

Securing the Supply Chain Natural Hazards & Food Safety

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Drought, Flooding, Earthquake, Avian Flu, Exotic Newcastle, Foot & Mouth Disease

- What do these terms have in common?
- How are they related to the “Whole Community” and “Resilience”
 - What do those terms mean?
- Natural hazard NOT natural disaster!
- Who are the players in the food supply chain?
- Whose responsibility is it to protect the food supply chain?



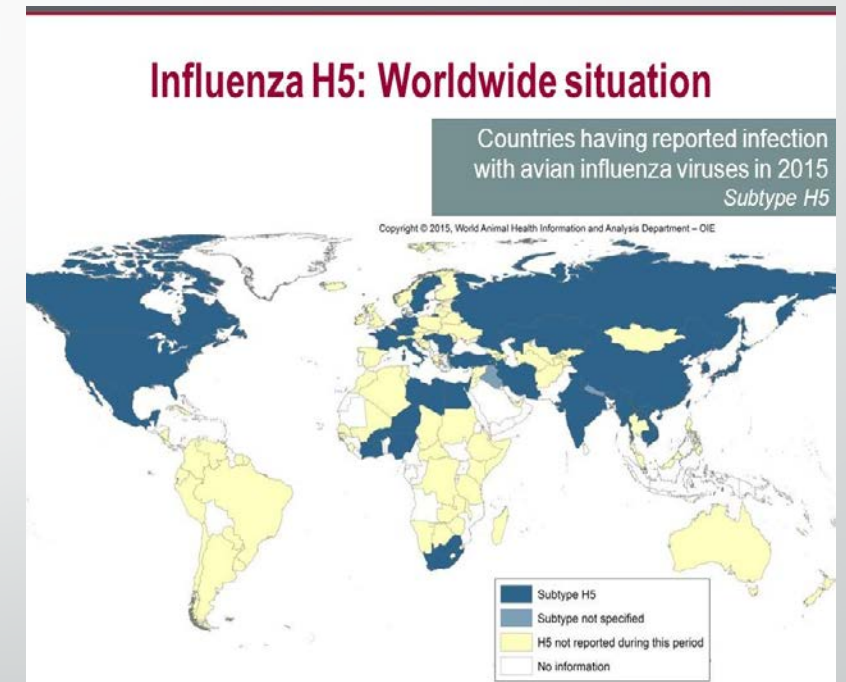
Exotic Newcastle

- Bird disease in California 2003-2004
 - Over 3 million birds euthanized - Southern California to middle of state
 - California Poultry 5% of Nation's production
 - \$1.7 Billion in sales
 - Response included local, state, and federal responders
 - Who were these people?
 - Potentially could have wiped out California's poultry industry
 - Huge impact to international trade
 - Potential harm to mammals
 - Biosecurity vs. Security
 - Fighting cocks, exotic birds, poultry and egg production



Avian Flu

- Bird Flu – continuous outbreaks in U.S. since 2014
- Euthanasia of more than 200,000 animals in three states - January to March of this year
- Nation's worst since 2015 – new cases still
- Normal measures of quarantines, transportation bans and mass euthanasia may not stop spread
- Mostly large commercial poultry houses, where at-risk birds killed using foam that smothers them
- Potential to become zoonotic.



Drought or Flooding

- Detriment to biosecurity
- Exacerbates pest invasions
- Makes response to Ag related events more challenging
- May occur in same year
- Relocation of California crops, huge displacement of farm workers
- Economic recovery can take years



Water Contamination in Hurricane Katrina's Aftermath

- Water contaminated with chemicals; gasoline, oil, lead, asbestos
- Biological contaminants; animal feces from pets, livestock, & wild animals; human waste & dead bodies of humans and animals
- Agricultural production of all kinds severely impacted
- Economic impact
- Public trust difficult to recover
- Many small agricultural producers never recover



What Do We Do About It?

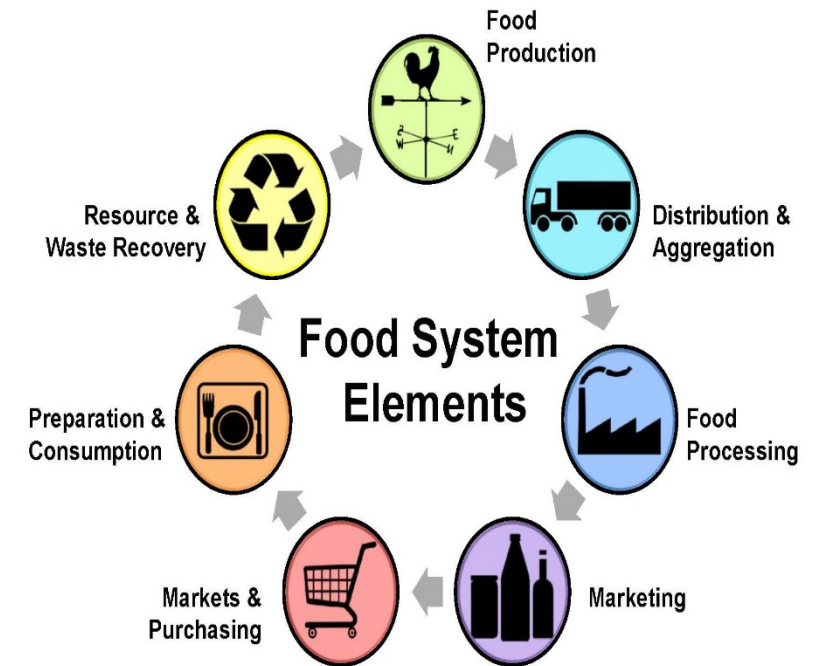
- Wait for the Government to Save Us?
- It Won't Happen Here...
- All Hazards Planning for Animal, Agriculture and Food Related Disasters
 - Organized process – using standard emergency management guidelines
- Emergency Management really is in **EVERYTHING!**



National Preparedness System

Helping Communities Withstand All Types of Hazards

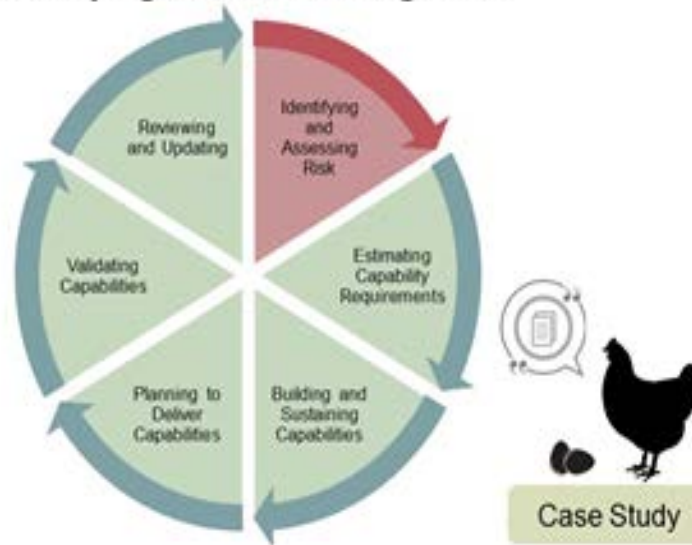
- Identify and Assess Risk
- Estimate Capability Requirements
- Build and Sustain capabilities
- Plan to use capabilities
- Validate
- Review and update



Adapted by Christy Shi, Center for Environmental Farming Systems.
From: Wilkins, J. and Eames-Sheavly, M. *Discovering the Food System: An experiential learning program for young and inquiring minds.*
Cornell University, Departments of Nutritional Science and Horticulture. <http://www.discoverfoodsyst.comell.edu/>

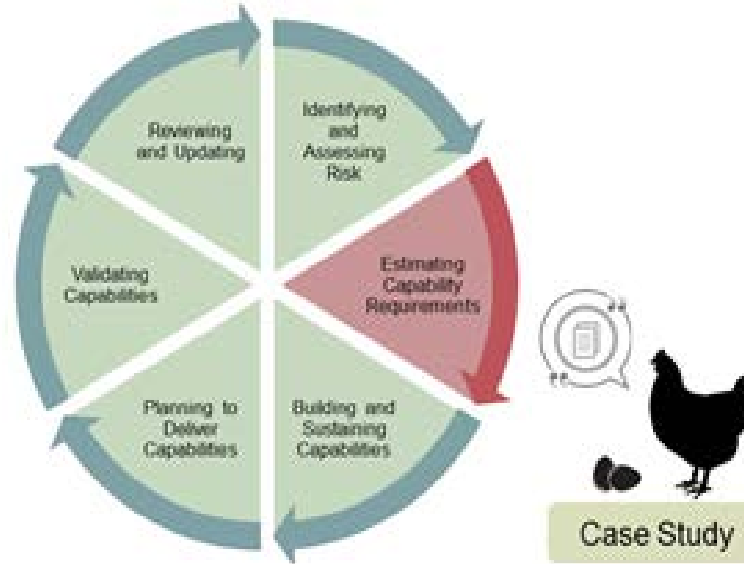
All Hazards Planning for Animal,
Agriculture, and Food Related Disasters

National Preparedness System:
Identifying and Assessing Risk



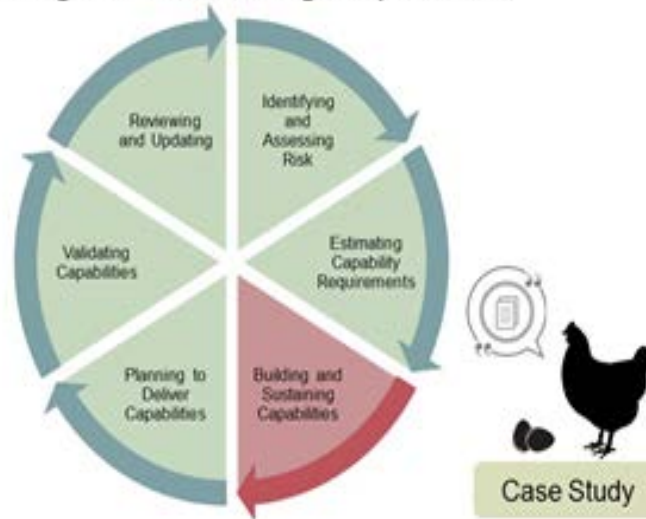
- **Identify & Assess Risk**
 - Collect recent & historical data on existing, potential & perceived threats
 - Analyze impact to community
 - Use assessment for remaining steps
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- Case study – High Path Avian Flu transmission to poultry premises through movement of egg products
 - Biosecurity areas widened.

National Preparedness System:
Estimating Capability Requirements



- **Estimate capability requirements**
- Which exist, which need to be developed?
- Prioritization – critical need first
- Case study - Secure Egg Supply & Avian Flu capabilities needed:
 - Traceability
 - Cleaning & disinfecting of equipment
 - Biosecurity implementation

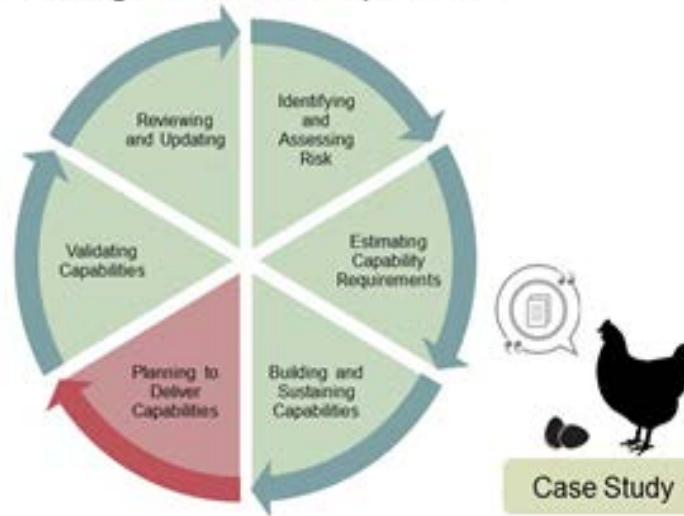
National Preparedness System:
Building and Sustaining Capabilities



- **Build & Sustain Capabilities**
- Develop plan for best use of limited resources
- Use risk assessment to address highest probability or highest consequence threats.
- Case study - Secure Egg Supply & Avian Flu:
 - Secure Egg Supply plan developed
 - Plan based on current virology, epidemiology and risk assessment data
 - *Science combined with preparedness!*

All Hazards Planning for Animal,
Agriculture, and Food Related Disasters

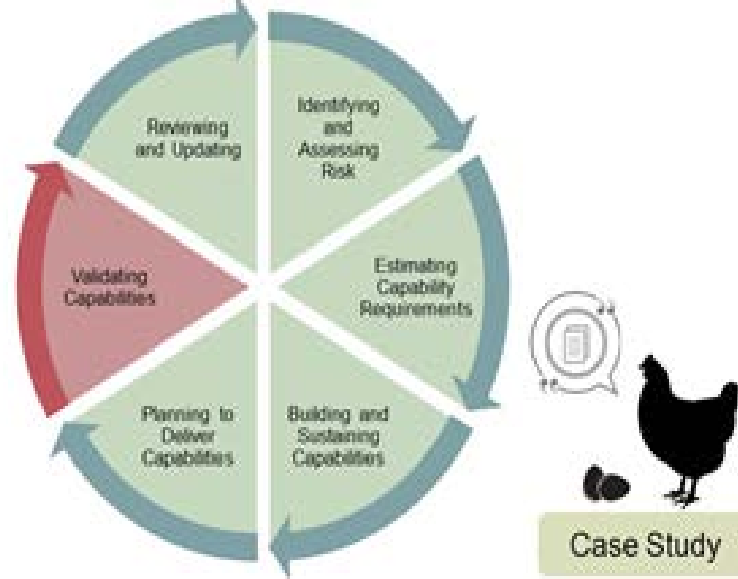
National Preparedness System:
Planning to Deliver Capabilities



- **Planning to Deliver Capabilities**
- Whole community = involving stakeholders; individuals, businesses, non-profits, community & faith based groups, all levels of government.
- Secure Egg Supply plan was a public-private-academic partnership; Univ. of Minnesota, Animal Health & Food Safety, Iowa State, Food Security & Public Health, United Egg Producers, veterinarians, State & Federal Officials.



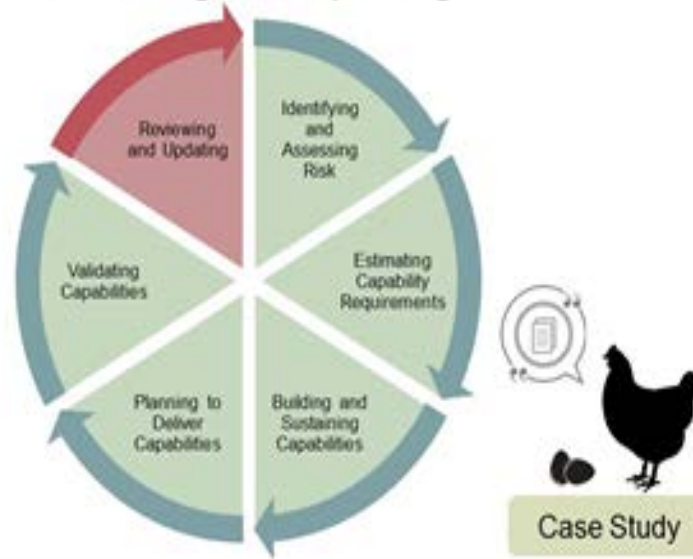
National Preparedness System: Validating Capabilities



- **Validating Capabilities**
- Communities Test & Evaluate
- Exercises, simulations help identify gaps
- Secure Egg Supply: 2015 Midwest outbreak tested capabilities
- 211 commercial & 21 backyard premises affected.
- Depopulation of 7.5 million turkeys, 42.1 million egg layer & pullet chickens – cost taxpayers \$950 million.
- After Action Reports identified gaps in plans & capabilities.

All Hazards Planning for Animal,
Agriculture, and Food Related Disasters

National Preparedness System:
Reviewing and Updating



- **Review & Update**
- Risks & resources evolve; review & update capabilities, resources, & plans.
- Hi-Path Avian Flu lessons learned:
 - Improved biosecurity
 - Improved surveillance of wild birds
 - Expand Federal, State, & Industry response capabilities
 - Increased rapid detection capabilities
 - Streamlined process for indemnity
 - Enhanced communication with producers, consumers, legislators, media

Sometimes Adversity Brings Innovation!

- Improved partnerships between the private and public sectors
 - California drought spurred efficient, innovative irrigation projects
 - Bird Flues increased collaboration between the private & public sectors
 - Improved preparedness and response
 - Biosecurity measures
 - Collaborative decision-making through Unified Command
 - Lessons learned shared across the Country
- Emergency Management touches Everything!

