



## UKRAINE – ACHIEVEMENTS, CHALLENGES AND NEEDS

# 1

According to official sources, up to 144,000 square kilometers of Ukrainian territory are potentially contaminated with landmines and other explosive remnants of war, requiring survey and clearance. Each additional day of ongoing conflict further compounds this challenge. In response to the scale of contamination, Ukraine has been compelled to undertake demining operations during active hostilities, while simultaneously developing innovative methods and approaches and continuously strengthening institutional frameworks to ensure long-term, sustainable, and effective mine action. What has been achieved so far, which challenges are the most demanding and what are the future plans for demining in Ukraine?

## INSTITUTIONAL/MARKET-BASED MODELS AND GOVERNANCE CHALLENGES

# 2

The process of humanitarian demining is highly demanding and time-consuming, yet it remains essential for the systematic clearance of mine-contaminated areas and the long-term safety of affected communities. Each country faces distinct operational, infrastructural, and security conditions. Models of mine action – whether institutionally driven or shaped by market-based mechanisms – differ substantially. As a result, national approaches, organizational structures, and management methods vary from one context to another. Despite these differences, recent years have seen significant progress in the development and professionalization of mine action governance in many countries. How do successful institutional solutions and the challenges related to aligning state capacities with market-based models of operation appear in practice?

## INCLUSION OF NOVEL TRAINING / CAPACITY-BUILDING APPROACHES

# 3

An effective mine action system in today's challenging environment requires the modernization and standardization of training approaches, as well as the systematic strengthening of capacities among all involved actors. The introduction of innovative learning methods and continuous education for all personnel within the mine action system at every level enables faster and higher-quality acquisition of essential skills. At the same time, the development of standardized training programs ensures greater productivity and professionalism of teams. The combination of modern tools, unified guidelines, and targeted capacity-building of specialized personnel forms a solid foundation for more effective, safer, and long-term sustainable mine action operations.

## R&D AND THE APPLICATION OF ADVANCED TECHNOLOGIES – AI, ROBOTICS AND MULTI-SENSOR APPROACHES

# 4

The role of R&D is crucial in advancing the application of artificial intelligence, robotics, and multi-sensor technologies in mine action. Innovative approaches support advanced solutions through adaptive systems and data-driven methodologies. The focus of this topic is on the integration of AI algorithms with robotic platforms and multisensor data to enhance perception, decision-making, and operational efficiency, while also addressing current challenges and future opportunities in advanced R&D environments.