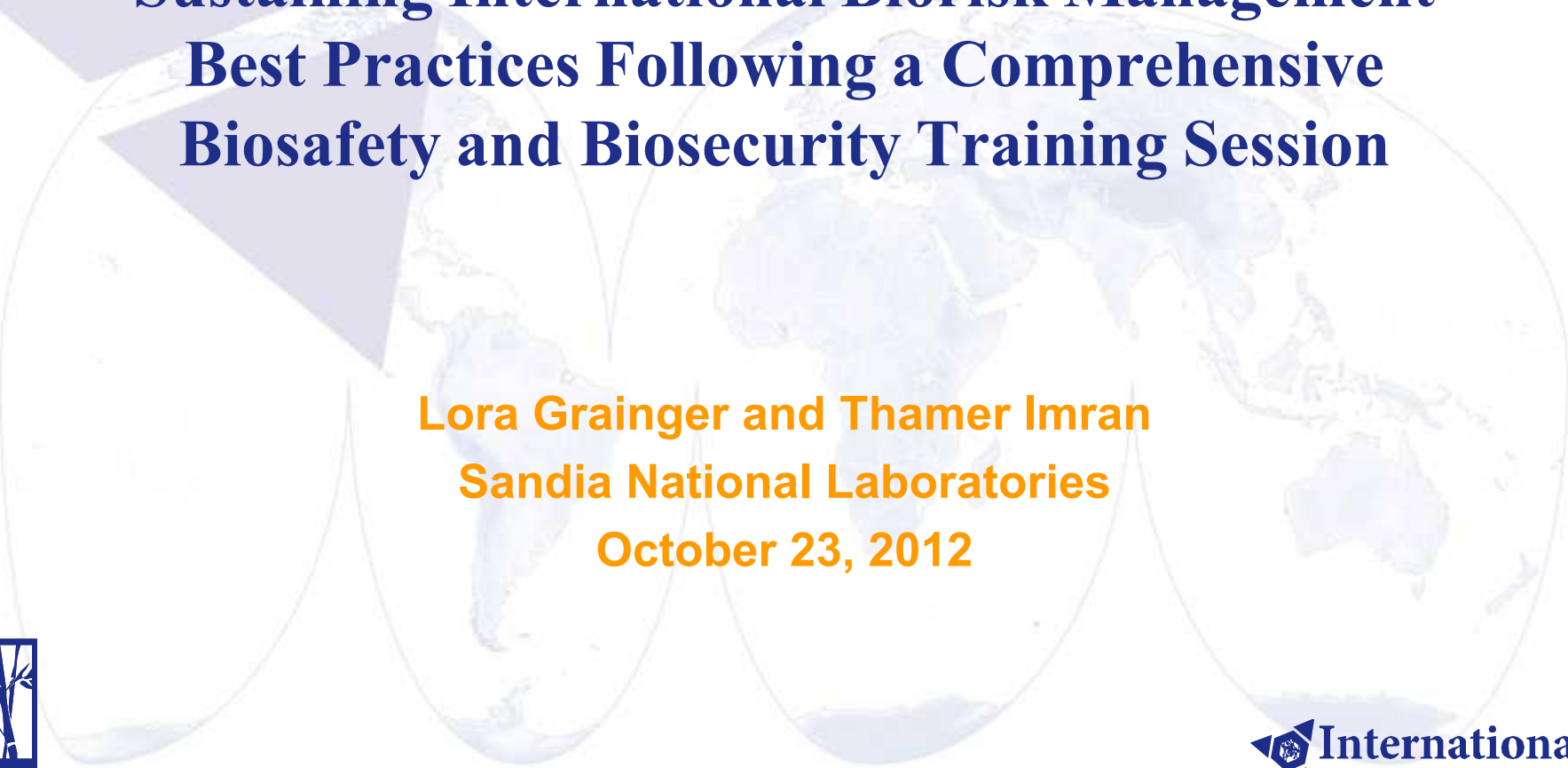




Sustaining International Biorisk Management Best Practices Following a Comprehensive Biosafety and Biosecurity Training Session



Lora Grainger and Thamer Imran
Sandia National Laboratories
October 23, 2012



Introduction

- **Background Information**
 - Controlling Biorisks Course
- **International BRM Training – CBR Follow-up Strategy**
 - Objectives
 - Project Outline
- **Example Projects**
 - Action in Risk Assessment
 - Mitigation Implementation
- **Lessons Learned**
- **Outcomes**
- **Next Steps**



Background Info – Controlling Biorisks (CBR)

- **An introductory Biorisk Management Course offered by Sandia National Laboratories, International Biological Threat Reduction department**
- **2010 – 2011 CBR Trained 55 Participants from Afghanistan, Iraq, Yemen, Jordan, Pakistan, Japan, Kenya, Uganda, Tanzania, South Africa, Denmark and the USA**
- **The focus of CBR is to provide a broad understanding of biorisk management best practices in the areas of biorisk assessment, mitigation and performance.**



CBR Follow-up Strategy

Mentorship

Build upon in-country relationships
Apply BRM in a country or situation specific way
Utilize experts in the field
Someone to answer questions and work through problems
Professional development
Trust and community

CBR Course

Country and Regional Engagements



CBR Follow-up Project Objectives

Goal

The CBR Follow-up Project is designed to provide support for implementing biorisk management solutions at the participants' home institutions.

Strategy

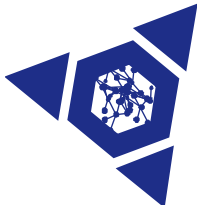
10 participants were selected from previous CBR courses

Action

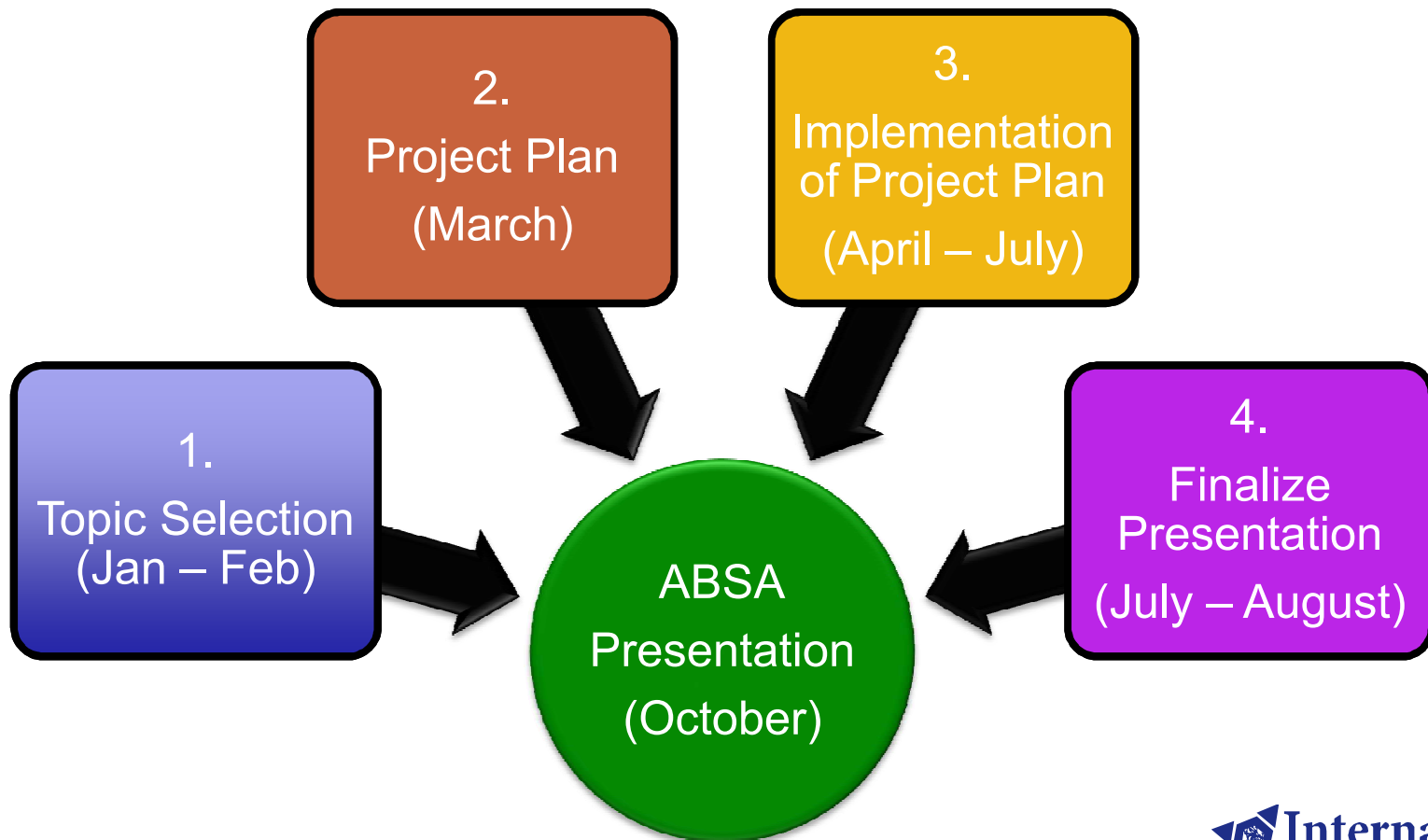
The participants were guided through the process of performing a risk assessment and subsequent risk mitigation plan for their proposed project.

Sustainability

Participants were not provided with any additional resources, besides mentorship and an opportunity to present their work at an international biosafety conference.



Project Outline





Projects

Session A: Facility Risk Assessment and Mitigation Strategies to Improve Biorisk Management

9:35-10:05	Iraq	A Comparative Approach: Integrating Current Facility Risk Assessment Data to Drive Biorisk Management Decisions for a Future Facility Presenters: Ihsan Al-Sagur and Emad Khammas
10:05-10:35	Uganda	Increasing Biorisk Management Capacity and Material Control and Accountability using a Perceptual Survey Presenters: Joseph Nkodyo and Samuel Majalija
10:35-10:50		Break

Session B: Controlling Biosafety and Biosecurity Risks Associated with Handling Biological Agents

10:50-11:20	Kenya, Jordan and Uganda	Mitigation Recommendations for Access to Biological Agents, Waste Decontamination and Disposal, and Incident Response Planning Presenters: Andrew Muruka, Rawan Khasawneh and Deo Ndumu
11:20-11:50	Uganda and Kenya	Development of Standard Operating Procedures (SOPs) to Improve Laboratory Biosafety and Mitigate Risks Associated with Shipping and Transport of Biological Agents Presenters: Joseph Bukusuba and Cecilia Rumberia



Action in Risk Assessment

Comparative

using current risk assessment data to influence mitigation measures in a proposed bioscience building

Perceptual

Using a survey developed to assess peoples perceptions about BRM in a facility to identify needs. Assayed attitudes about a particular BRM process.

Outcomes

Locally addressed unique approaches to identify BRM needs

Deliverables

Data sets. Practice using BioRAM in new contexts. Functional SOPs in place. Improved biosafety and biosecurity

Strategic

Using risk assessment data in a to develop an incident response plan. Also to influence future, role specific, training needs

Working

Assessing SOP development needs and drafting SOPs. Assaying communication challenges during a BRM program. Identifying current disinfection/decontamination needs



Mitigation Implementation

Training

Role specific from perceptual survey. Topic specific – disinfection, access controls, shipping. Developed trainers from other groups now have tools from which to apply their skills

SOPs

Functional set added into a larger group (Kenya and Uganda) training strategies

Outcomes

Practice using DATA to influence mitigation measures

Deliverables

Locally specific mitigation measures in place. Included performance metrics from the start.

Administrative Controls

Risk assessment used to influence policy – strategic planning (building) for a facility based on current procedures happening in the laboratory

Improved Risk & BRM

Communication

among departments, regulatory bodies and with management and leadership within a facility



Lessons Learned

- **An applied, robust, reproducible, and meaningful risk assessment is HARD.**
 - How to get data, how to ask the right questions, sensitivities – why are you collecting data, what to do with all the data, how to analyze it, how to translate it into suggested mitigation strategies.
- **Mentorship projects take a lot of time**
 - Mentors and the participants
- **Communication is key**
- **Flexibility is a must**



Outcomes

Created a foundation for future biosafety and biosecurity improvements

Trained, qualified, experienced, and confident individuals who can, on their own, promote biorisk management best practices.

Broader context - Created a network to build upon individual goals with existing projects

- University setting perceptual survey positive dual use
- Shipping training with integrated SOP training
- Trainer development – relevant topics
- Professional development – in hand strategic project plans, international conference



Next Steps

- **Pilot project** – We want to know how we did. Student's perspective, tangible deliverables – assign numbers. Develop and describe strategy.
- **Measured success** – Show that participants who took part in both the CBR course and the follow-up mentorship program have had more measured success at achieving their biorisk management goals.



Acknowledgements

The Participants

Biosecurity Engagement Program

Sandia National Laboratories

- Susan Boggs
- Eric Cook
- Jennifer Gaudioso