



International Federation of  
Biosafety Associations

# Biosafety and Global Public Health

Biosafety and biosecurity are fundamental elements of public health systems in the global fight against infectious diseases. Despite this central role, many laboratories still lack effective biosafety practices, equipment and infrastructure. These circumstances not only present a risk to laboratory-acquired infections among healthcare workers, but also present a risk of release of infectious agents back into the surrounding community and environment preventing efforts to contain and control infectious diseases.

The International Federation of Biosafety Associations and its Member Biosafety Associations are assisting national authorities to integrate biosafety into national policies, to improve sustainable laboratory infrastructure, and to increase biorisk management competencies among those working with infectious diseases. Our locally driven approaches are based on each country's needs, are practical, cost-effective and sustainable over the long term.





National biosafety programs include the “whole of government” (e.g. human, animal, and security) and are anchored in key international instruments, treaties, standards and guidelines that control and inform the management of biological risks. We take a “cradle to grave” approach to lower the risk of exposure at all stages in the healthcare system where biological agents may present a risk to workers (e.g. sample collection in the field, transport, laboratory, hospital, and disposal).

Laboratories are an integral component of global health security and play a major role in the safe and secure handling of biological materials. Building laboratory infrastructure that is highly dependent on engineering controls and technology presents a challenge in many countries where construction and maintenance costs are prohibitive.

Rather than taking a high technology approach, the International Federation of Biosafety Associations (IFBA) adopts a risk-based approach to designing “built-to-purpose” laboratory equipment and infrastructure that is:

- relevant to local circumstances
- tailored to the actual risks of an individual laboratory
- economically feasible and cost-effective to maintain

The IFBA’s biocontainment engineering network and private industry partners are working together on sustainable laboratory design approaches to reduce initial capital and on-going operational costs. Building sustainable laboratories also requires a strong focus on procedural and human factors, including trained and competent engineering and maintenance staff.

