

2019 FEMA Catastrophic Planning: Response and Recovery Efforts

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FEMA

Hurricane María *Historic Response*



Longest sustained domestic air mission of food and water in U.S. history

62 days



Largest disaster air mission in U.S. history

Sorties 4,679



Largest disaster commodity mission in U.S. history

**72.97 million liters of water,
63.24 million meals and continuing**



Largest disaster generator mission in U.S. history

2,044 generators installed



One of, if not the, largest disaster medical response missions ever

38,037 patients cared for



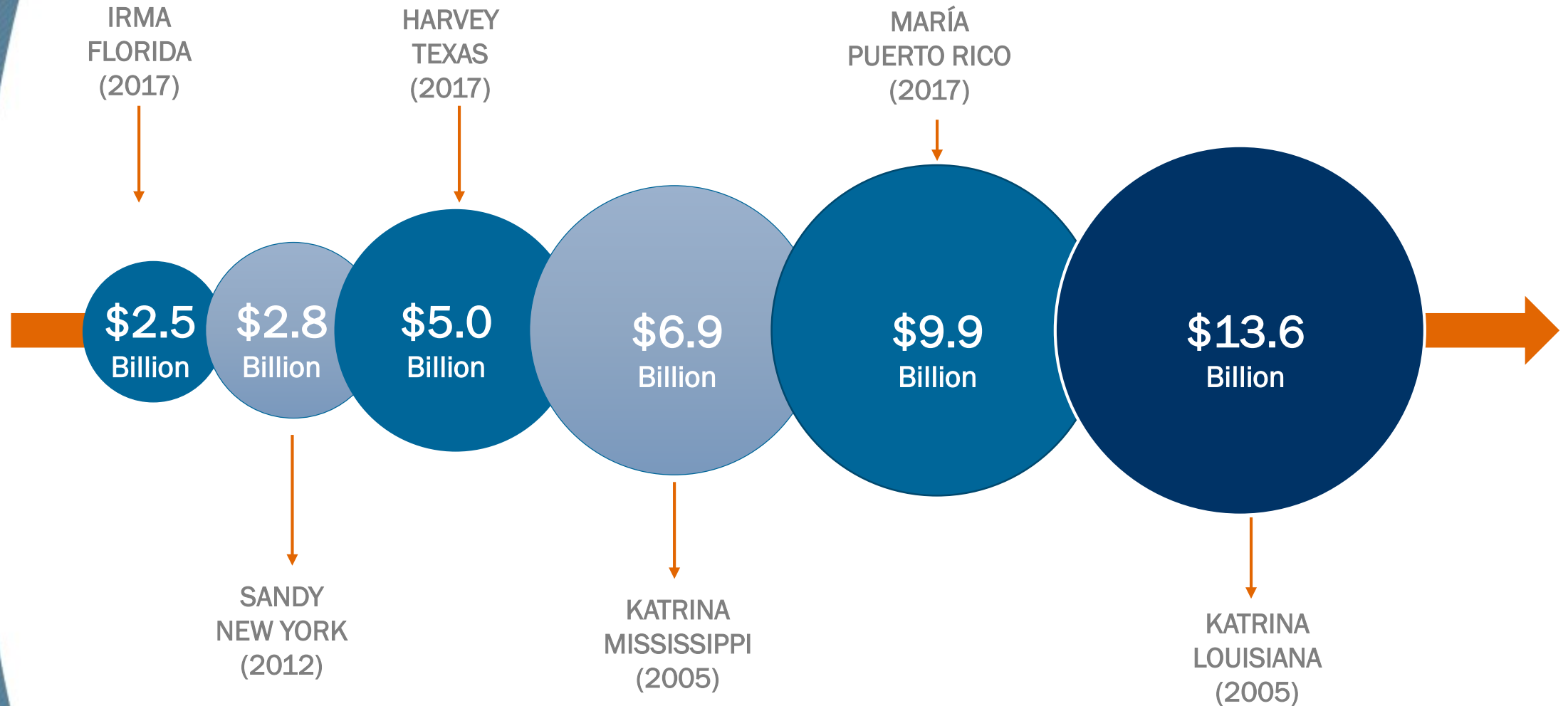
One of, if not the, largest disaster housing missions in U.S. history



The largest sea-bridge operation in U.S. history

Hurricane María

Total **FEMA** Funding: First 180 Days



Incident Complex – Puerto Rico

FEMA-3391-EM-PR/FEMA-4339-DR-PR

Damaged highway in the Municipality of Toa Alta on 09/24/2017 and on 03/17/2018.



Incident Complex – Puerto Rico

FEMA-3391-EM-PR/FEMA-4339-DR-PR

Aerial view of a baseball field in the Municipality of Cataño on 09/22/2017 and 03/18/2018.



Incident Complex – Puerto Rico

FEMA-3391-EM-PR/FEMA-4339-DR-PR

A neighborhood destroyed by hurricane winds in the Municipality of Corozal on 09/24/2017 and being repaired six (6) months later on 03/18/2018.



Incident Complex – Puerto Rico

FEMA-3391-EM-PR/FEMA-4339-DR-PR

Aerial view of the damage caused by La Plata river in the Municipality of Toa Alta on 09/24/2017 and 03/18/2018.



Incident Complex – Puerto Rico

FEMA-3391-EM-PR/FEMA-4339-DR-PR

Lateral view of the Rio Abajo bridge collapsed in the Municipality of Utuado on 10/01/2017 and six (6) months later after being completed on 03/13/2018.



After-Action Report – Lessons Learned



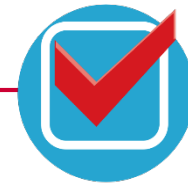
Revise the National Response Framework and the Response Federal Interagency Operational Plan.



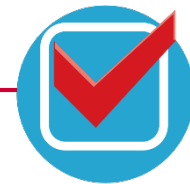
Promote federally supported, state managed, locally executed logistics operations.



Broaden FEMA's capability to quickly get teams on the ground.



Develop a more comprehensive understanding of local, regional, and national supply chains.



Support state, local and government agencies improve capabilities.

Top Objectives of Puerto Rico's Plan for **ECONOMIC** and **DISASTER RECOVERY**

1



Promote a society that is educated, healthy and sustainable.

2



Enhance Puerto Rico's ability to withstand and recover from other disasters.

3



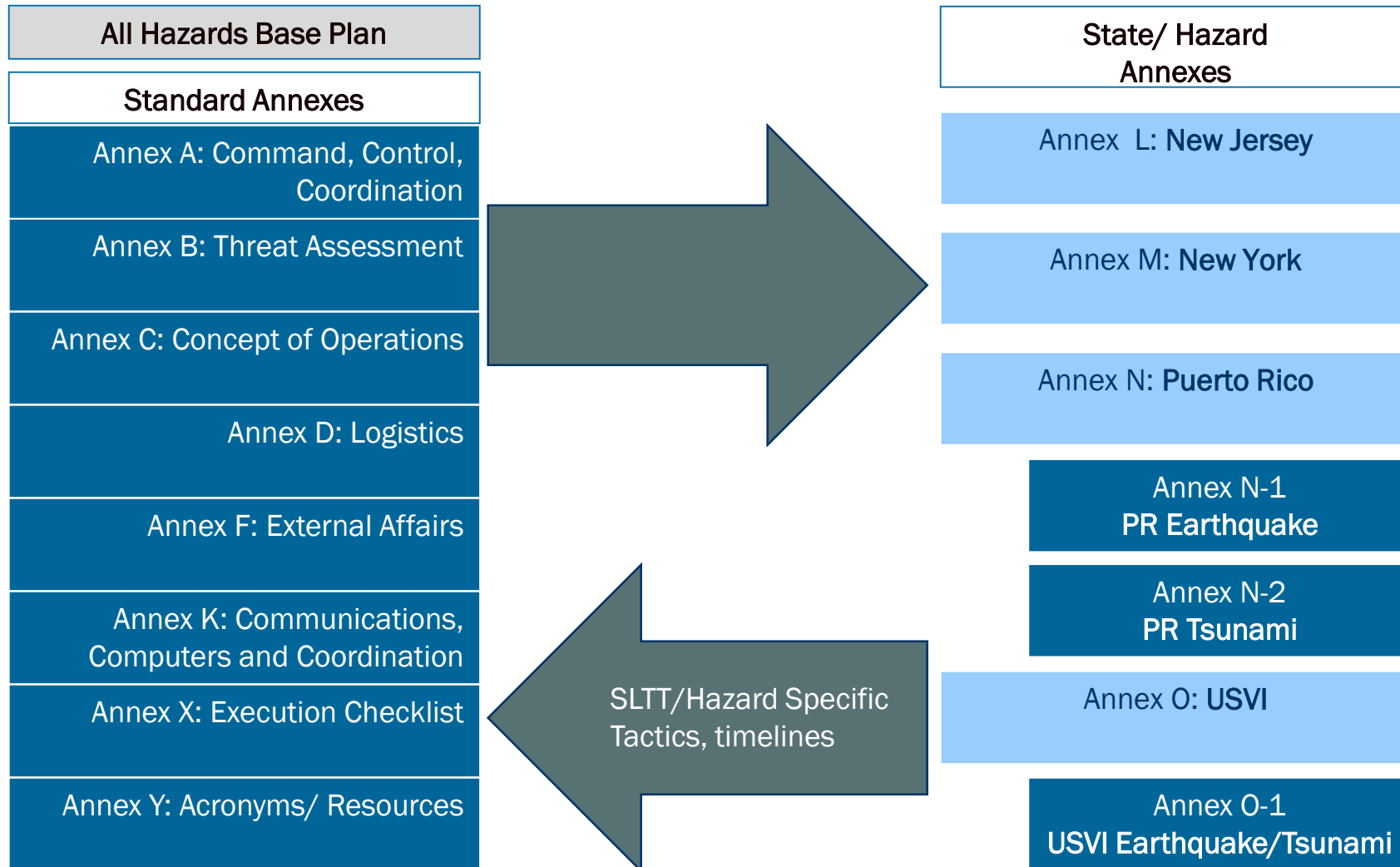
Ensure rebuilding and restoration efforts promote sustainable economic growth and social transformation.

4

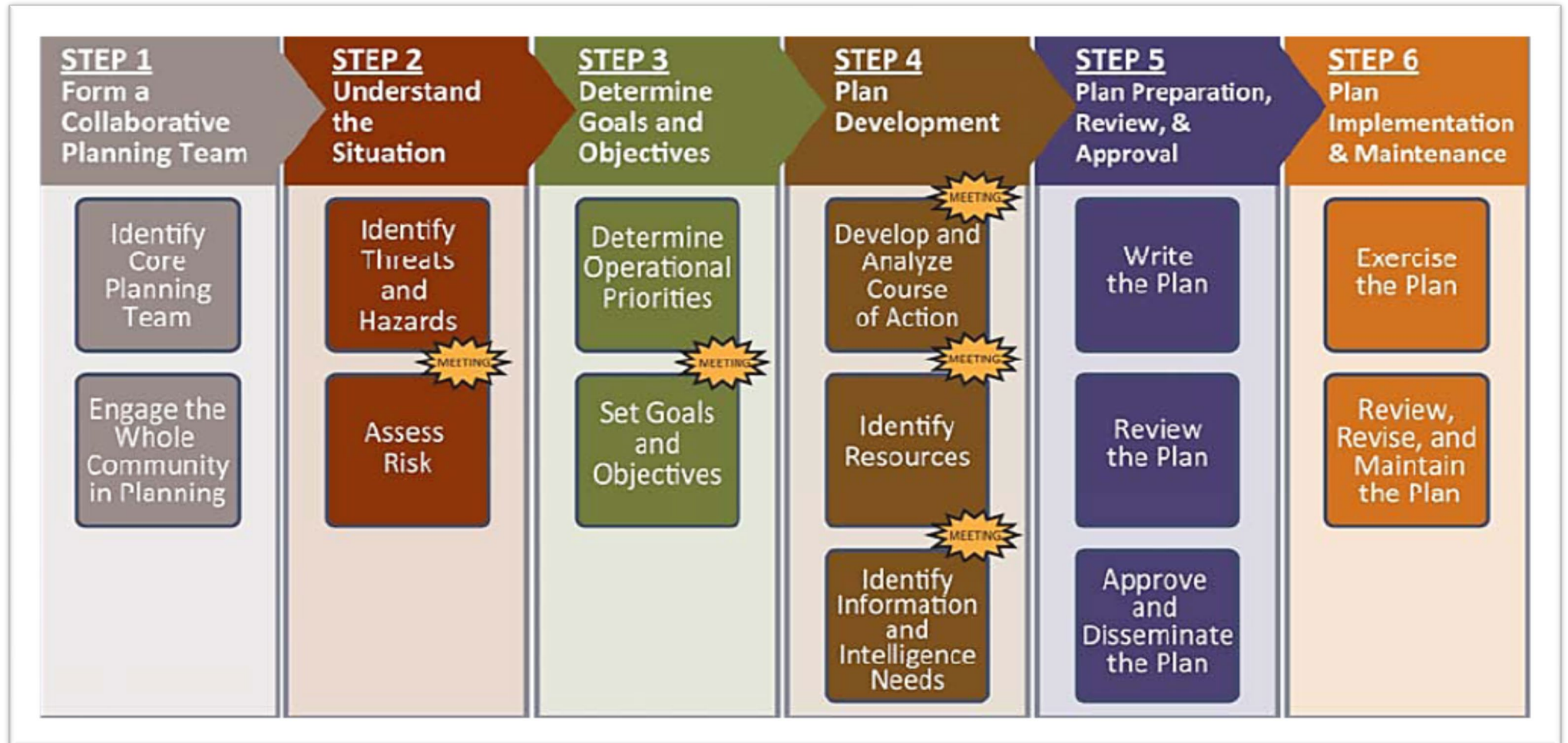


Strengthen Puerto Rico's critical infrastructure.

All-Hazards Plan / Annex Integration



FEMA Six-Step Planning Process





FEMA Region II Hurricane Annex for Puerto Rico & US Virgin Islands

October 20, 2014



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2018 Puerto Rico Response Contingency Plan August 7, 2018

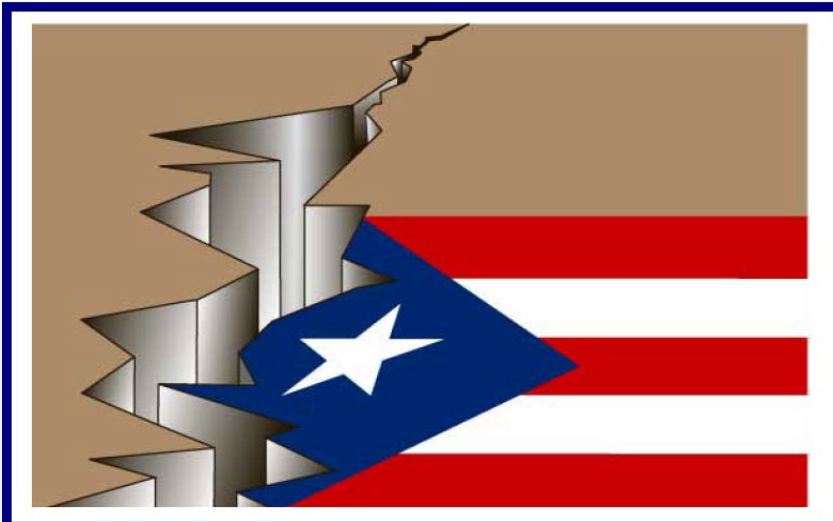
Joint Recovery Office
50 Carr 165 #3
Guaynabo, PR 00968



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Puerto Rico Catastrophic Annexes

Earthquake and Tsunami



Puerto Rico Catastrophic Earthquake Annex

June 2012



FEMA



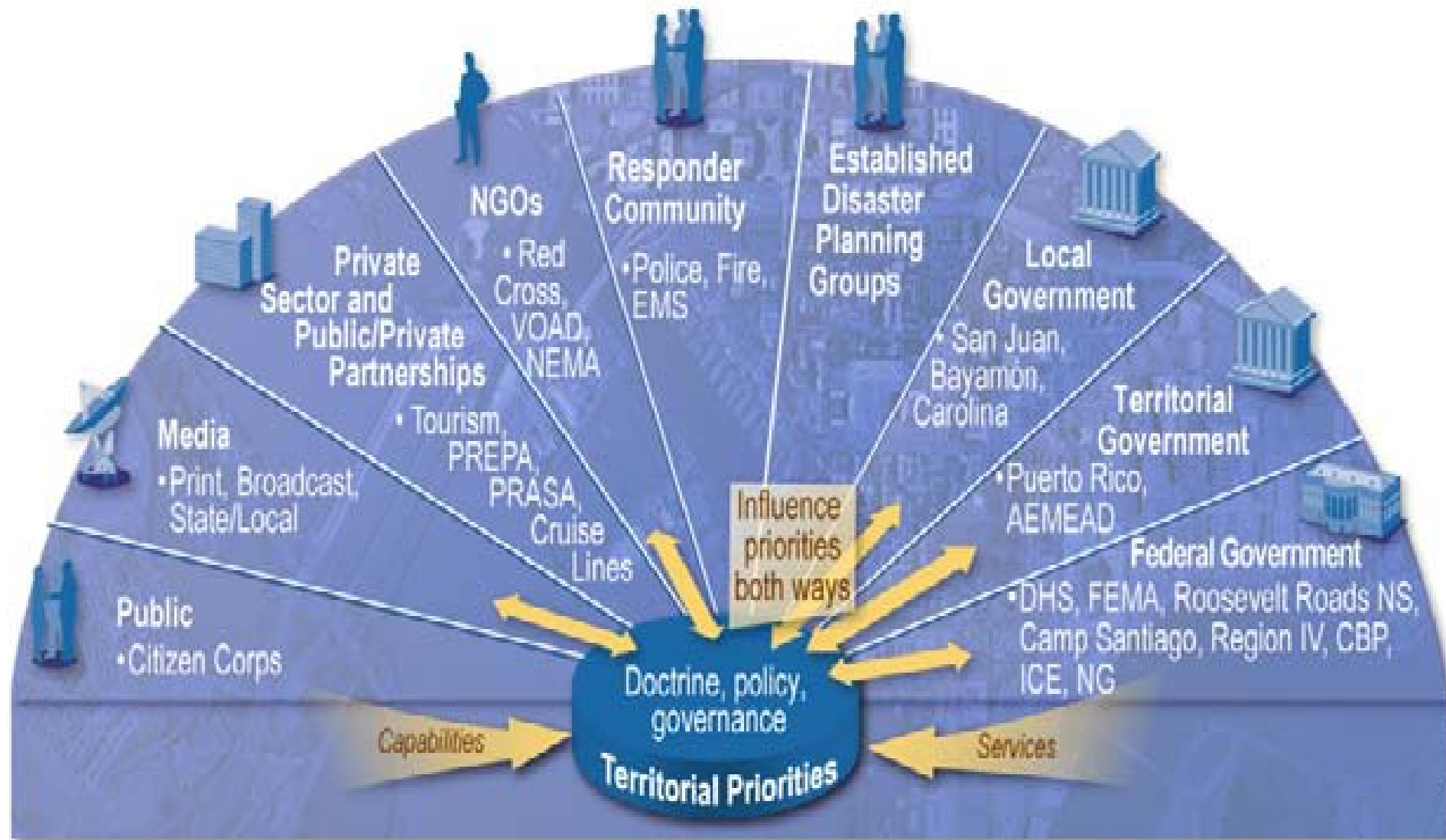
Puerto Rico Catastrophic Tsunami Annex

June 2012



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Whole Community Concept



Phased Response - Core Capabilities

Enable Rapid and Effective Response

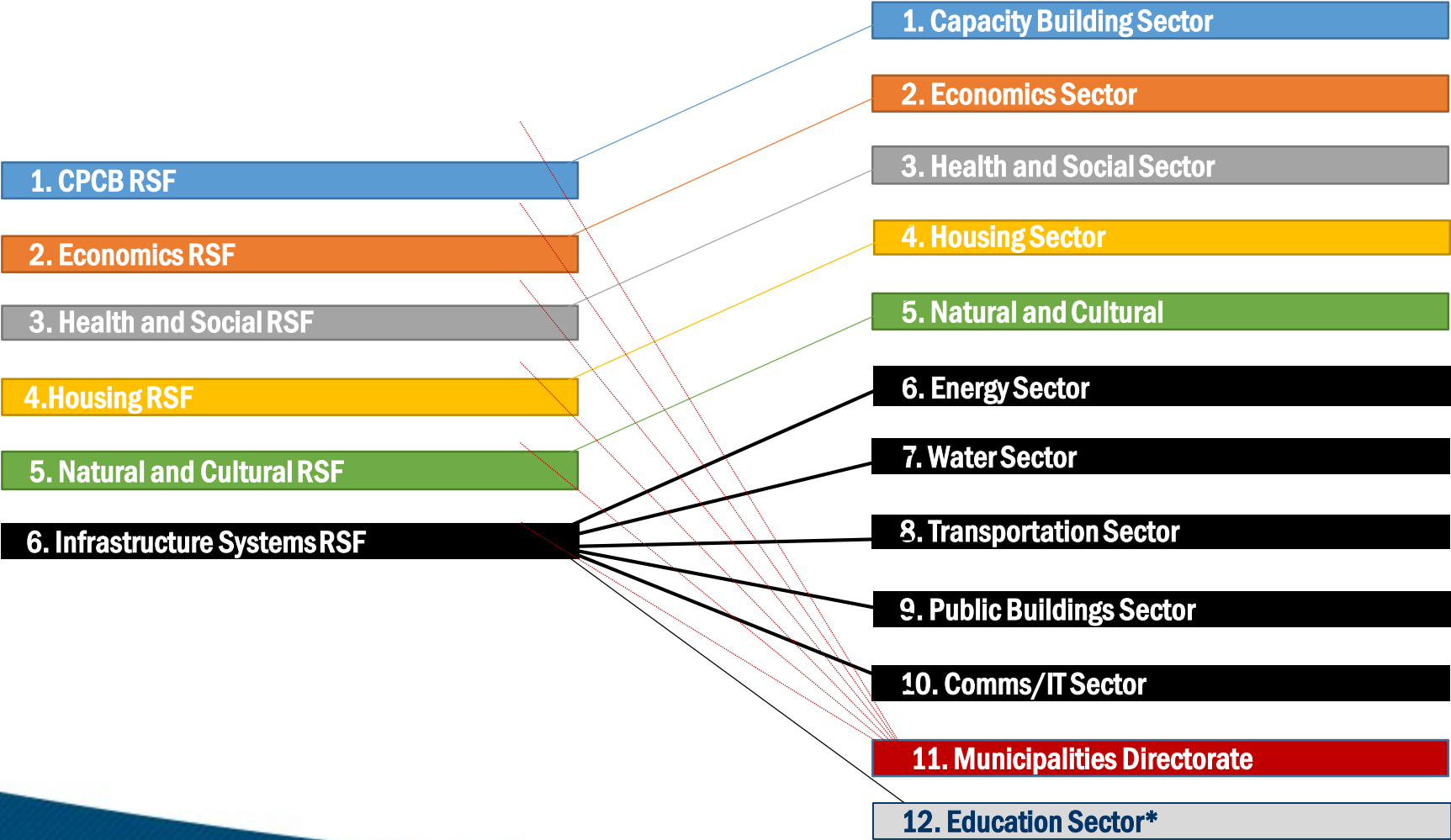
- Situational Assessment
- Public Messaging
- Command, Control, & Coordination
- Critical Communications
- Environmental Health & Safety
- Critical Transportation
- Planning



Survivor Needs

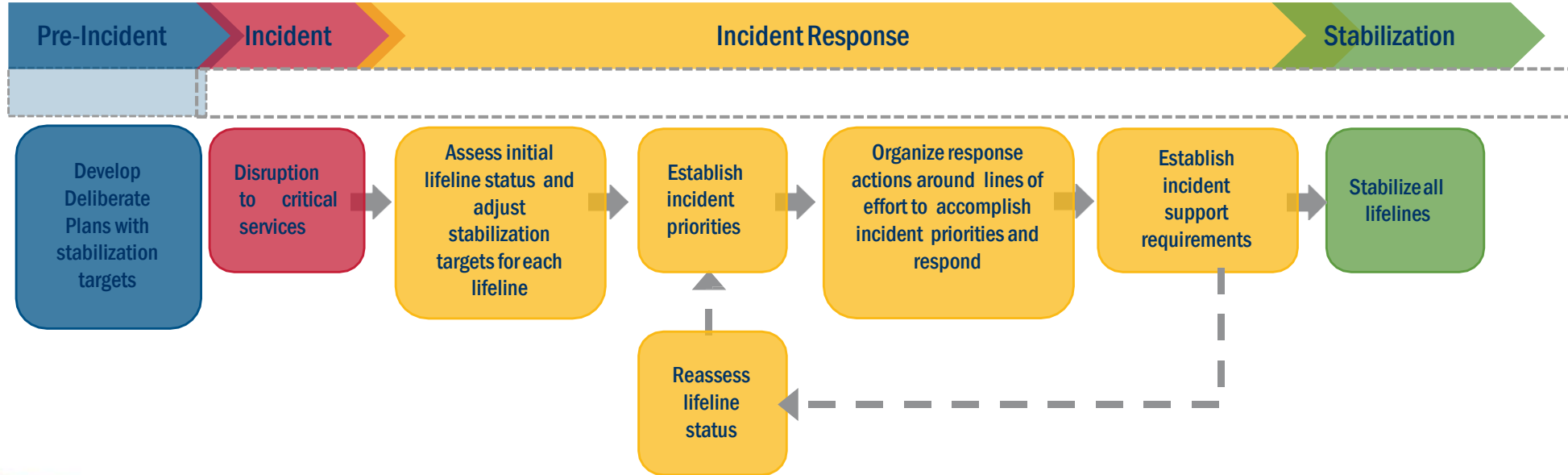
- On-Scene Security and Protection
- Mass Search and Rescue Operations
- Health and Medical Treatment
- Mass Care Services
- Public & Private Services & Resources
- Stabilize and Repair Essential Infrastructure
- Fatality Management Services

Sector-Based Approach



Lifelines Drive Response

Incident responders iteratively assess lifeline status, establish priorities, organize lines of effort, and respond until the incident is stabilized



Community Lifeline Components



Multiple components establish the parameters of and key assessment elements for each of the lifelines; component-level analysis is required to determine if each lifeline is stable

1. Safety and Security

- Law Enforcement/Security
- Search and Rescue
- Fire Services
- Government Service
- Responder Safety
- Imminent Hazard Mitigation

2. Food, Water, Sheltering

- Evacuations
- Food/Potable Water
- Shelter
- Durable Goods
- Water Infrastructure
- Agriculture Infrastructure

3. Health and Medical

- Medical Care
- Patient Movement
- Public Health
- Fatality Management
- Health Care Supply Chain

4. Energy

- Power (Grid)
- Temporary Power
- Fuel

5. Communications

- Infrastructure
- Alerts, Warnings, Messages
- 911 and Dispatch
- Responder Communications

6. Transportation

- Highway/Roadway
- Mass Transit
- Railway
- Aviation
- Maritime
- Pipeline

7. Hazardous Material

- Facilities
- Hazardous Debris, Pollutants, Contaminants

ROOT CAUSE ANALYSIS	
Status	“What?”
Impact	“So What?”
Actions	“Now What?”
And any <i>Limiting Factors?</i>	



Communications

Components and EEs

Infrastructure	Alerts, Warnings, Messages	911 and Dispatch	Responder Communications
<ul style="list-style-type: none"> ▪ Status of telecommunications service ▪ Reliability of internet service ▪ Reliability of cellular service ▪ Requirements for radio/satellite communication capability 	<ul style="list-style-type: none"> ▪ Status of the emergency alert system (e.g., TV, radio, cable, cell) ▪ Status of public safety radio communications ▪ Options for dissemination of information to the whole community ▪ External affairs and media communication 	<ul style="list-style-type: none"> ▪ Status of phone infrastructure and emergency line ▪ Number of callers and availability of staff and facilities ▪ Status of responder communications ▪ Availability of communications equipment 	<ul style="list-style-type: none"> ▪ Status of EOC(s), dispatcher, and field responder communications ▪ Availability and status of first responder communications equipment



Hazardous Material Components and EEIs

Facilities	Incident Debris, Pollutants, Contaminants
<ul style="list-style-type: none">▪ Status of hazardous material facilities▪ Amount, type, and containment procedures of hazardous materials▪ Reported or suspected hazardous material/toxic release incidents▪ Status of hazardous material supply chain	<ul style="list-style-type: none">▪ Debris issues affecting the transportation system▪ Status of debris clearance operations▪ Reported or suspected hazardous material/toxic release incidents▪ Actual or potential radiological or nuclear incidents▪ Monitoring actions planned or underway for HAZMAT incidents

BY THE NUMBERS

REPAIRS



TU HOGAR RENACE
Repairs Completed
108,484

POWER-GENERATORS



DEBRIS CLEARED



RESTORED SERVICES

PRASA **99%**
PREPA **99.9%**
WASTEWATER TREATMENT PLANTS **100%**

NUMBER OF FEDERAL EMPLOYEES



FEMA EMPLOYEES (TOTAL)
1,841

OTHER FEDERAL / CONTRACTORS
505



LOCAL FEMA EMPLOYEES
1,538 (84%)



FEMA INDIVIDUALS AND HOUSEHOLDS PROGRAM

TOTAL DOLLARS OBLIGATED **\$2.4 BILLION**
HOUSING ASSISTANCE \$774 MILLION
OTHER NEEDS ASSISTANCE \$419 MILLION
IMMEDIATE NEEDS ASSISTANCE \$943 MILLION

FEMA PUBLIC ASSISTANCE

PROJECT WORKSHEETS OBLIGATED **1,186**

TOTAL DOLLARS OBLIGATED **\$5.7 BILLION**



ARCHITECTURAL AND ENGINEERING
\$358 MILLION OBLIGATED COSTS

DISASTER UNEMPLOYMENT ASSISTANCE

TOTAL CLAIMS APPROVED **9,097**

FUNDING ALLOCATED **\$24*** MILLION
*Includes administrative costs.

U.S. SMALL BUSINESS ADMINISTRATION

LOANS APPROVED **56,509**

TOTAL DOLLARS APPROVED **\$2** BILLION

HUD - COMMUNITY DEVELOPMENT BLOCK GRANTS

TOTAL DOLLARS APPROVED **\$20** BILLION

FEDERAL HOUSING SNAPSHOT



RENTAL ASSISTANCE

\$132 Million

ESSENTIAL HOME REPAIRS

\$535 Million

HOME REPLACEMENT

\$84 Million

VOLUNTARY AGENCIES LEADING & ORGANIZING REPAIR



Repairs Completed
3,868
Estimated Total
\$16.8 Million

TU HOGAR RENACE

Repairs Completed
108,484
Average cost per home
\$10,409

TEMPORARY ROOFING



Blue Roof **59,469** FEMA Self Help Tarps **125,981**

Direct Lease/Multi-Family Lease and Repair

Number of Families Leased In

62

Total Dollar Amount

\$11.7 Million



US SMALL BUSINESS ADMINISTRATION ASSISTANCE for Homeowners & Businesses



Home Loans

\$1.8 Billion

Business Loans

\$206 Million

Loans Approved

56,509

Total Dollars Approved

\$2 Billion

HUD

Survivors who meet U.S. Department of Housing and Urban Development income requirements are being referred directly to HUD's programs. Survivors can then go online or to the local housing authority to work with HUD on available Section 8 properties in their area.



PUERTO RICO REBUILDING



PUBLIC ASSISTANCE



\$5.7

BILLION
TOTAL APPROVED

\$629 MILLION
Funding for Debris Removal

\$4.4 BILLION
Funding for Emergency
Protective Measures

\$379 Million (includes A&E)
Permanent Work

\$1.9

BILLION

Puerto Rico
Electric Power
Authority

HAZARD MITIGATION GRANT PROGRAM



\$16.5

MILLION
OBLIGATED

COMMUNITY DISASTER LOANS



\$299

MILLION
TOTAL APPROVED

Number of
Municipalities **76**

USACE MISSION ASSIGNMENTS



\$3.7

BILLION

Grid
Restoration **\$2.1**
BILLION

Temporary
Power
Generators **\$823**
MILLION

Generator
Maintenance
to Critical
Infrastructure **\$136**
MILLION

Debris
Removal
Mission
Assignments **\$231**
MILLION

HUD COMMUNITY DEVELOPMENT DISASTER RECOVERY



\$20

BILLION
AWARDED

DEPARTMENT OF EDUCATION



As of May 29

NEARLY \$600

MILLION
APPROVED



DR-4336-PR / DR-4339-PR

MAY 13, 2019

COMMODITY STOCK PUERTO RICO



12x

8x

3x

3x

11x

5x

WATER
(Liters)
2017: 800K
Present: 9.2M



MEALS
2017: 500K
Present: 3.8M



GENERATORS
2017: 90
Present: 298



BLANKETS
2017: 6K
Present: 20K



TARPS
2017: 13K
Present: 145K



PLASTIC SHEETING
2017: 15K
Present: 73.8K



Inventory as of April 26, 2019
Updated monthly



FEMA



DR-4336-PR / DR-4339-PR

MAY 13, 2019

Atlantic Basin Storm Name 2019

- Andrea
- Barry
- Chantal
- Dorian
- Erin
- Fernand
- Gabrielle
- Humberto
- Imelda
- Jerry
- Karen
- Lorenzo
- Melissa
- Nestor
- Olga
- Pablo
- Rebekah
- Sebastien
- Tanya
- Van
- Wendy

Earthquake Details

Estimated Maximum Intensity:	IV in Maunabo, PR
Date:	May 02, 2019 01:10:26 UTC May 01, 2019 21:10:26 Local Time
Region:	Southeast Region of Puerto Rico
Distances:	11.16 Km Southeast of Yabucoa,PR 11.55 Km East-Southeast of Maunabo,PR 50.99 Km South-Southeast of San Juan,PR
Magnitude:	4.1 MI
Location:	Latitude:17.9946 Longitude:-65.8256
Depth:	13 Km
Tsunami Warning Level:	No Warning, Advisory or Watch is in effect for Puerto Rico and the Virgin Islands
Issued date and time :	2019-05-01 22:28:52
ID:	20190502011025





Questions & Discussion

Challenges, Innovation, the way forward



FEMA