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# **FOOD AND AGRICULTURE**

Through work with the U.S. Department of Agriculture (USDA), the U.S. Department of Health and Human Services (HHS), and state and local agriculture and public health agencies, CNA has developed expertise in exercise and serious games design and evaluation, real-world operations analysis, capability and readiness assessment, and strategic and operational planning.

# EXERCISE AND SERIOUS GAMES DESIGN AND EVALUATION

CNA tailors exercises and games to sponsor objectives. Sponsors range from government agencies to hospitals and laboratories and the private sector. Our recent work includes the following:

**State Foot-and-Mouth Disease (FMD) Exercises.** CNA conducted functional exercises for the California Department of Food and Agriculture and the Texas Animal Health Commission that examined unified command, decision making, and response in coordination with USDA during an FMD outbreak.

National Avian Influenza Exercise Program. To address action items assigned in the implementation plan for the National Strategy for Pandemic Influenza, CNA designed a decision-making tabletop exercise to examine the integral connections between field actions and laboratory response during an avian influenza outbreak. CNA applied a gaming approach to the exercise design and conducted 38 exercises across the nation. The exercises had more than 700 participants representing numerous federal, state, and local agencies, as well as the poultry industry.

**National FMD Exercises**. CNA designed and evaluated 16 regional tabletop exercises for USDA to examine National Animal Health Laboratory Network (NAHLN) laboratory capabilities, capacities, and decision making during an FMD outbreak.

Leadership Tabletop Exercises. CNA designed and evaluated two tabletop exercises for National Veterinary Service Laboratory

leadership. This series built upon lessons learned from the previous tactical-level NAHLN Avian Influenza and FMD exercises.

**Global Food Security.** CNA developed and analyzed the outcomes of a policy decision-making game to explore issues arising from, and possible responses to, global food system disturbances. The game brought together senior officials and experts from Africa, Brazil, China, the European Union, India, the United States, multilateral institutions, and the private sector.

Animal and Plant Health Inspection Service (APHIS) Exercise Program. CNA provided exercise and analytic support to APHIS in the development of an exercise series focused on internal and external response coordination. The series evaluated the APHIS Emergency Mobilization Guide, external coordination with the Federal Bureau of Investigation and the APHIS Communication and Information Standard Operating Procedure, and a Federal-to-Federal Request for Assistance. The Federal-to-Federal Request for Assistance workshops and tabletop exercise were designed to develop and validate processes and procedures for requesting and coordinating USDA and other federal assistance during a disease outbreak. The results and documentation associated with this effort are important to a federal-level understanding of non-Stafford Act incident response.

**National Exercise Program (NEP).** Under the Department of Homeland Security (DHS) NEP, CNA has evaluated National-Level Exercises, Top Officials full-scale exercises, and Principal-Level Exercises, which are Cabinet-level tabletop exercises. CNA also supported the design and evaluation of the Food, Agriculture, and Veterinary Response Exercise series regional workshop and Assistant Secretaries tabletop exercise and a Texas Panhandle regional FMD tabletop exercise.

**International Coordination of FMD.** CNA supported USDA and the North American Animal Health Committee through

the design and analysis of exercises involving agriculture agencies from Canada, Mexico, and the United States. The series focused on cross-border operations and decisions related to the North American Foot-and-Mouth Disease Vaccine Bank.

North American Plan for Animal and Pandemic Influenza (NAPAPI) Tabletop Exercise. CNA supported HHS with the design, facilitation, and evaluation of this senior-level exercise for the Senior Coordinating Body, a trilateral organization comprising senior officials from Canada, Mexico, and the United States.

#### **REAL-WORLD OPERATIONS ANALYSIS**

CNA pioneered the analysis of real-world operations with the military as a way to understand and improve operational capabilities. We have expanded this method to include the activities of other government agencies. We use a tested approach of observation, reconstruction, and analysis to identify critical lessons and to focus on needed improvements to existing capabilities. Our recent work includes the following:

**Foodborne Outbreaks and Related Incidents.** CNA assessed HHS actions, in collaboration with USDA, during responses to the 2006 outbreak of *E. coli* in fresh spinach and to the 2007 melamine contamination of pet food and animal feed.

**Hurricanes Katrina and Rita.** In a series of studies in 2005, CNA evaluated the response of federal agencies, including HHS and USDA.

**Exotic Newcastle Disease.** From 2002 to 2003, CNA evaluated USDA and state activities to contain and eradicate a large outbreak of Exotic Newcastle Disease.

**BSE "Mad Cow" Case.** CNA reconstructed and analyzed the 2005 Mad Cow Disease investigation focused on interagency coordination and the role of the APHIS National Coordination Group.

**Animal Disease Meta-Analysis.** CNA reviewed more than 70 after-action reports and conducted a meta-analysis of lessons learned from animal disease exercises and real-world events to assist ongoing efforts to identify the resources and steps necessary to improve response infrastructure.

### **CAPABILITY AND READINESS ASSESSMENT**

CNA has developed quantitative and qualitative approaches to capability and readiness assessment to help agencies measure and assess readiness. Our recent work includes the following:

**Regional Capability Assessment.** CNA has worked with several states and regions, including Atlanta, Hampton Roads, Houston, Seattle, and South Carolina, to assess capability levels and identify gaps. We have several proven methodologies for assessment, including self-assessment tools and quantitative modeling, that help agencies identify gaps and develop planning requirements, estimate capability development and sustainment costs, and support broader risk management frameworks.

#### STRATEGIC AND OPERATIONAL PLANNING

Virginia Department of Agriculture and Consumer Services (VDACS) State Disease Response Plan. CNA reviewed Virginia's plan for livestock disease response for consistency with federal animal disease doctrine and guidance and provided a detailed set of recommended revisions. We briefed the recommendations at a VDACS Catastrophic Large Animal Mortality Taskforce meeting and facilitated additional discussions to gather stakeholder and internal feedback on proposed revisions.

DHS Office of Health Affairs Food, Agriculture, and Veterinary Defense (FAVD) Strategic Plan and Implementation Plan. CNA is currently supporting the FAVD branch and its stakeholders through a structured, comprehensive, and collaborative strategic planning and implementation process. The strategic plan and implementation plan will guide the FAVD branch in achieving its mission and strategic goals over the next five years.

**Southern Animal Disaster Response Alliance.** CNA conducted a planning conference for the State of Missis-sippi Board of Animal Health to create a five-year strategic plan focused on developing and maintaining emergency response capabilities when dealing with animals in disaster situations, including agroterrorism.

## **ABOUT CNA**

CNA is a nonprofit research and analysis organization with 75 years of experience providing government agencies with datadriven insights and real-world, actionable solutions grounded in our direct experience with the operational environments where these solutions are applied. CNA developed the foundational techniques for operational analysis to address complex challenges facing government programs. We have applied these techniques successfully in areas ranging from defense to aviation, education, justice, and homeland security. For more information please contact: David Kaufman, Vice President CNA Safety and Security 703-824-2080

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