



GEMA

Georgia Emergency Management Agency
Office of Homeland Security

Risk Reduction Effectiveness and Capabilities Assessment



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Veterinary Programs*

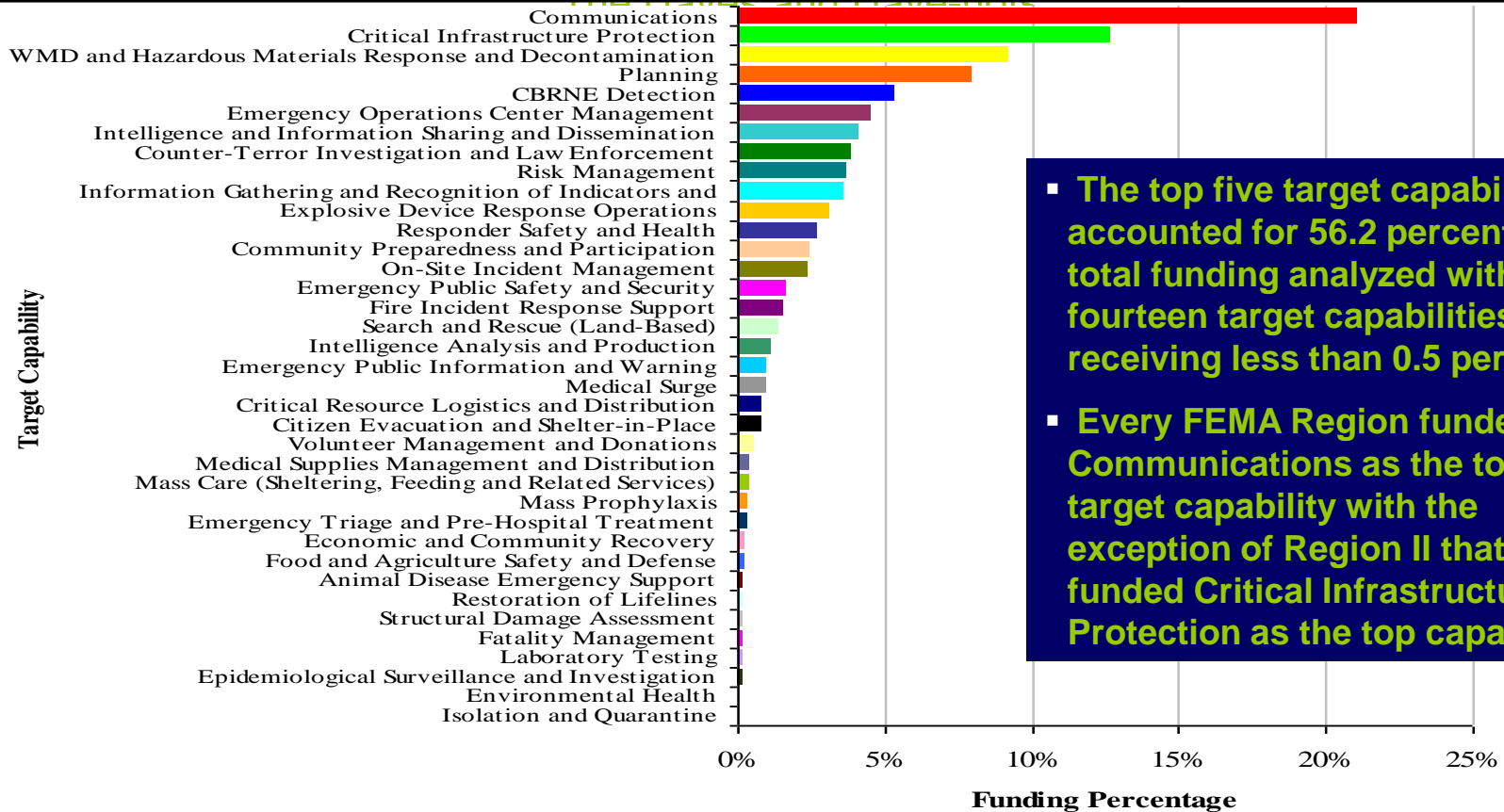
States Perspective on Ag and Food CI/KR

- 2003 HSPD 7 lists our Nations food supply as CI/KR
- DHS Lists 15 National Scenarios / what DHS considers the 15 most plausible ways that the US could be attacked. Attack on the US food supply is listed
- 37 Target Capabilities to address the 15 Scenarios. Two of which list directly AG and Food.
- Funding for developing preparedness for states is the State Homeland Security Grant Program

State Homeland Security Grant Program

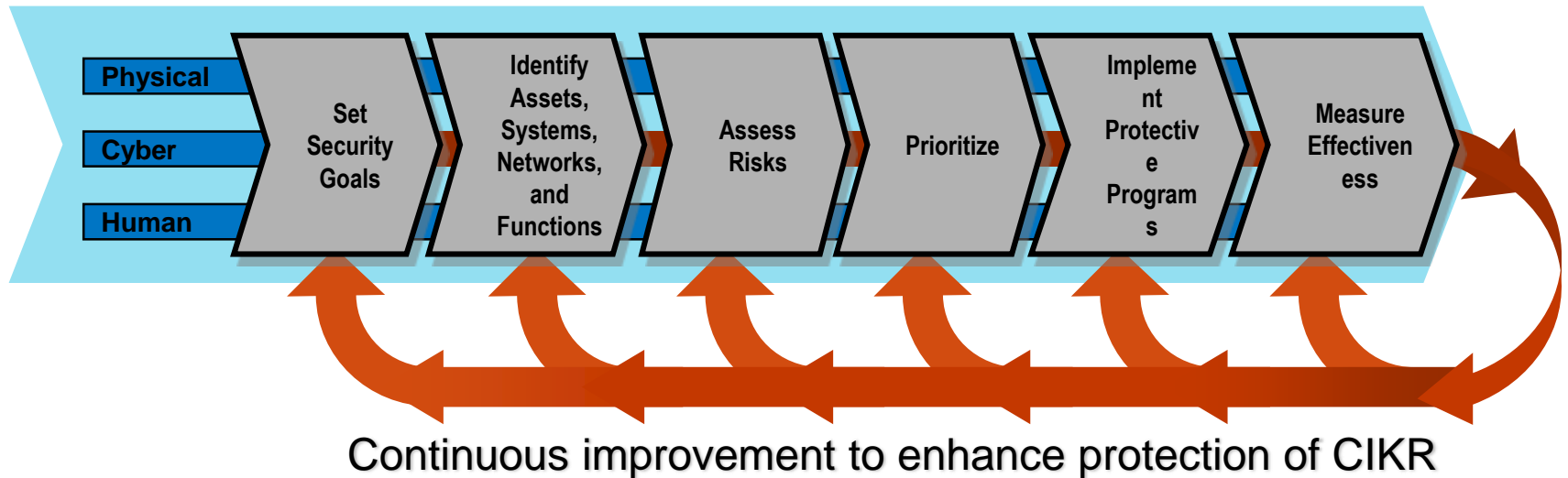
- The 8 National Priorities
- Expand Regional Collaboration
- Implement NIMS
- Strengthen Information sharing / analysis
- Strengthen Interoperable communication
- Strengthen CBRNE detection & response
- Strengthen Med. Surge & Mass Prophy
- Strengthen Planning, Citizen Preparedness
- Implement the National Infrastructure Protection Plan

For the first time, FEMA can see how grantee dollars support target capabilities across the grant portfolio – FY03-07 data is displayed



- The top five target capabilities accounted for 56.2 percent of total funding analyzed with fourteen target capabilities receiving less than 0.5 percent
- Every FEMA Region funded Communications as the top target capability with the exception of Region II that funded Critical Infrastructure Protection as the top capability

Risk Management Framework



State's Perspective

- Assessment showed that 2/3rds of the food consumed in a state came from another state.
- Recognized that existing plans were Food Emergency Response Plans and only addressed response out of the NIPP vision of Prevention, Protection, **Response** and Recovery

State's Perspective

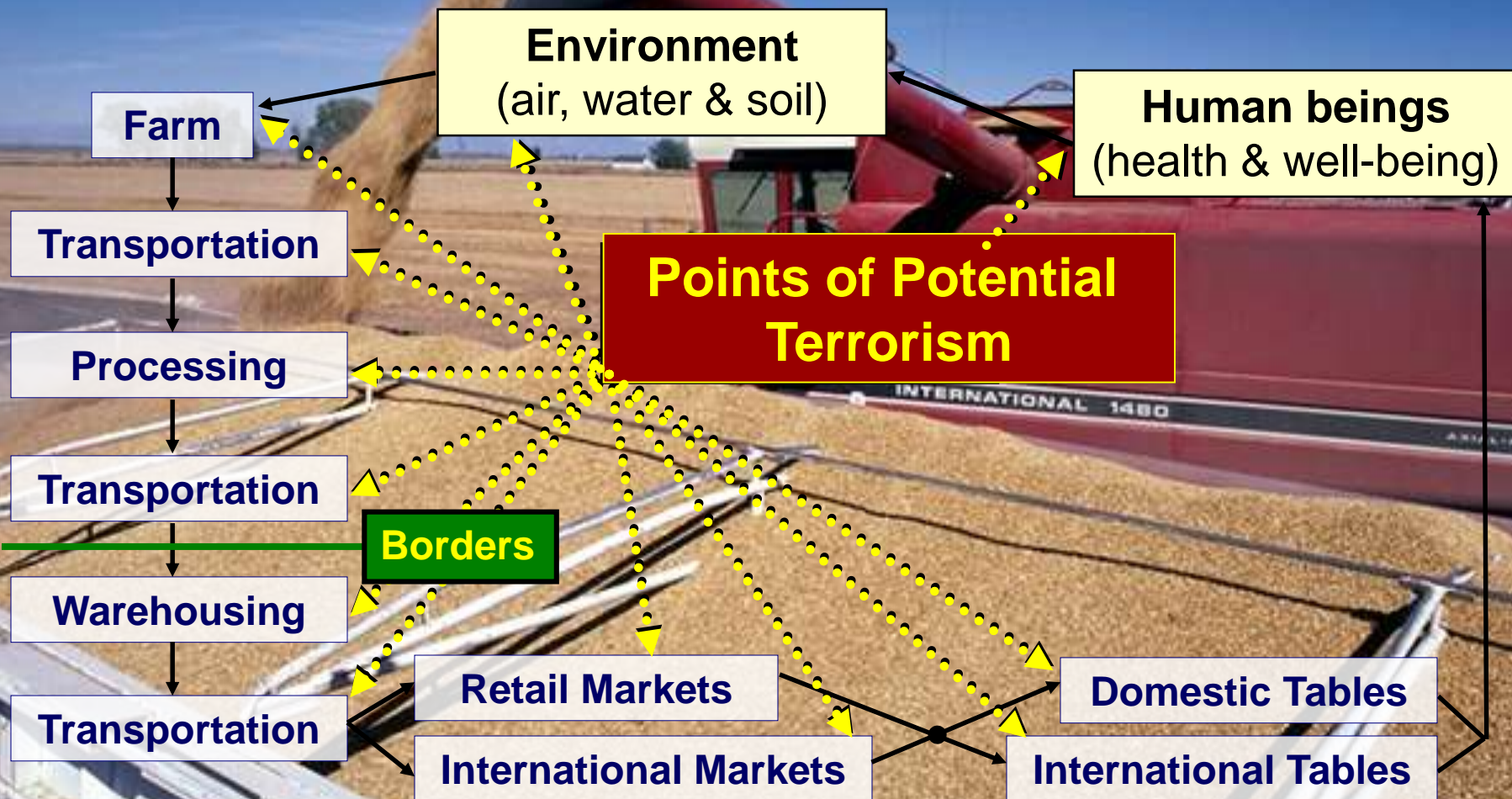
- Used IMPLAN to identify commodities within the state and contiguous and regional states based on economic impact
- Did FAS/CAT on those commodities
- Worked through SAADRA to do FAS/CAT on each states commodities
- Results were submitted for last yrs data call

State's Perspective

- Identified a commodity with a National Supply Chain and a National Distribution Foot Print.
- Identified a National Company with a National Supply Chain and National Distribution Foot Print
- Do a FAS/CAT on the Company to develop a generic template of how that commodity flows regionally and nationally

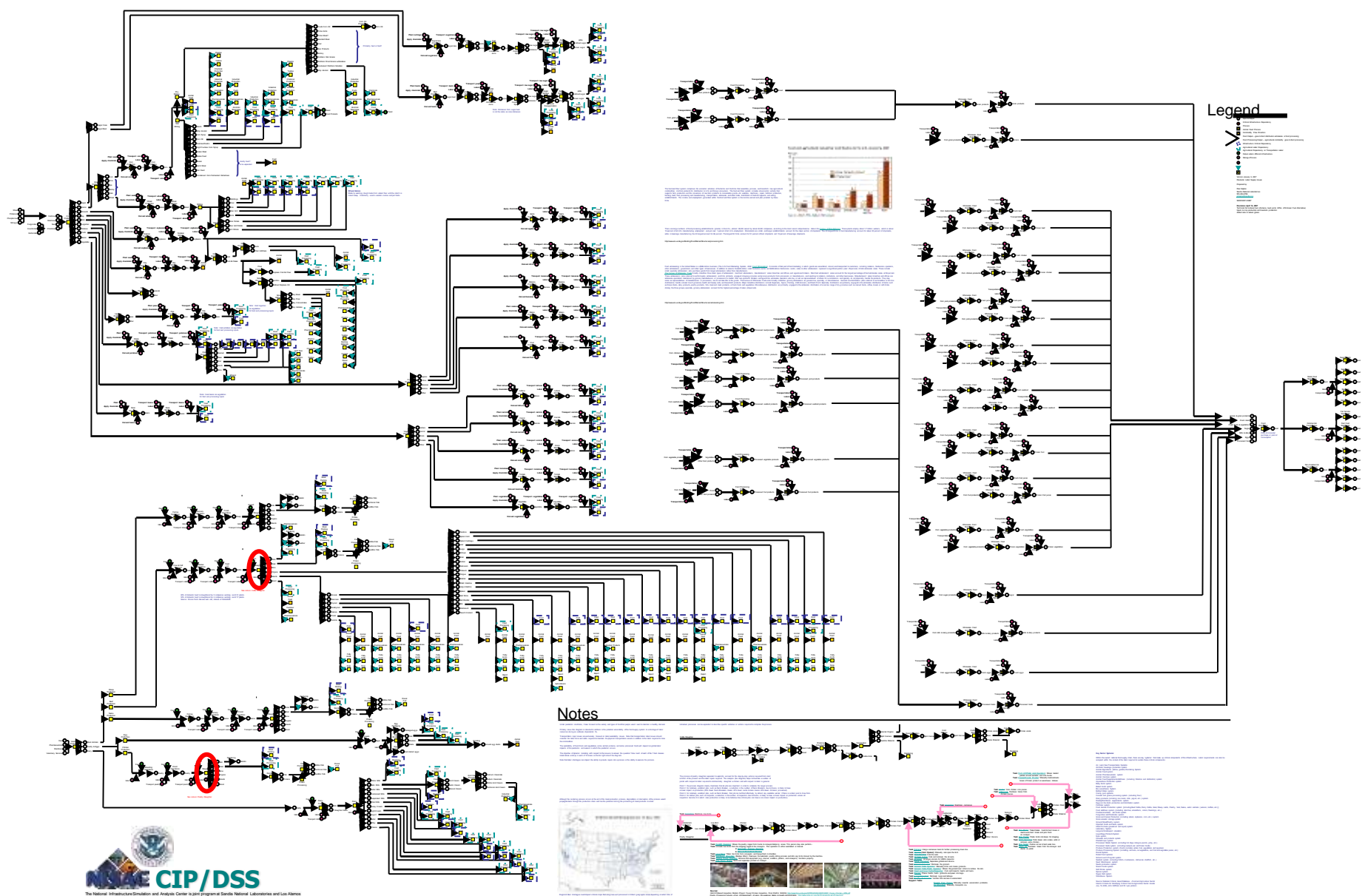
A *new* food continuum

Environment to People



Food & Agriculture Commodity Flow System Labor Inputs Input/Process/Output Diagram

Production Inputs → Livestock & Crop Production → Food Processing → Food Distribution Wholesale → Food Service



Legend

Legend symbols include various colored triangles and circles, representing different labor inputs and processes.

Notes

The National Information System and Analysis Center is a joint program of the National Laboratories and Los Alamos National Laboratory, funded by the Department of Homeland Security's (DHS) Prevention Directorate, under the direction of the Information Protection Management Office. Santa National Laboratories is a joint program managed by Santa Corporation in Los Alamos, New Mexico. Santa National Laboratories is a joint program managed by Santa Corporation in Los Alamos, New Mexico. Santa National Laboratories is a joint program managed by Santa Corporation in Los Alamos, New Mexico.

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State's Perspective

- Share the IMPLAN information with other states
- Share a subsystem generic supply chain and distribution template with other states to begin to identify critical nodes for an agreed upon commodity (or sub-sector).
- Share with other states a generic Risk Management Plan based on the FAS/CAT and a COOP and COBP done with the company representing the agreed upon commodity (sub-sector)

States Perspective

- Populate the state's ACAMS with the Critical Commodities (sub-sector) identified within the state. Supply ACAMS with the generic template of a company within each of the identified subsystems so that intell can be applied to a particular subsystem with a reasonable knowledge of how that system works.
- Share how that is done with multi state groups

State's Perspective

- Develop a spatial capability based on GIS of Critical Nodes within each commodity group
- Develop a threat warning capability with phone, email, fax for POC at each Critical Node.
- Compartmentalize critical nodes and POCs to allow for Need to Know dissemination of information

State's Perspective

- Overlay threat warning information with GIS capability to enhance operational capability. Cluster critical nodes and assets
- Company Proprietary information will be available at time of actual incident

State's Perspective

- Nov. 2009 at the first meeting of the Multi State Grp and SAADRA (25 states) a common problem was identified.
- A food emergency response, where ever it occurs in Farm to Fork, is based on regulatory requirements that stop movement.
- The ability to keep the food system operational is not part of the formula.
- The National Infrastructure Protection Plan provides solutions to Food and Ag Sector Resiliency

- Intel Inject: Abu Sayyaf intends to attack US food Supply
- Abu Sayyaf is based in the Philippines
- What food product is exported from the Philippines to the US
- Seafood
- Shrimp
- Hartsfield/Jackson International Airport (based on current criteria 60th on list but with **THREAT** should have gone to top of list

THE PLAYERS



THE PLAYERS

- The US Attorney's Office
- The FBI
- The Department of Homeland Security
- The Centers for Disease Control
- The Food and Drug Administration
- The USDA, FSIS
- The USDA, APHIS
- The USDA, PPQ
- Customs and Border Protection

THE PLAYERS

- USDA, Smuggling Interdiction
- US Fish and Wildlife
- NOAA
- The FBI Strategic Information Operations Center
- The Intelligence Fusion Center

THE PLAYERS

- The Georgia Bureau of Investigation
- The Georgia Department of Agriculture
- The Georgia Division of Public Health
- The Georgia National Guard , CST
- The Georgia Office of Homeland Sec.
- The Georgia Emer. Manag. Agency

21 State and Federal Agencies

A FULL FUNCTIONAL HSEEP EXERCISE
SHADOWED BY THE RISK REDUCTION EFFECTIVENESS AND CAPABILITIES ASSESSMENT
PROGRAM

- Over 300 participants representing over 60 Federal, State, Local and Private Sector Agencies and Organizations played
- 3 Scenarios were exercised
- Botulinum Toxin
- Anthrax
- Methyl Parathion

Target Capabilities Exercised (14)

- Risk Management
- Intelligence, Information Sharing and Dissemination
- Counter-terrorism Investigation and Law Enforcement
- Critical Infrastructure Protection
- Agriculture, Food Safety and Defense
- Epidemiology Surveillance and Investigation

TCLs Exercised

- Laboratory Testing
- On Site Incident Management
- Responder Safety and Health
- Fire Incident Response Support
- WMD and Hazardous Materials Response and Decontamination
- Emergency Public Information and Warning
- Medical Surge

Risk Reduction Effectiveness and Capability Assessment Program (RRCAP)

- Model used to measure the effectiveness of 14 Target Capabilities
- Time it took to carry out all Universal Tasks associated with each TCL was recorded.
- Model calculated the reduction of morbidities and mortalities associated with actions taken in each TCL

Time	Elapsed Time (hr)	Event	Location	Participant	Event Specifics
Friday 8/7/09					
0:00	0	Simulation of exercise starts	FLETC	Simulation	Simulation time clock starts: all elapsed times are from this time
8:00	8	First shipments of product	JESUP	Simulation	First shipments of contaminated product from JESUP
18:00	18	Shipments of product stop for the weekend	JESUP	Simulation	Final shipments of contaminated product from JESUP
Saturday 8/8/09					
9:00	33	Dock sale of contaminated product	JESUP	Simulation	Dock sale of contaminated product 9:00 am -17:00
Sunday 8/9/09					
9:00-	57	Dock sale of contaminated product	JESUP	Simulation	Dock sale of contaminated product 9:00 am -17:00
Monday 8/10/09					
5:45	77.75	Exercise Start	FLETC	Glynn County PD	LE Officer will be briefed on the events leading up to the exercise start
5:50	78	Notification	FLETC	LE to EMA	LE notifies County EMA
6:35	78	Joint IC Established	FLETC	LE and FD	Joint IC established, IC prepared to coordinate responding agencies
6:40	78	Alert to GEMA	GEMA	EMA to GEMA	EMA and GEMA alert all participating agencies
6:45	78	4th CST Alerted	Dobbins ARB	GEMA to 4th CST	GEMA identifies and requests state assets
6:57	79	GBI Arrives	FLETC	GBI Arrives on site	
7:06	79	Fire Dept deploys	FLETC	Local FD Hazmat team	Assemble; commence setting up Decon Line
7:30	79	Ground Convoy Departs	Dobbins ARB	4th CST	Ground convoy movement from metro Atlanta to FLETC
7:30	79	LE SWAT arrives	FLETC	LE SWAT to IC	Prepare to secure house; LE will not allow entry until Decon line is ready
7:38	80	LE CBRNe team deploys	FLETC	LE CBRNe to IC	IC link-up, prepare to secure house
8:02	80	46th CST (Alabama) Arrives	FLETC	46th CST	46th CST arrives and prepares to handle samples
8:00	80	FD Decon line ready	FLETC	FD	Decon line is complete and ready for use
9:50	82	House Secure	FLETC	LE CBRNe	LE secures house, remove perpetrators

Timeline of Events in Operation Vigilant Sample II
(Highlighted Elapsed Times are incremented by 3 hours due to early start of exercise at JESUP)

Time	Elapsed Time (hr)	Event	Location	Participant	Event Specifics
10:02	82	CBRNe Entry	FLETC	LE CBRNe	CBRNe confirm house is clear and secure
8:36	83	Producers sign a "Withhold from Sale" form for contaminated product	JESUP	Producers	Asst Commissioner GDA and Producers jointly agree to issue Stop Movement of product
8:37	83	Ass't Commissioner GDA issues Stop Movement	JESUP	GDA + Producers	GDA + Producers
9:23	83	JIC established	JESUP	LE GDA	LE establishes JIC
9:44	85	44th CST (Jacksonville) Arrives	JESUP	44th CST	44th CST arrives and prepares to handle samples
10:58	86	44th CST (Jacksonville) commences clearing contaminated location for entry	JESUP	44th CST	44th CST clears storage area for entry
11:00	83	GBI takes incident command	FLETC	GBI	GBI takes control of incident at site
11:04	86	44th CST (Jacksonville) commences entry to contaminated location	JESUP	44th CST	44th CST clears storage area for entry
1130	84	Recon	FLETC	FD HAZMAT	Site characterization
11:55	87	44th CST (Jacksonville) commences sample testing	JESUP	44th CST	44th CST removes samples from the location and commences testing
1100	84	Strike Team Deploys	FLETC	4th CST to IC	IC link up
13:30	86	Sample Team entry	FLETC	4th CST/FBI	Collect Samples
14:00	86	Ground Convoy Deploys	FLETC	4th CST to IC	IC link up
1430	86	Sample out of Hot Zone	FLETC	4th CST/FBI	Sample split at point of sample, processed through Decon line and moves to PZ
1530	88	Sample departs via aviation	FLETC	GSP/FBI	Sample moves via aviation to the LRN in Decatur
15:30	88	ALS ready to receive samples	FLETC	4th CST	Samples processed for on-site presumptive analysis
15:30	88	Re-deploy Decon line	FLETC	FD and 4th CST	Begin to stand down response operations
18:00	93	Ass't Commissioner GDA issues Public Announcement	JESUP	GDA + Producers	Asst Commissioner GDA and Producers jointly agree to issue Public Announcement to not consume product
1830	91	Sample arrives in Metro Atlanta	PDK Airport	GSP/FBI	Sample moves to LRN
18:30	91	On- site presumptive results issued	FLETC	4th CST	On-site results communicated
20:00	92	Sample arrives at LRN	LRN, Decatur	GPHL	Process samples for final call and disposition
COB		End Exercise	LRN	PH to GEMA	Issue Final Call

Timeline of Events in Operation Vigilant Sample II
(Highlighted Elapsed Times are incremented by 2 hours due to early start of exercise at JESUP)

RRECAP supports a large set of capabilities, and operates in several modes. When used to evaluate an entity many of these capabilities may be measured. However following the exercise small sets of these may be exercised individually to evaluate the sensitivity of outcomes to changes in individual capabilities.

Capabilities Modeled by RRECAP

The list shows the capabilities that can be modeled. When values are entered for a selection of capabilities and the 'Run' button pressed RRECAP shows an evolving map of the outcomes.

Run	Continue
Speed(Ms)	500
Profile	Legend
Capabilities(%) <input checked="" type="checkbox"/>	
CONOPS	N/A
Roles & Resp	N/A
Field Sampling	N/A
Communications	N/A
Reporting Mechanisms	N/A
Consequence Accuracy	N/A
Situational Awareness	N/A
Spatial Awareness	50%
Stop Sale Effectiveness	50%
Recall Effectiveness	50%
Recall/Stop Sale Time Span	96
Announcement Effectiveness	50%
Announcement Time Span	24
First Responder Protection	N/A
Surge Effectiveness	N/A
Surge Radius	N/A



The map shows locations of illnesses, mortalities, etc. due to incident. It can be "drilled down" to see detailed geography, and is overlaid with additional features such as roads, hospitals, known distribution sites, etc.

RRECAP Capabilities

The following are among the "Key Performance Indicators" modeled by RRECAP:

CONOPS

Roles & Resp

Field Sampling

Communications

Reporting
Mechanisms

Consequence
Accuracy

Situational
Awareness

Spatial
Awareness

Stop Sale
Effectiveness

Recall
Effectiveness

Recall/Stop Sale
Time Span

- CONOPS -- A comprehensive Risk Management plan is in place and understood
- Roles and Responsibilities - Roles & responsibilities are well defined and understood by all responders
- Field Sampling - Active sampling and testing is performed on products in distribution
- Communications -- Effective physical and logical communication links are in place between all responders
- Reporting Mechanisms -- Effective mechanisms for exist for reporting between all parties
- Consequence Accuracy -- Capability exists to determine the nature and potential size prior to interventions
- Situational Awareness --All responders have an accurate perception and understanding of key factors and conditions they need to know
- Spatial Awareness -- GIS and POC info has been collected and synthesized for companies that handle the modeled product
- Stop Sale Effectiveness --Speed and completeness to which stop movement/stop sale interventions are executed
- Recall Effectiveness -- Speed and completeness with which a recall interventions are executed
- Recall/Stop Sale Time Span -- Length of time (in hours) between invocation of a Recall/Stop Movement/Stop Sale and its completion

RRECAP Capabilities Further “Key Performance Indicators” modeled by RRECAP:

Announcement Effectiveness

Announcement Time Span

First Responder Protection

Surge Effectiveness

Surge Radius

Detection[hr] Law?

Outbreak ID

Product ID

Shipment ID

Consequence ID

Agent ID

- **Announcement Effectiveness** -- Speed and completeness to which public announcements are executed
- **Announcement Time Span** --Time delay between decision to announce to the announcement being fully effective
- **First Responder Protection** -- Availability and training of first responder PPE and procedures
- **Surge Effectiveness** - Average percentage of total hospital capacity that can be freed up to accept patients of attack
- **Surge Radius** - Radius for which assets are available to transport patients to surge hospitals

(Each of the following takes two values depending on whether accomplished by law-enforcement or otherwise)

- **Outbreak Identification** – Time taken to identify that an outbreak is underway
- **Product Identification** --Time taken to attribute outbreak to specific vector (e.g. product)
- **Shipment Identification** --Time to identify specific lots of product to be recalled (if appropriate)
- **Consequence Identification** --Time to identify cause and vector sufficiently to enable interventions
- **Agent Identification** --Time to identify agent

RRECAP simulation in Operation Vigilant Sample

- The following shows the human health consequences that would ensue under the scenario exercised during the “Operation Vigilant Sample” functional exercise.
- The exercise scenario is an intentional contamination of 80,000 servings of chicken nuggets with an ID_{90} , LD_{50} of methyl parathion.
- The first slide shows the effects that would have ensued had there been no interventions in scenario evolution.
- The subsequent slides show the effects of the actual interventions made by exercise participants in response to observed events. The effects of these interventions are modeled with observed timing of invocation of the actions by the participants, under varying assumptions of levels of capability for non-exercised responses.

Consequences with No Interventions

Elapsed Time

Aug 27th
0:00 Hrs

Controls Day 20 480hr

Restart Continue

Speed(Ms) 1

Profile Legend

Capabilities(%)

Observations

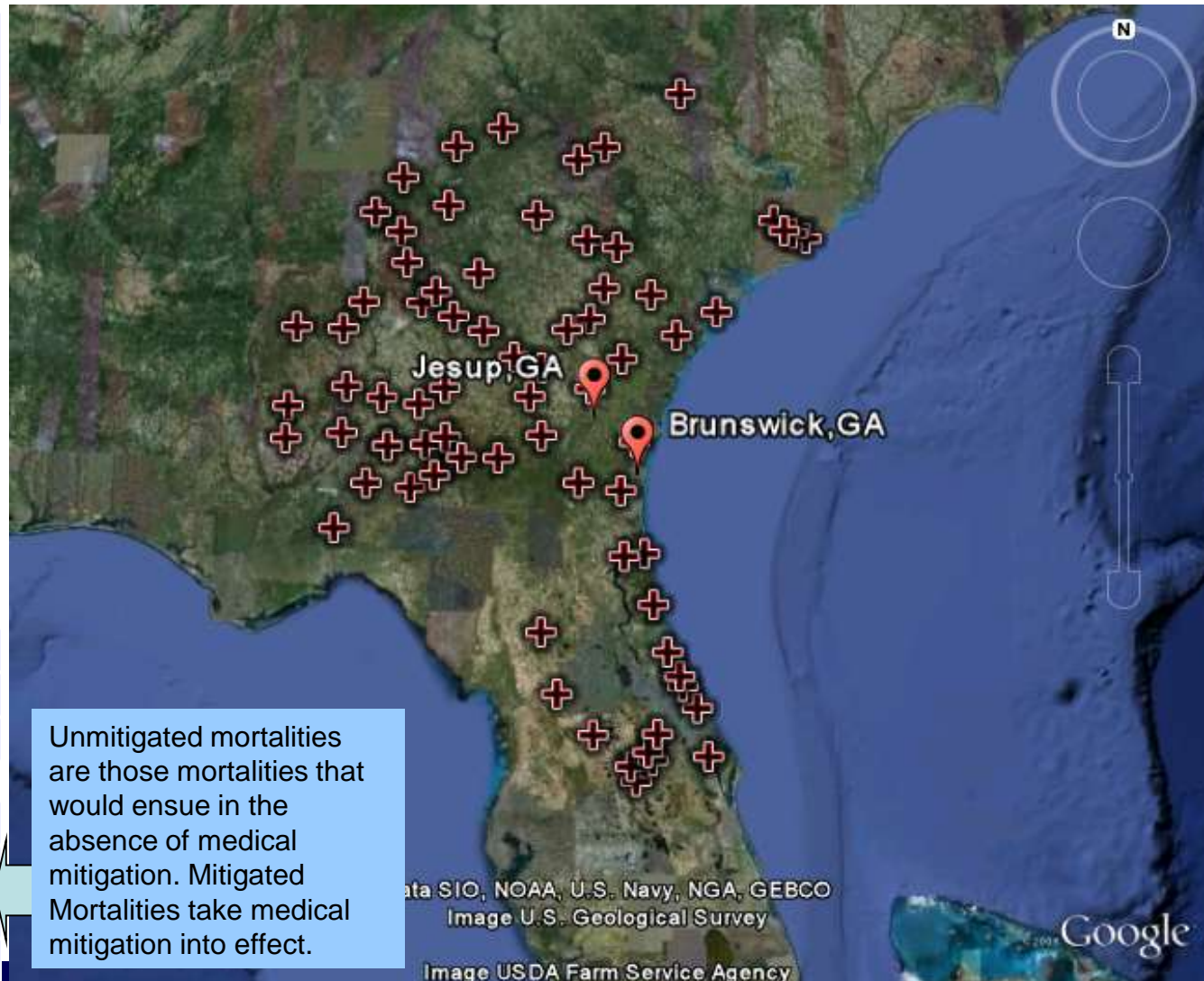
Consumer Reports	203
Medical Attentions	53962
PHD Reports	8090
Hospital Admissions	19424

Interventions(time)

Recall/Stop Sale	0
Announcement	0
Medical Mitigation	0

Consequences

Illnesses	71995
Mitigated Mortalities	39980
Unmitigated Mortalities	39980
Responder Events	0



Stop Movement at Hour 84

(status at end of scenario evolution)

Elapsed Time

Aug 27th
0:00 Hrs

Controls D:20;480

Speed(Ms)

Capabilities(%)

Observations

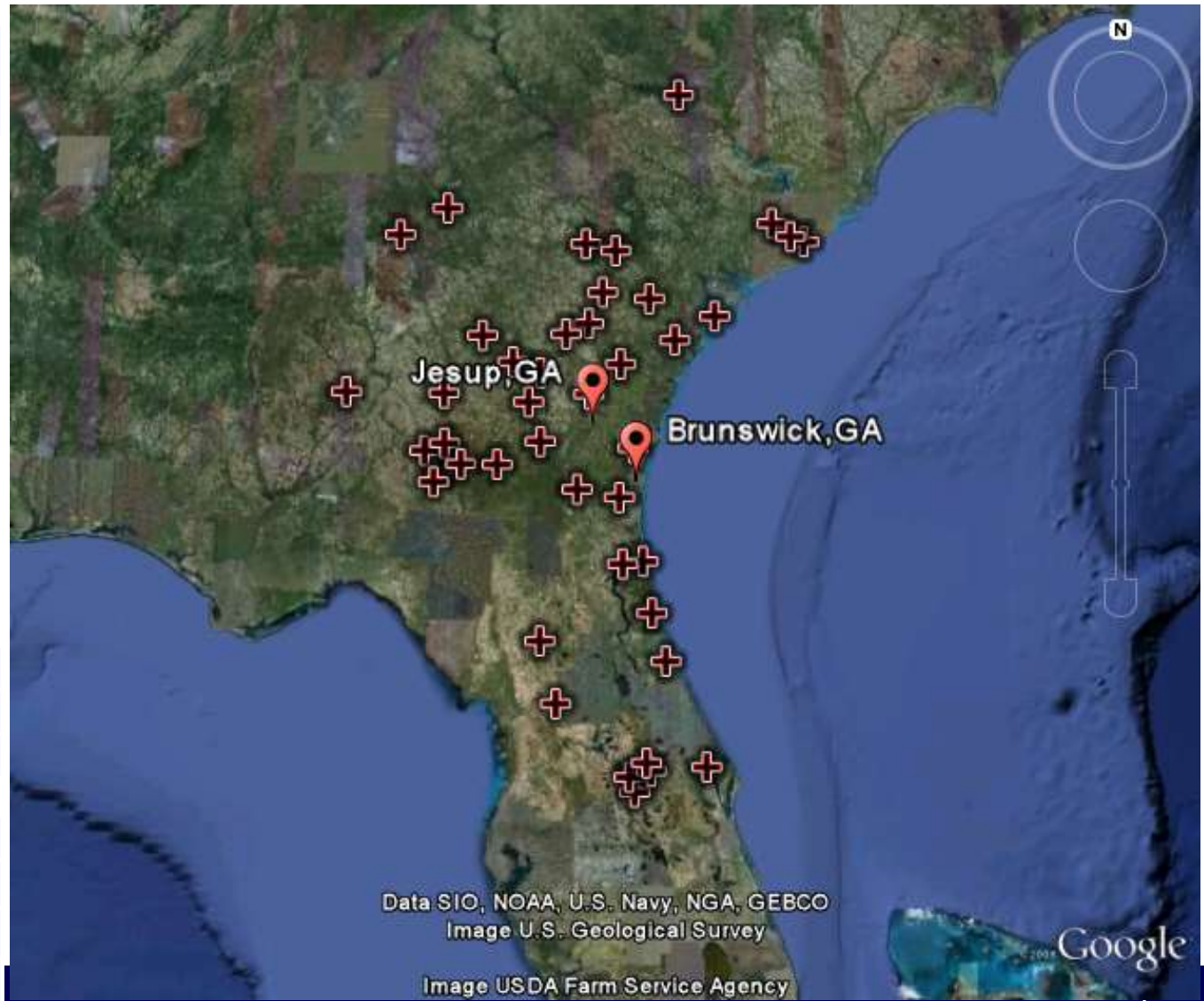
Consumer Reports	112
Medical Attentions	29386
PHD Reports	4408
Hospital Admissions	10582

Interventions(time)

Recall/Stop Sale	84
Announcement	0
Medical Mitigation	0

Consequences

Illnesses	39204
Mitigated Mortalities	21668
Unmitigated Mortalities	21668
Responder Events	0



Stop Movement at Hour 84; Public Announcement at Hour 93

(status at end of scenario evolution)

Elapsed Time

Aug 27th
0:00 Hrs

Controls

D:20;480

Restart

Continue

Speed(Ms)

5

Profile

Legend

Capabilities(%)

Observations

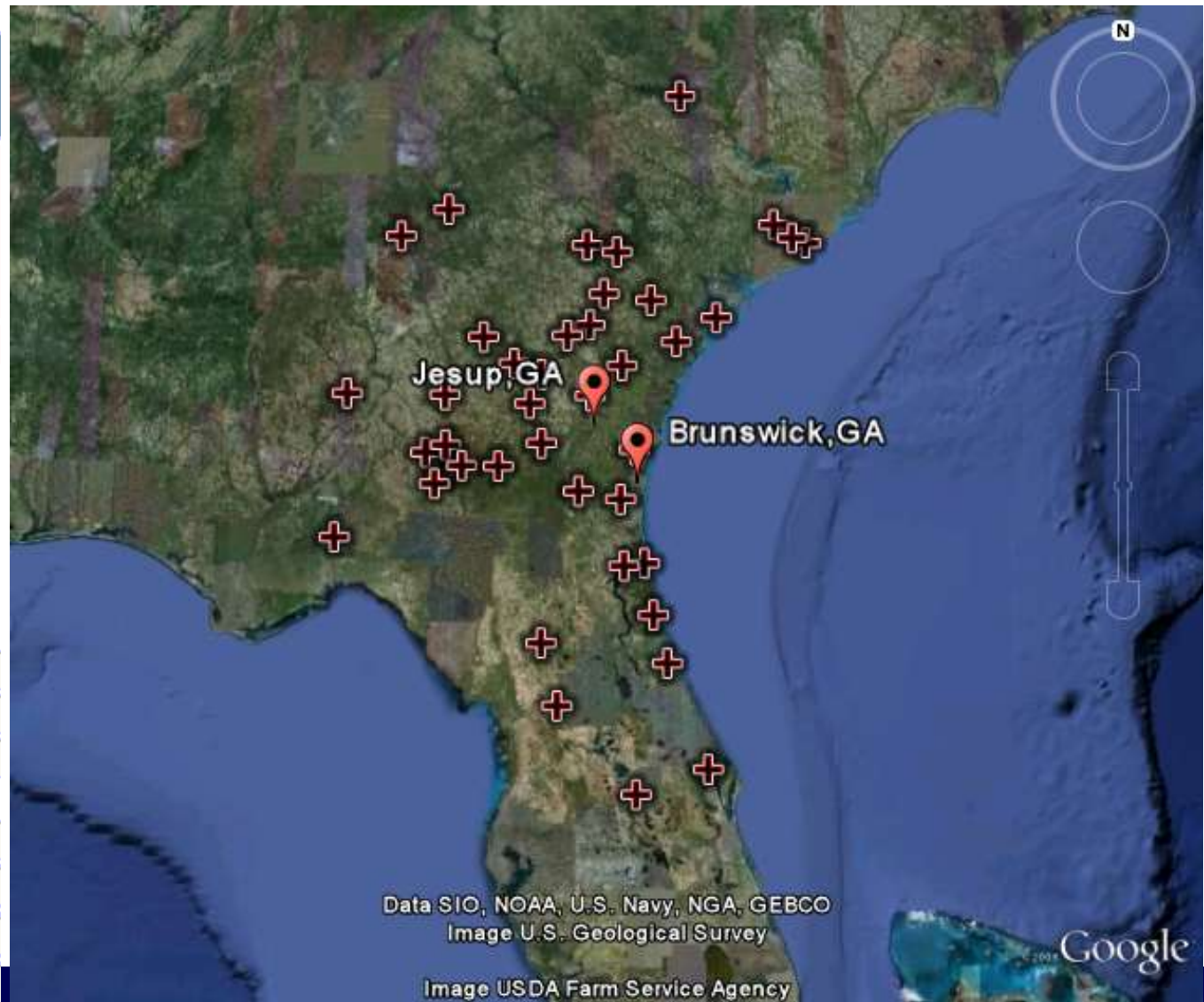
Consumer Reports	44
Medical Attentions	18220
PHD Reports	2732
Hospital Admissions	6559

Interventions(time)

Recall/Stop Sale	84
Announcement	93
Medical Mitigation	0

Consequences

Illnesses	24316
Mitigated Mortalities	13426
Unmitigated Mortalities	13426
Responder Events	0



Comparison of Capabilities
(including Stop Sale and Public Announcement)

No Interventions

(FAS-CAT)
Spatial
Awareness;
Recall/Stop sale
and
announcement
effectiveness all
set at 25%^c

(FAS-CAT)
Spatial
Awareness;
Recall/Stop sale
and
announcement
effectiveness all
set at 50%^c

(FAS-CAT)
Spatial
Awareness;
Recall/Stop sale
and
announcement
effectiveness all
set at 75%^c

Profile Legend

Capabilities(%)

Observations

Consumer Reports	203
Medical Attentions	53962
PHD Reports	8090
Hospital Admissions	19424

Interventions(time)

Recall/Stop Sale	0
Announcement	0
Medical Mitigation	0

Consequences

Illnesses	71995
Mitigated Mortalities	39980
Unmitigated Mortalities	39980
Responder Events	0

Profile Legend

Capabilities(%)

Observations

Consumer Reports	121
Medical Attentions	35260
PHD Reports	5288
Hospital Admissions	12692

Interventions(time)

Recall/Stop Sale	84
Announcement	93
Medical Mitigation	0

Consequences

Illnesses	47040
Mitigated Mortalities	26094
Unmitigated Mortalities	26094
Responder Events	0

Profile Legend

Capabilities(%)

Observations

Consumer Reports	90
Medical Attentions	24612
PHD Reports	3690
Hospital Admissions	8859

Interventions(time)

Recall/Stop Sale	84
Announcement	93
Medical Mitigation	0

Consequences

Illnesses	32840
Mitigated Mortalities	18206
Unmitigated Mortalities	18206
Responder Events	0

Speed(Ms) 5
Profile Legend

Capabilities(%)

Observations

Consumer Reports	43
Medical Attentions	17286
PHD Reports	2591
Hospital Admissions	6222

Interventions(time)

Recall/Stop Sale	84
Announcement	93
Medical Mitigation	0

Consequences

Illnesses	23068
Mitigated Mortalities	12676
Unmitigated Mortalities	12676
Responder Events	0

NEXT STEPS

- Enhanced Critical Infrastructure Protection Visit (ECIP)
- Infrastructure Survey Tool (IST)
- Site Assistance Visit (SAV)
- Regional Resiliency Assessment Program (RRAP)
- Buffer Zone Protection Program (BZP)
- Protected Critical Infrastructure Information (PCII)
- Automated Critical Asset Management System (ACAMS)
- Training and Exercises (HSEEP)



Voluntary Private Sector Preparedness Accreditation and Certification Program

“PS-Prep”

October 1, 2010

Partnership and Outreach Division
Office of Infrastructure Protection
U.S. Department of Homeland
Security



**Homeland
Security**

Implementing Recommendations of the 9/11 Commission Act of 2007 (Public Law 110-53)

Mandated Action

- Directs DHS to establish a “Voluntary Private Sector Preparedness Accreditation and Certification Program”

Improve Private Sector Preparedness in:

- Disaster management
- Emergency management
- Business continuity

Program Requirements

- Select preparedness standards for accreditation
- Establish accreditation and certification program
- Small business provision

Supplementary Information on the PS-Prep Program

<http://www.fema.gov/privatesector/preparedness.index.htm>



Program Coordination, Management, and Oversight Structure

- The Act identifies specific DHS program offices with oversight over PS-Prep
 - The Administrator of FEMA
 - The Assistant Secretary for Infrastructure Protection
 - The Assistant Secretary for the Private Sector
 - The Under Secretary for S&T (DHS Standards Executive)
- DHS designated FEMA as the program lead

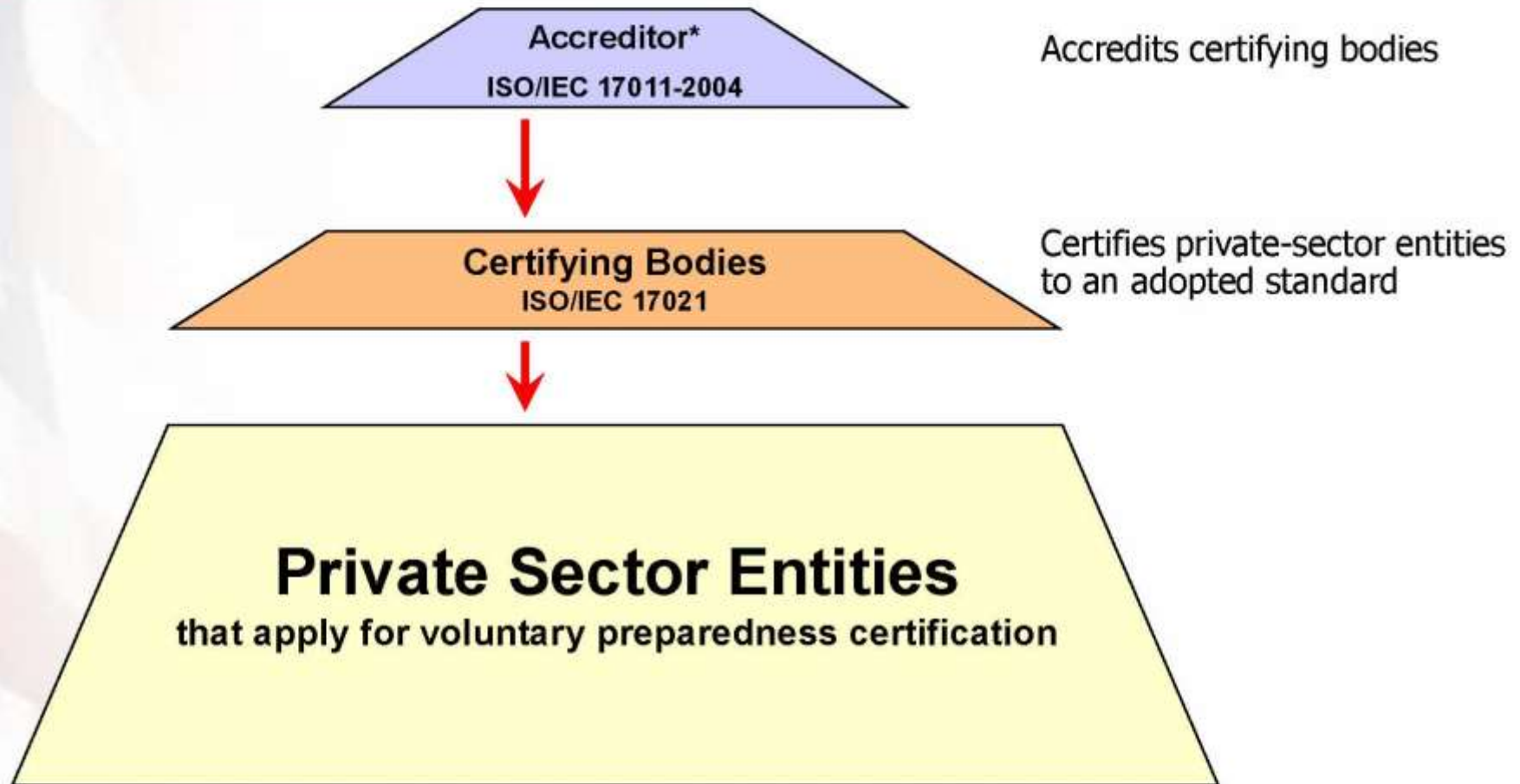


Key Program Requirements

- Voluntary participation
- Provide a method to independently certify preparedness of private-sector entities (third-party certification)
- Administered by non-governmental entity
- DHS designates one or more standards
- Separate classification and certification methods for small businesses
- Integrate and leverage existing regulatory requirements and programs, if feasible



PS Prep Certification Program Model



Standards Adopted for PS-Prep

On June 15, 2010, DHS announced adoption of the following standards:

- *NFPA 1600* - Standard on Disaster / Emergency Management and Business Continuity Programs, “... a common set of criteria for preparedness, disaster management, emergency management, and business continuity.” (2007 and 2010 editions)
- *BS25999* - Business Continuity Management. “... defines requirements for a management systems approach to business continuity, and integrates risk management disciplines and processes.”
- *ASIS SPC.1-2009* - Organizational Resilience: Security, Preparedness, and Continuity Management Systems “... defines requirements for a management systems approach to organizational resilience.”



Potential Benefits of Preparedness and PS-Prep Certification

- Business Survival
- Minimizing Impact of Business Disruptions
- Improved Supply Chain Resilience
- Satisfying Customer Business Continuity Requirements
- Improved Internal Processes
- Improved Employee Relations
- Improved External Relationships
- Possible Insurance Benefits
- Protection of Brand and Reputation
- Potential Advantage over Unprepared Competition
- Lower Operating Expenses
- Rating Agency Acknowledgement
- Reduction of Potential Damages from the Disaster



Critical Infrastructure Sector-Specific PS-Prep Framework Guides

- DHS Office of Infrastructure Protection is collaborating with sectors to:
 - *Identify* guidelines, best practices, relevant regulations and agreed codes of practice that already apply to the sector
 - *Cross-map* to adopted standards
 - *Develop framework guide for use* by certifying bodies and sectors in applying standards

- 18 Critical Infrastructure Sectors
- Agriculture and Food
 - Defense Industrial Base
 - Energy
 - Healthcare and Public Health
 - National Monuments and Icons
 - Banking and Finance
 - Water
 - Chemical
 - Commercial Facilities
 - Critical Manufacturing
 - Dams
 - Emergency Services
 - Nuclear Reactors, Materials, and Waste
 - Information Technology
 - Communications
 - Postal and Shipping
 - Transportation Systems
 - Government Facilities



“ARE WE ANY SAFER THAN WE WERE BEFORE?”

- Compliance to program standards does not answer that question.
- Risk Reduction Effectiveness and Capabilities Assessment measures the reduction of consequences across the broad spectrum of responders and not just sector specific response
- RRECAP can answer the question, “are we more safe”



QUESTIONS?

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