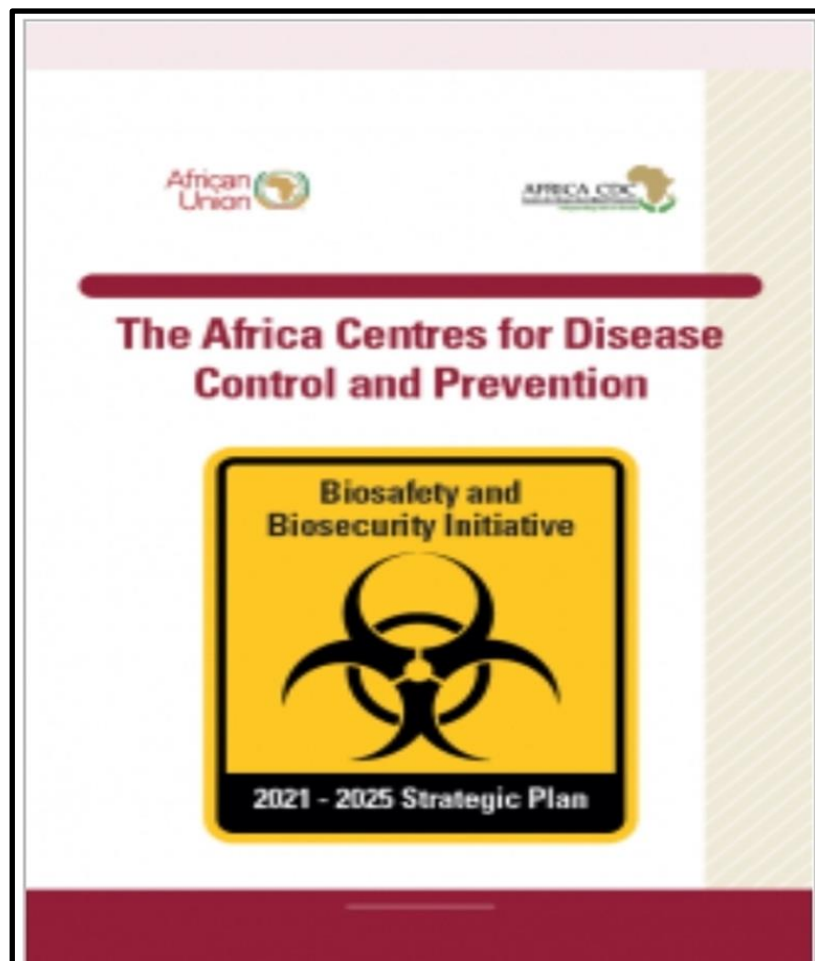
<https://africacdc.org/download/africa-cdc-biosafety-and-biosecurity-initiative-report-on-the-consultative-process-to-identify-priorities-for-strengthening-biosafety-and-biosecurity/>

Africa CDC Biosafety and Biosecurity 5-Year Strategic Plan

<https://africacdc.org/download/biosafety-and-biosecurity-initiative-2021-2025-strategic-plan/>



Biosafety and Biosecurity Initiative: 2021 – 2025 Strategic Plan



GOAL: To strengthen the biosecurity and biosafety systems of African Union Member States to comply with international regulations including the International Health Regulations (IHR 2005), Biological Weapons Convention (BWC), and United Nations Security Council Resolution (UNSCR) 1540 and the GHSA action packages (APP3)

ACTION: Develop local, accessible, sustainable and regionally recognized and endorsed formal training and certification program

Priority Area 1 Develop a Biosafety and Biosecurity Legal Framework for the Africa Region

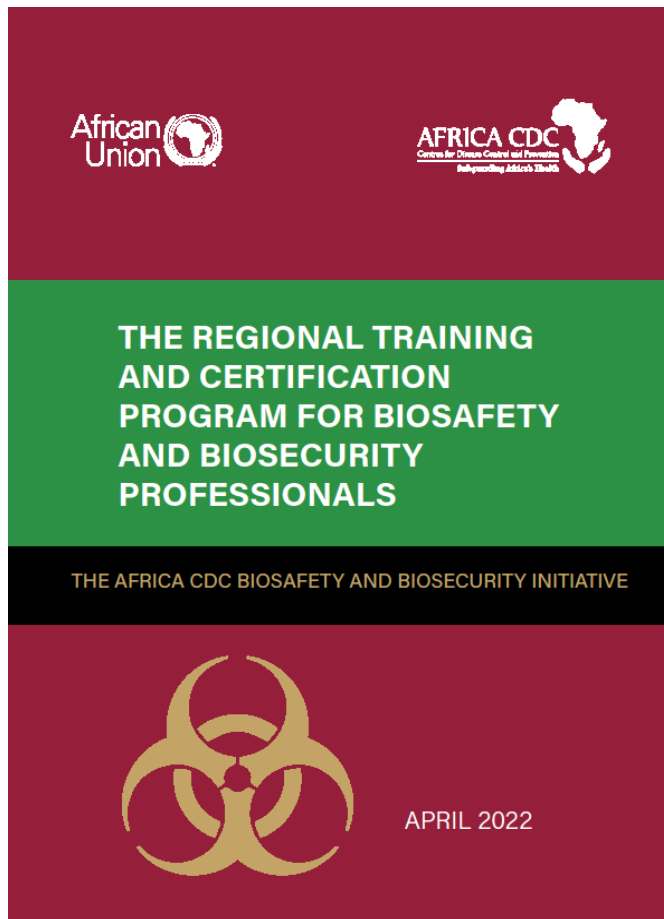
Priority Areas 2 Establish Regional and Continental Biosafety and Biosecurity TWG to coordinate and monitor implementation

Priority Area 3 Establish a Regional Training and Certification Program for Biosafety and Biosecurity Experts

Priority Area 4 Establish a regulatory and certification framework for institutions handling high risk pathogens

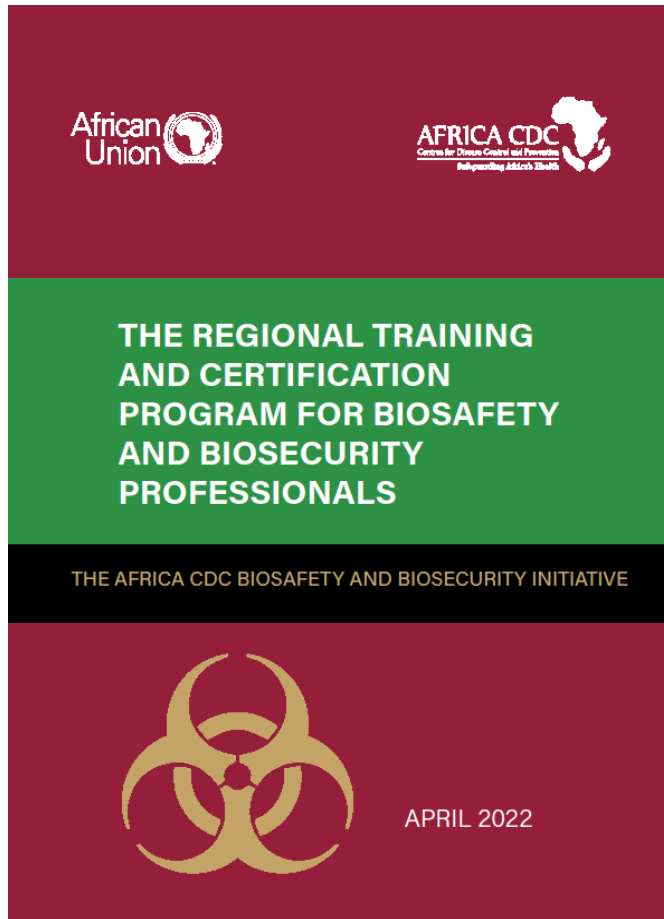
Priority Area 5 Strengthen NPHI and NRL capacities to prevent, detect and respond to Events of public health concern in each MS

Training Program Objectives



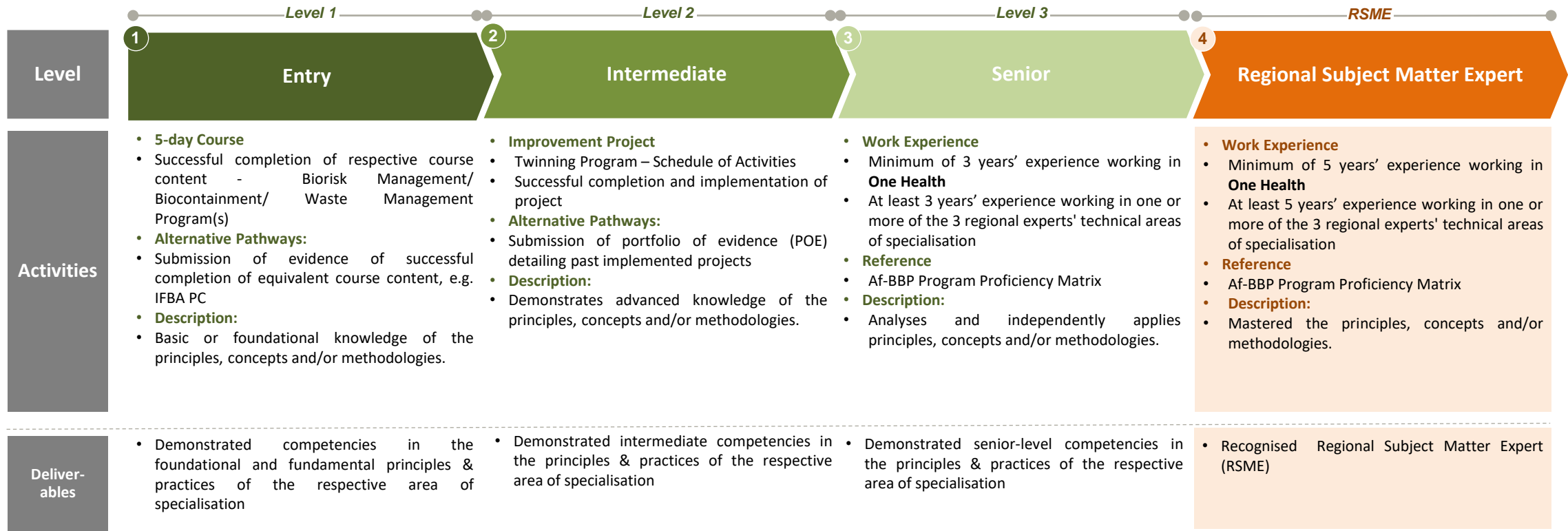
- **To train and develop** a baseline knowledgebase for the biosafety and biosecurity professionals on the African continent that aligns with international best practice and international equivalency certifications.
- To develop a **harmonised biosafety and biosecurity capacity building program** that enables workforce development of bioscience practitioners with **knowledge, skills and demonstrable competencies** in biosafety and biosecurity to enhance safety and security with working with biological agents.
- To ensure that the continent has an **established process for recognizing and accrediting its biosafety professionals** so that a database of these professionals may be called upon for all matters relating to biosafety and biosecurity on the continent.

Training Program Scope



- i. To train and certify Biosafety and Biosecurity Professionals in four (4) priority areas of specialization for professionals in the Africa Region:
 - Biorisk Management
 - Maintenance and Management of High Containment Facilities
 - Biological Waste Management
 - Selection, Installation, Maintenance and Certification of Biological Safety Cabinets
- ii. To develop African biorisk management professionals who are able to implement biosafety and biosecurity programs, to enhance safety and security with working with biological agents, consistent with the world's best practices within limited resource environments.

Program Proficiency Levels and Progression Process



Regional Subject Matter Expert (RSME): is an Individual that has mastered the principles, concepts and/or methodologies related to the areas of specialisation described above and has demonstrated significant success in performing the most demanding assignments requiring the competency. This knowledge and experience must be demonstrable and documented, with their expertise being recognized by their peers, regionally and/or internationally. **RSMEs will provide ongoing mentorship, conduct in-country competency evaluations and trainings in areas of their proven competencies.**

RTCP Curriculum Development

- Africa CDC launched the Regional Training and Certification Program for Biosafety and Biosecurity Experts in April 2022
- Curriculum development is at an advanced stage – Biorisk Management and Biological Waste Management
 - ECC launch end of June 2022
 - Training conducted in August and exams in November 2022





Intermediate Level: Practical – Improvement Project

Twinning Program – Schedule of Activities

Stage	Timeline	Program Activities
Post-Level 1		Participant "Twinning" <ul style="list-style-type: none"> - Participants to choose a "twin" or one will be assigned to them. - A twin is another candidate participating in either of the Certification programs and should be at a different institution.
	At least 4 weeks after the course attendance	Inception Meetings <ul style="list-style-type: none"> - Meetings between twin participants (virtually or in-person) to get to know one another and to discuss each other's goals & objectives. - Complete the project initiation worksheets, share amongst each other with feedback provided. - Finalize the project initiation worksheet (once final, this worksheet is now the Project Plan).
Participation and Project Execution	10 Months	Implement Project Plan <ul style="list-style-type: none"> - Record progress and progress checks on the Project Progress log. - Check in with twin at a frequency defined in the Project Plan. - Share and document lessons-learned and challenges twins are struggling to overcome. Project Document Review <ul style="list-style-type: none"> - Submit project document for review by partner-twin. - Twin to provide constructive feedback based on the rubric(s) in the toolbox and their own experience. - Update project document based on mutually agreed upon changes.
Project Completion and Evaluation	1 - 4 weeks Evaluation	Project Evaluation <ul style="list-style-type: none"> - Submit project documents for review by Regional Experts as appointed by ASLM-ACDC - Examination and Certification Committee (ECC). - Regional experts will use the rubric(s) plus their experience to provide feedback. - After considering the expert feedback and making any changes, share the final document with twin for any last comments and feedback. - Submit for final grading, the grade will be based on the rubric(s) and final expert feedback.



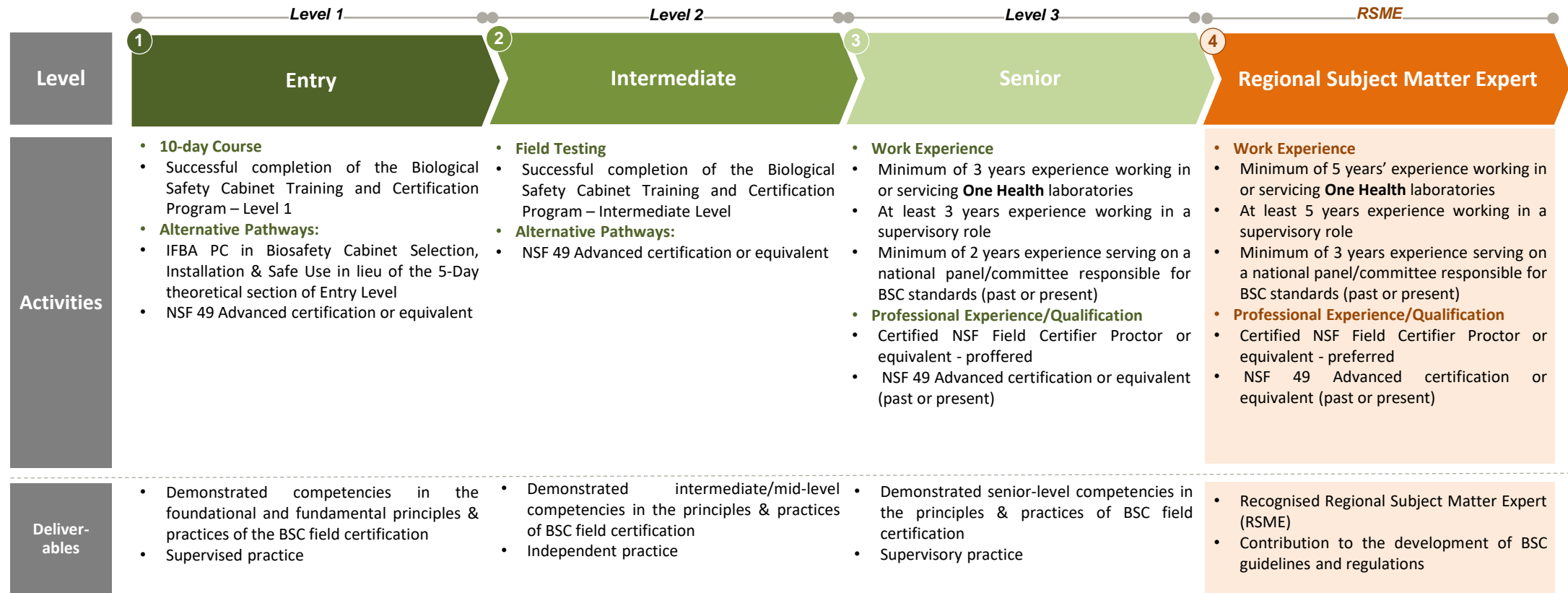
Biological Safety Cabinet Certification Program Curriculum

- The purpose of the Africa BSC Certification Program (Af-BSCCP) is to **address the lack of trained and qualified technicians** through the **provision of a regionally sustainable and accessible certification program**.
- Af-BSCCP has been **developed in line with international standards for both theoretical and practical forms of competency assessment**, which will upon successful completion will result in either **Entry Level or Intermediate Level certification**.

- Critical to have **the correct candidate with the right aptitude** for BSC certification, i.e. candidates with **math and some basic mechanical skills** generally fare well in the training process¹.

- ¹*Whistler T, Kaewpan A, Blacksell SD. A Biological Safety Cabinet Certification Program: Experiences in Southeast Asia. Applied Biosafety Vol. 21, No. 3, 2016*

Competency Evaluation Process



Examination and Certification Committee: Africa CDC shall establish Examination and Certification Committee (ECC) composed of RSMEs with demonstrable field certification experience (as specified in the Af-BSCCP) to administrate and evaluate the compliance of certified professionals. Other factors to be considered in the selection of RSMEs to serve on the ECC include past experience in serving on national panel/committees responsible for BSC standards, regional committees; geographical representation; gender balance; and diversity of expertise. The ECC shall **establish and implement a formal system for Continuing Professional Development (CPD) and renewal of certification.**



Regional Centres of Excellence for Biosafety and Biosecurity (RCoEBB)

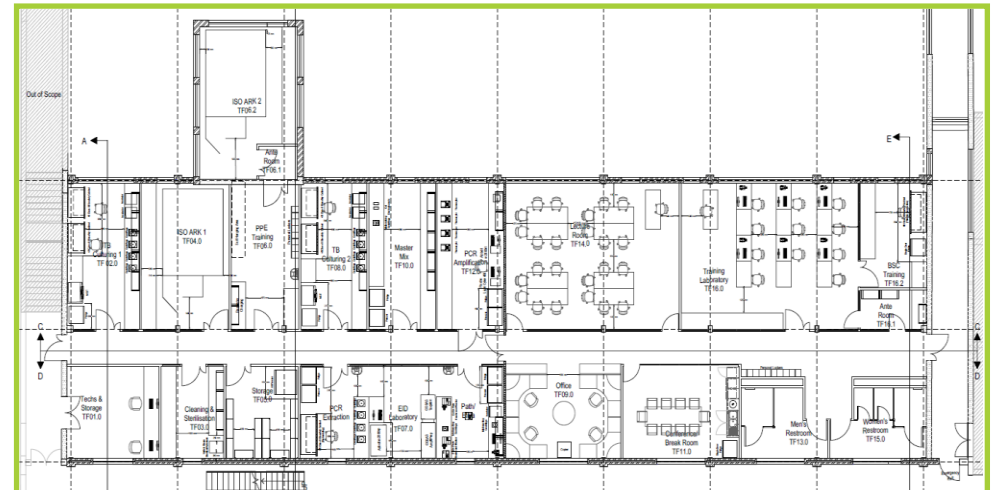
- RCoEBBs will be established as resource centres to implement, support and strengthen the RTCP.
- Physical and/or virtual centres of excellence with the capacity and resources to enable professionals to learn effectively through competency-based training and enhance capacity development and availability.
- The key performance areas of the RCoEs are as follows:
 - Provide Entry Level training and support competency-based certification.
 - Support with advocacy and promotion CPD programs in line with requirements to maintain certification.
 - Recognition of Prior Learning (RPL), alternative pathways, and experience.

Regional Diagnostic Demonstration Centre (RDDC) – RCoEBB Southern Africa

NICD Regional Diagnostic Demonstration Centre

Highly versatile, state-of-the-art and first of its kind in Africa training centre, designed to provide safe, secure and dedicated laboratory space built in accordance with internationally accepted laboratory biosafety and biosecurity standards for training in routine diagnostic procedures.

- Designed and constructed to mimic a true laboratory environment so that learners will experience the appropriate infrastructure and operation of laboratories that adhere to biosafety and biosecurity standards.
- The 600m² training facility is situated on the Upper Ground floor with flexible space provision for laboratory, office/lecture rooms and supporting functions.



Facilities and RCoEBB Program – Next Steps



- Develop and implement training and Certification for laboratory equipment maintenance
 - Develop training and certification program for laboratory equipment
 - Conduct training of technicians at RCoEBB
 - Competency assessment of technicians in-country

- END -

Thank You



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