

Technical Cooperation workshop for Development of
the Caribbean regional Cooperation Programme
in Multi-Hazard Early Warning System
Barbados – 2-5 November 2010



R3I Overview

Regional Risk Reduction Initiative

R3I



Building Capacity in Disaster Risk Reduction in the OCTs

National outputs with regional integration



Regional

Overseas countries
and territories

Regional expertise
for national outputs

Risk

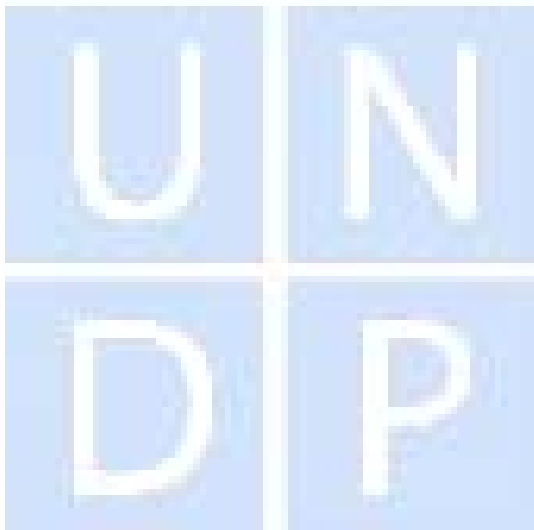
Regional integration

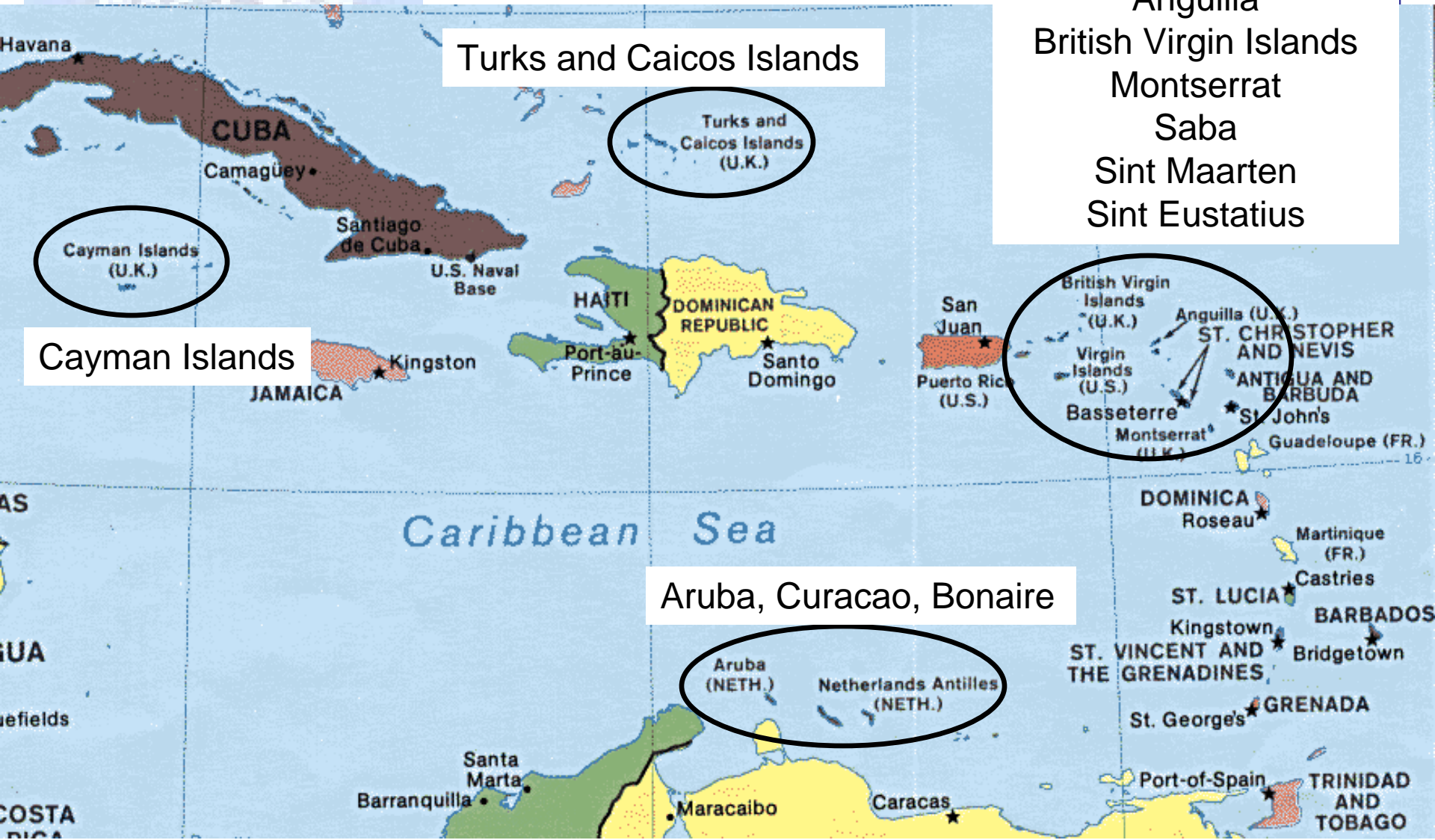
Reduction

Comprehensive disaster
risk management

Initiative

More than a project,
a regional cooperation effort





Turks and Caicos Islands

Cayman Islands (U.K.)

Cayman Islands

Aruba, Curacao, Bonaire

Aruba (NETH.)
Netherlands Antilles (NETH.)

Anguilla
British Virgin Islands
Montserrat
Saba
Sint Maarten
Sint Eustatius

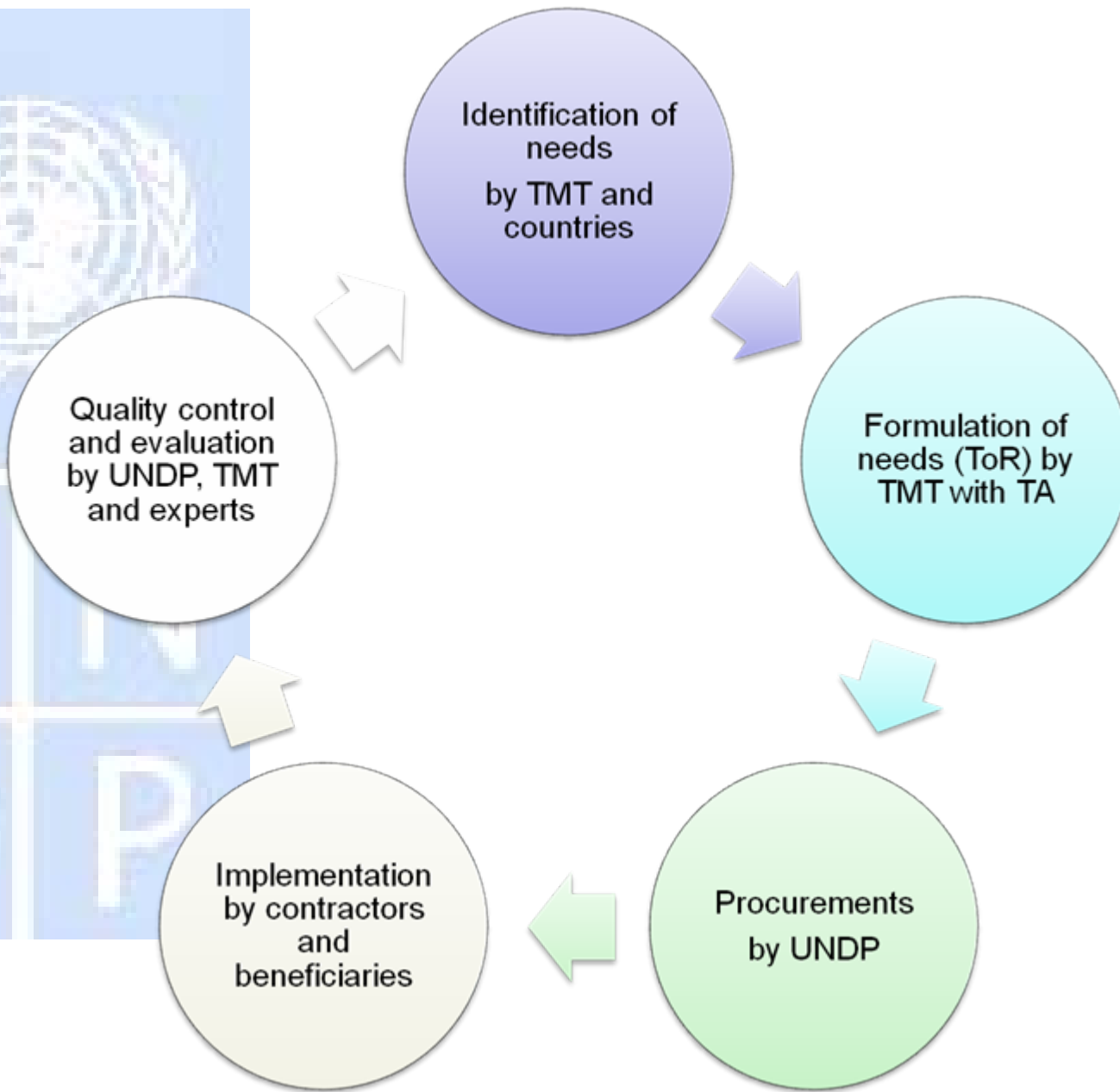
British Virgin Islands (U.K.)
Anguilla (U.K.)
ST. CHRISTOPHER AND NEVIS
Virgin Islands (U.S.)
ANTIGUA AND BARBUDA
Basseterre
St. John's
Montserrat (U.K.)
Guadeloupe (FR.)

€4.9M - Financed by the EU Implemented by UNDP

Output 1	Output 2	Output 3	Output 4	Output 5
Hazard Mapping and Vulnerability Assessment	Early Warning Systems	Response rescue and Recovery	Technical assistance	Coordination, training, dissemination
TMT 1	TMT 2	TMT 3	TMT 4&5	
<ul style="list-style-type: none"> • Work of UNESCO-IHE in Sint Maarten • Request for Proposals: <ul style="list-style-type: none"> - GIS assistance - Vulnerability assessment for Aruba, Curacao, Bonaire, TCI and Montserrat - Quantitative risk assessment for Cayman Islands - Coastal hazard modelling (tsunami and SS) for BVI • Aerial photography of Anguilla •... 	<ul style="list-style-type: none"> • Public warning system (CAP) pilot in: <ul style="list-style-type: none"> - Anguilla – Hazmat - BVI – Tsunami - Montserrat – Volcano - Sint Maarten – Floods • Feasibility study for EWS in 11 territories 	<ul style="list-style-type: none"> • Telecomm equipment • Training in: <ul style="list-style-type: none"> o safer building techniques o search and rescue o hazmat management o EOC management o relief distribution and shelter management o business continuity management o oil spill management • Development of: <ul style="list-style-type: none"> o disaster recovery plans o national asset registers • Examination of risk transfer initiatives • Tsunami signage • Testing of national plans • MoU between Dutch and British OCTS • Damage and needs assessments 	<ul style="list-style-type: none"> • Benchmarking assessment • Expertise and quality control • Participation in regional workshops and training • Development of: <ul style="list-style-type: none"> o school safety programme o community preparedness programme • CDM training • Equipment acquisition and upgrades • ICC building codes adoption and schedules •... 	<ul style="list-style-type: none"> • Coordination team • Project Board meetings • TMT meetings • Communication and publications • Dissemination of good practices and lessons learned • Visibility

Technical Management Teams

	TMT 1 HM & VA	TMT2 EWS	TMT 3 RRR	TMT 4&5 TA and Coord
Anguilla				
Aruba				
Bonaire				
BVI				
Cayman Islands				
Curacao				
Montserrat				
Saba				
Sint Eustatius				
Sint Maarten				
TCI				



EWS activities

4 Pilots

- Anguilla
- BVI
- Montserrat
- Sint Maarten
- ABC Islands
- Cayman Islands
- Saba
- St Eustatius
- Turks & Caicos

Feasibility Study

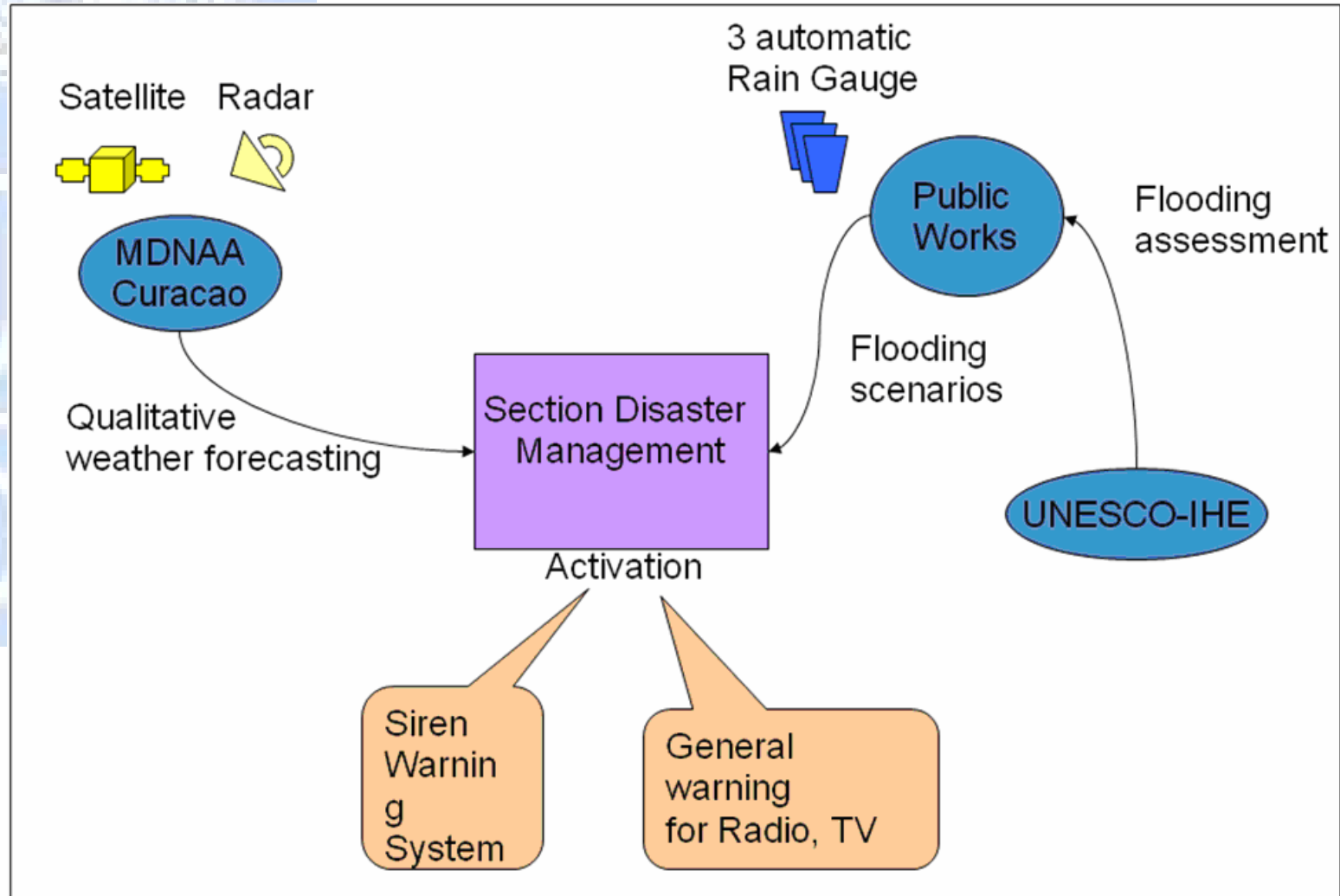
Pilot Focus

	Anguilla	Montserrat	St Maarten	BVI
Hazard focus	Hazardous Material	Volcano	Floods	Tsunami / EQ
Public Warning system in place IT equipment	<ul style="list-style-type: none"> Legislation Policy (draft) Protocols NWAC Radio broadcast F/AM Radio Interrupt Mounted vehicle PA RDS Receivers (CAP) Computer Popup (not public) (CAP) SMS (CAP) EMAIL Rosters (CAP) 	<ul style="list-style-type: none"> Legislation Policy SOP Checklists Live drills NWAC Sirens (not CAP) EAS radio interrupt with RDS messaging system DMCA audio and video studio with interrupt of local media (needs more discussion with IT) VHF (to complete under TMT3 and TRAC) 	<ul style="list-style-type: none"> Related Flood hazard maps Sirens (Not CAP) 3 automatic rain gauges (not installed) 	<ul style="list-style-type: none"> Legislation and Policy (linded) NWAC Radio AM and FM broadcast Radio Interrupt TV interrupt Cable interrupt Mounted vehicle Sirens ? RDS
Institutional Gaps	<ul style="list-style-type: none"> SOP for Hazmat National Warning system training Education materials Public outreach 	<ul style="list-style-type: none"> Training to maintain sirens Maintenance policy or legislation SOP for new CAP system 	<ul style="list-style-type: none"> SOP Drills, testing documents NWAC (not needed ?) 	<ul style="list-style-type: none"> SOP and Checklists Drills, testing documents
Technology required	<ul style="list-style-type: none"> 1 CAP server and BamBox (for public) 1 Back Up CAP CONverter or "radio interrupt" 1 Backup FM radio RDS signal encoder 50 back-up receivers 1 Backup CAP server Hot Button 	<ul style="list-style-type: none"> 1 additional siren (CAP enabled) Cap base controller to interface with sirens controller New siren controller and upgrading of 8 existing units CAP integration of existing RDS including text to speech converter 1 public CAP server with Bambox (pop-up) and email notifications (require further discussion with IT) Cellular SMS and Text Hot Button 	<ul style="list-style-type: none"> Cap base controller to interface with sirens controller Bambox (Pop-up) Email RDS ? SMS ? Radio interrupt ? Via radio ? Hot Button ? 	<ul style="list-style-type: none"> 1 public CAP server with Bambox (pop-up) and email notifications 1 CAP CONverter or alternate "radio interrupt" 1 Backup FM radio RDS signal encoder CAP Integration of existing RDS Hot Button ?



Initiate Sint Maarten Pilot

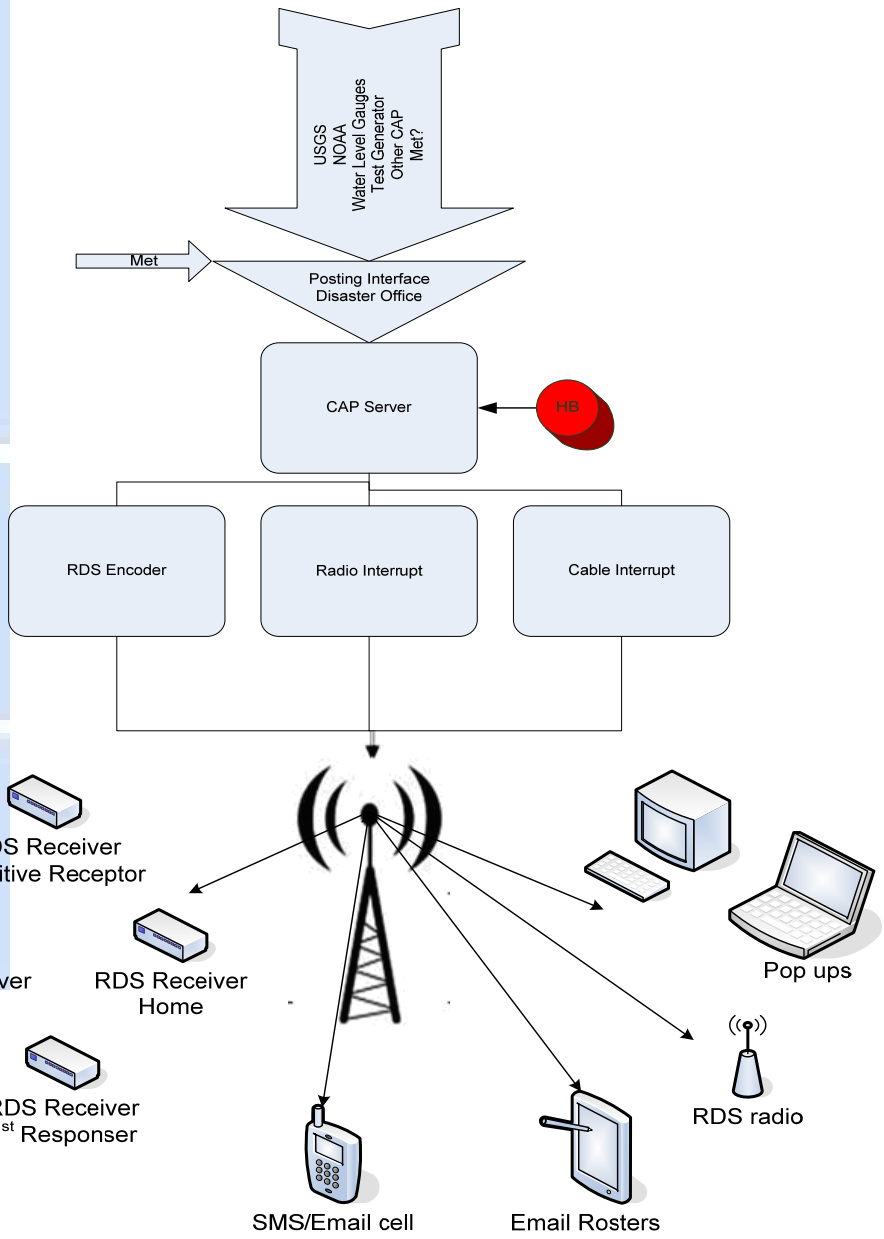
Existing





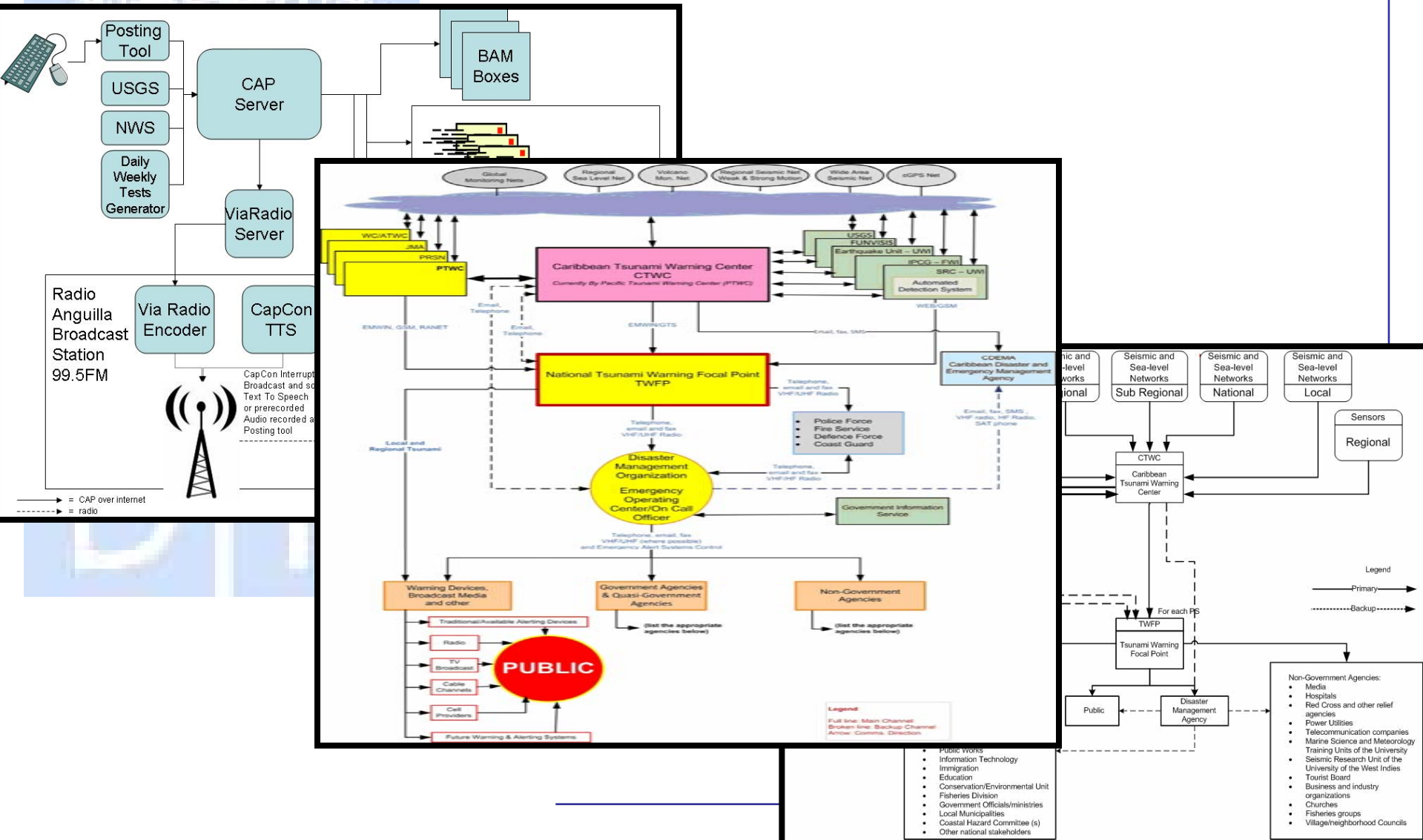
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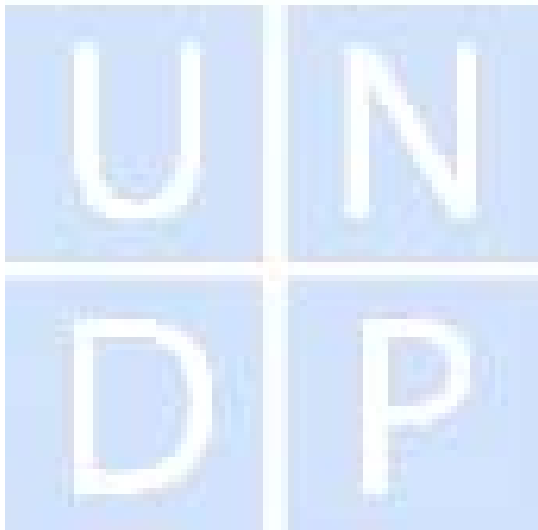
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Networks in Place

Recently Mostly Tsunami Focused But Not All





Thank you !