Strengthening the UNSGM: Moving Towards a Global Trusted Network of UNSGM Designated Laboratories

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Outline

- Motivation
- First Swiss WS 2015
- Second Swiss WS 2016
- Third Swiss WS 2017
- Fourth Swiss WS 2018
- Outlook

Swiss UNSGM Designated Laboratories Workshop series

Motivation

- Take the necessary steps to establish and operationalize a global trusted network of designated laboratories for the analysis of samples in an investigation of alleged use of biological weapons under the UNSGM

Series of workshops

- Expert discussions by designated laboratories on roster (representative group)
- Inclusive in terms of geographical representation (countries actively interested in UNSGM)
- Expand participation based on progress
- Incentivize concrete activities among designated laboratories

Progressive planning after each workshop
First Swiss UNSGM Designated Laboratories Workshop held in November 2015

Objectives

- What is the task of designated laboratories?
- How to successfully fulfill these tasks?
- How to meet international quality assurance expectations?

Key findings

- Insufficient information regarding capabilities and quality of laboratories on UNSGM roster
- Not all biological agents of potential relevance for the UNSGM are of interest to public health
- Chain-of-custody, quality assurance, validation of methods and reporting requirements are of utmost importance
Second Swiss UNSGM Designated Laboratories Workshop held in June 2016

Objectives

- What would a mandate look like and how to fulfill it?
- What would be considered an ‘unambiguous’ identification?
- What would a report be expected to contain?

Key findings

- Mandate for analysis: Set of instructions and guidelines; Need for flexibility to accommodate mission context
- ‘Unambiguous’ identification: Critical element supporting mission findings; Must meet requirements
- Reporting of laboratory results: Must withstand technical scrutiny; Must include any unusual / unexpected findings
Third Swiss UNSGM Designated Laboratories Workshop held in June 2017

Objectives

• What is the value of a scoring system for analysis methods?
• What constitutes best practice in laboratory analysis?

Key findings

• Scoring system: On its own, does not establish proof of BW use; When applied in flexible manner, it might serve as guidance tool
• Best practice: Demonstrate proficiency and quality assurance through accreditations and validations of analysis methods as well as through conducting inter-laboratory calibrations

➢ Necessity for practical work: Conduct of confidence building exercises; Piggy-backing on existing schemes
➢ While observing: Inclusiveness (scientific scope and geographical representation); Comprehensive mix of laboratory capabilities
Activities after the Third Swiss UNSGM Designated Laboratories Workshop

Guiding principles for activities

- Leadership and support for activities are to be provided by the laboratories themselves
- Participation in exercises is voluntary and should be open to all interested laboratories

Exercises

- Project by Germany that provides External Quality Assurance Exercises (wet-lab) in the fields of bacteria, viruses, and toxins
- Project by Denmark supported by Sweden and with financial support by the US that provides Confidence Building Exercises (dry-lab) through genomic data analysis of bacteria
- Of potential interest to the UNSGM designated laboratories, a range of on-going Biotoxin Exercises are organized by the OPCW
Fourth Swiss UNSGM Designated Laboratories Workshop held in September 2018

Objectives

• Review of exercises recently conducted or initiated
• Interaction between investigation team and laboratories
• Exploration of additional elements for quality assured laboratory evidence

➢ Moving from conceptualization and general discussions towards practical work and interaction between laboratories interested in contributing to the development of a trusted UNSGM laboratory network
Fourth Swiss UNSGM Designated Laboratories Workshop held in September 2018

Key findings

• Growing appreciation for developing a trusted laboratory network through exercises and exchanges
• A first important step towards operationalization has been achieved with the conduct of Confidence Building Exercises
• Sample handling should follow forensic principles thus ensuring sample identity at any given moment of the chain of custody
• Depending on mission context, the concept of a hub laboratory may prove useful in supporting a mission

➢ There is significant common ground on what is required to strengthen the operational capacity of the UNSGM with regard to bioanalytical laboratories
Fourth Swiss UNSGM Designated Laboratories Workshop held in September 2018

On-going practical work

• Continue the various formats of Confidence Building Exercises

Issues to be addressed in the future

• Develop plans for sustained funding for future exercises
• Aim for a broader geographical representation of laboratories
• Develop guidance for various aspects such as sample collection towards Recommended Operating Procedures
• Address potential issues related to the shipment of samples
• Develop evaluation methodologies for laboratory outputs
• Further refine the concept of a hub laboratory
• Address the need for sensitizing political actors and regulators to the importance of tackling these matters
Outlook

Fifth Swiss UNSGM Designated Laboratories Workshop planned for 11 – 13 September 2019 in Spiez, Switzerland

Looking back

• Take stock of progress made towards strengthening the operational capacity of the UNSGM with regard to bioanalytical laboratories

Moving forward

• Further develop common understandings on concepts and issues that need to be addressed for a robust and trusted network of UNSGM designated laboratories