Smart, Safe Growth for the CNMI

Guidance Manual – Introduction and Uses

Training Module 3
19 – 21 July 2022

Nimbus Environmental Services

Purpose – Overview of the Guidance Manual for *Smart, Safe Growth (SSG)*

- Help users understand the organization of the Guidance Manual for SSG
- Review tools and resources provided to implement *SSG*

Learning Objectives

- Guidance Manual organization
- How to access and use the information to integrate SSG into agency or company work products

Learning Tool

Training Module 3 – The *Guidance Manual for SSG*
Handout 1
Chapter Organization

Instructions: Fill in the blank to complete the chapter titles. Write notes below each chapter for information that is most important to you and your work.

Chapter 1.0 – Manual _____

Chapter 2.0 – Smart, _____ Growth

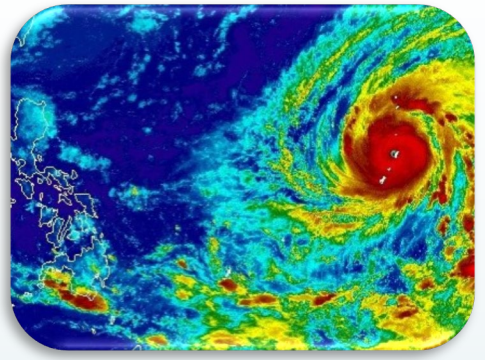
Chapter 3.0 - _____ _____

Instructions: Draw a line between the chapter and the topics covered in each chapter

Chapter 1.0	1. Climate change adaptation strategies
Chapter 2.0	2. Regulations review summary
Chapter 3.0	3. Master bibliography
Chapter 4.0	4. Manual overview
Chapter 5.0	5. Information, tools and resources to work toward SSG
Chapter 6.0	6. Recommendations to adopt climate change policy.
Chapter 7.0	7. SSG emerges from the intersection of 3 areas of practice
Appendix A	8. Summary review of CNMI planning documents
Appendix B	9. Key Terms defined
Appendix C	10. Tool to evaluate planning and development initiatives for SSG conformance.
Appendix D	11. Complete Regulations review for conformance with SSG
Appendix E	12. Evaluation of selected resources for conformance with SSG
Appendix F	13. 2018 SSG Workshop proceedings

Introduction

- A new way to plan to plan and develop
- SSG = development tools
- SSG = improved resiliency
- SSG = sustainability
- SSG aligns with values in the Comprehensive Sustainable Development Plan






Smart Growth
PROGRAM

HMGP
HAZARD
MITIGATION
GRANT PROGRAM

PACC
Building Resilience to Climate Change in Pacific Communities

Climate Adaptation

Manual Organization

- Chapter 1.0 – Introduction
- Chapter 2.0 – *Smart, Safe Growth*
- Chapter 3.0 – Climate Conditions
- Chapter 4.0 – Recommended Government Actions
- Chapter 5.0 – CNMI Planning
- Chapter 6.0 – Regulations
- Chapter 7.0 – *SSG* Implementation Tools
- Appendices A-F

Chapter 1.0 - Manual Purpose

- **Useful tools and information**
- **Reduce burdens of recovery**
- **Key SSG topics**
  - Climate adaptation measures
  - Recommendations for government action
  - Planning resources
  - Regulatory instruments
  - Tools

Chapter 1.0 - Primary Users

- **Regulatory Authorities, Agency Staff, and Government Planning Officials**
- **SSG provides framework for consistent work toward sustainability**
  - Technical reviews
  - Planning document updates
  - Ideas/language to advocate for sustainability w/public
- **Additional research for SSG applications**

Chapter 1.0 - Other Users

- **Project developers and consultants**
  - Sustainable and resilient project plans
  - Criteria for project reviews
  - Engineering principles and practices move towards the sustainable
- **Sustainability practitioners and researchers and the general public**
  - Makes tools and information accessible
  - Resource to help community-led efforts

Activity - How will you use *SSG* and how will the manual help you?

- Review of plans / projects
- Project design
- Plan development
- Ideas/language to advocate for sustainability
- Additional research for SSG applications
- Other functions???

Training Module 3 – The *Guidance Manual for SSG*
Handout 2
How Will You Use *SSG* and how will the *Guidance Manual help*?
Activity Time: 5 Minutes

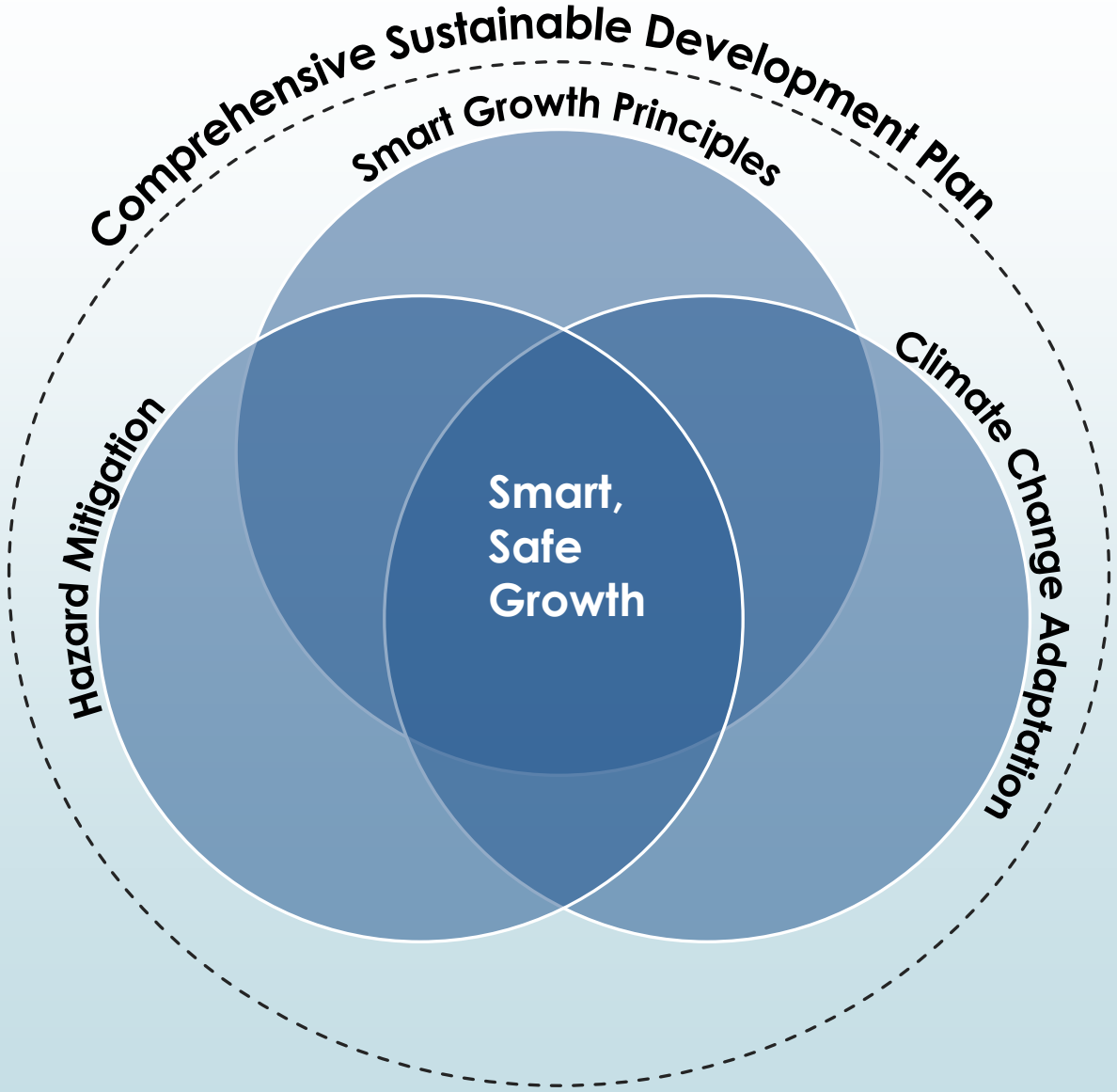
Instructions: In your current job think of how you might integrate *SSG* into your work and how you might use the Guidance Manual to assist you. Write down your answer and be prepared to share with the group.

Answer:

How will others in the group use the *Guidance Manual*?
List answers:

Chapter 2.0 - *Smart, Safe Growth*

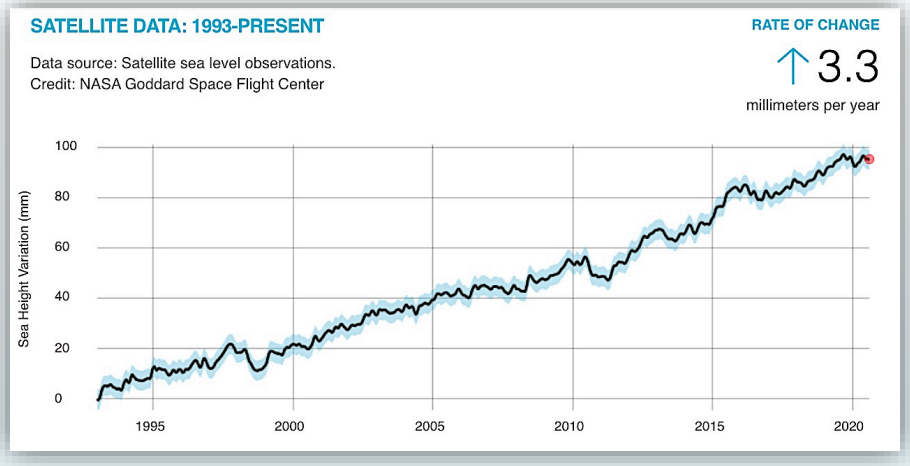
- Regulations and economic incentives are the "*builders*"
- CNMI CSDP establishes the "blueprint"



Chapter 3.0 - Climate Conditions

Extreme Temperatures

Sea-Level Rise



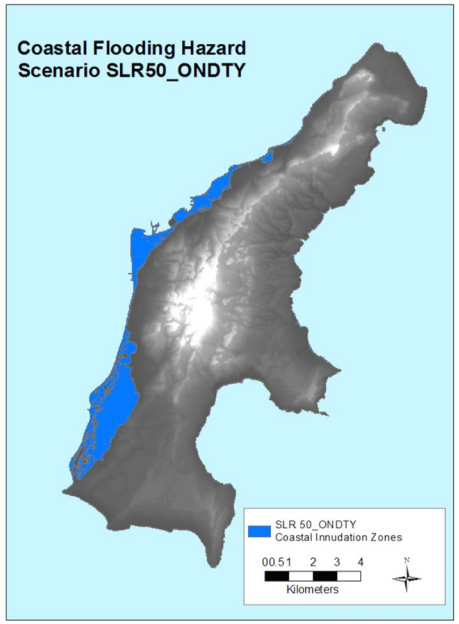
Increased Wave Action

Extreme Rainfall

Chapter 3.0 – Climate Adaptation Strategies

Adaptation Strategy	SSG Principles	Benefits
Respond (evacuate or shelter)	P*4*	Critical facilities, such as shelters and hospitals, in safe locations maximizes public safety and community recovery.
Manage development and redevelopment	P*1*, P*2*, P*4*, P*5*, P*6*, P*8*, P*9*, P*10*, P*11*, P*12*	Managed development and redevelopment decisions can reduce community vulnerability to natural hazards and lower the impacts of climate change.
Improve structural resistance	P*1*, P*3*, P*6*, P*9*, P*11*, P*12*	Increases resiliency of existing structures and reduces damage and recovery costs.
Promote natural protective features	P*1*, P*5*, P*7*, P*8,* P*12*	Key natural resources and protective features buffer and protect the built environment from weather impacts (e.g., barrier reef reduces wave energy and helps buffer the impacts of wave run-up).

SSG Principles: P*1*- Climate Change; P*2* – Retreat; P*3* – Retrofit; P*4* – Critical Facilities Location; P*5* – Development Initiatives; P*6* – Sustainable Development BMPs; P*7* – Ecosystem Services; P*8* – Green Infrastructure; P*9* – Development Decision Process; P*10* – Early Collaboration; P*11* – SSG Knowledgeable Communities; P*12* – Adaptive Management



Chapter 4.0 - Government Actions

- **Adopt climate change policy**
- **Revise regulations**
- **Adopt long-range planning and funding horizons**
- **Fund and implement SSG**
  - Office of Planning and Development
  - Resilience Working Group
  - GIS User's Group

Chapter 5.0 - Planning Resources

- **Office of Planning and Development**
  - Promote Sustainable Development and SSG Implementation
  - Effective control over private actions
  - Agency coordination
  - Resource Allocation and Use
- **Planning Document Reviews**

Chapter 6.0- Regulatory Resources

- Summary of SSG-relevant regulations
- Overlap with the Comprehensive Sustainable Development Plan (CSDP)

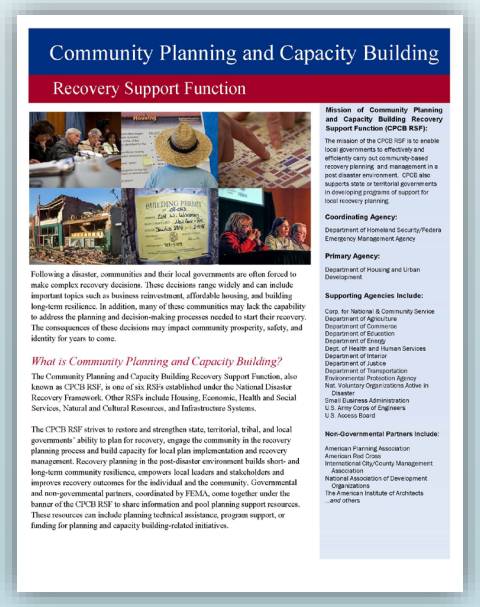
Chapter 6.0- Regulatory Resources

- **Zoning**
  - SSG Principles into land use planning.
  - Proactively works toward SSG
- **Permitting**
  - Review process – SSG compliant?
  - Review criteria to drive sustainability and SSG

Chapter 7.0 – *SSG* Implementation Tools

- **Tools and resources for CNMI**
  - Utilities Design, Engineering, and Construction
  - Land Use Management
  - Post-Disaster Recovery
  - Funding
  - Capacity Building
  - Community Engagement

Tool Name	Tool Summary
Capacity Building Tools	
Enhanced capacity building	• Incorporate SSG concepts in high school and college curricula. • Coordinate local capacity building efforts among agencies, professional organizations, extension groups, and others. • Utilize the FEMA Local Capacity Building Support Catalog that contains resources useful to local governments recovering from severe disasters. It is a compilation of time sensitive and ongoing training, toolkits, and technical assistance offered by 40 federal and state departments, professional and trade associations, and national non-profit organizations. The catalog's purpose is to help local governments address knowledge and capacity gaps in disciplines necessary for long-term recovery. Most of the offerings are free or low cost. https://www.fema.gov/media-library/assets/documents/160154


Community Planning and Capacity Building

Recovery Support Function

Following a disaster, communities and their local governments are often forced to make complex recovery decisions. These decisions range widely and can include important topics such as business reinvestment, affordable housing, and building long-term resilience. In addition, many of these communities may lack the capability to address the planning and decision-making processes needed to start their recovery. The consequences of these decisions may impact community prosperity, safety, and identity for years to come.

What is Community Planning and Capacity Building?

The Community Planning and Capacity Building Recovery Support Function, also known as CPCB RSF, is one of six RSFs established under the National Disaster Recovery Framework. Other RSFs include Housing, Economic, Health and Social Services, Natural and Cultural Resources, and Infrastructure Systems.

The CPCB RSF strives to restore and strengthen state, territorial, tribal, and local governments' ability to plan for recovery, engage the community in the recovery planning process and build capacity for local plan implementation and recovery management. Recovery planning in the post-disaster environment builds short- and long-term community resilience, empowers local leaders and stakeholders and improves recovery outcomes for the individual and the community. Governmental and non-governmental partners, coordinated by FEMA, come together under the banner of the CPCB RSF to share information and pool planning support resources. These resources can include planning technical assistance, program support, or funding for planning and capacity building-related initiatives.

Mission of Community Planning and Capacity Building Recovery Support Function (CPCB RSF):

The mission of the CPCB RSF is to enable local governments to effectively and efficiently carry out community-based recovery planning and management in a post-disaster environment. CPCB also supports state or territorial governments in developing programs of support for local recovery planning.

Coordinating Agency:

Department of Homeland Security/Federal Emergency Management Agency

Primary Agency:

Department of Housing and Urban Development

Supporting Agencies Include:

Corp. for National & Community Service
Department of Agriculture
Department of Commerce
Department of Education
Department of Energy
Dept. of Health and Human Services
Department of Interior
Department of Justice
Department of Transportation
Environmental Protection Agency
Nat. Voluntary Organizations Active in Disaster
Small Business Administration
U.S. Army Corps of Engineers
U.S. Access Board

Non-Governmental Partners Include:

American Planning Association
American Red Cross
International City/County Management Association
National Association of Development Organizations
The American Institute of Architects
...and others


Community Planning and Capacity Building
Recovery Support Function

What does the CPCB RSF do BEFORE a disaster?

The CPCB RSF coordinates assistance among federal and non-federal partners to help local governments and tribes prepare for disaster recovery. The CPCB RSF works through partners to communicate and coordinate availability of guidance materials, tools and training for developing local and tribal pre-disaster recovery and resilience plans. The RSF also builds a network of agencies and organizations that are prepared to aid tribes and local governments with planning when disaster strikes.

What does the CPCB RSF do AFTER a disaster?

The CPCB RSF coordinates and facilitates support among a variety of partners for the planning, capacity, and resilience building capabilities needed by local or tribal governments following large or unique incidents. Coordination and partner support is tailored to the needs of disaster-impacted states, territories, tribes, and local governments through information sharing, assessment, and strategy development process.

Examples of coordinated CPCB RSF support activities include:

- *Education, Peer-to-Peer Forums and Workshops* give recovery planners and officials an opportunity to ask questions and benefit from the recovery planning lessons learned by others.
- *Recovery Planning* is often needed by communities to begin an organized process. CPCB federal partners, as well as universities and NGOs, can pool resources to provide planning technical assistance, staffing resources and funding.
- *Community Engagement* after a disaster can be fraught with challenges, including resident displacement. CPCB partners can advise or support communities with reaching and involving all stakeholders in recovery planning.
- *Management Capacity* is often needed to implement recovery plans. CPCB partners can help communities quickly define local capacity building needs and identify post-disaster resources to fill those management needs.
- *Planning and related Tools, Guidance, Training* and other just-in-time materials are available through the *Community Recovery Management Toolkit* and other partner resources.

FEMA

April 2016

Related Resources:

National Disaster Recovery Framework
http://www.fema.gov/national-disaster-recovery-framework

Does your community have a recovery plan or an emergency operations plan?
www.fema.gov/plan

Community Recovery Planning and Management Toolkit:
http://www.fema.gov/national-disaster-recovery-framework/community-recovery-management-toolkit

Does your community have a hazard mitigation plan?
Local Mitigation Planning Handbook –
http://www.fema.gov/media-library/assets/documents/31598

Hazard Mitigation: Integrating Best Practices into Planning –
http://www.fema.gov/media-library/assets/documents/19261

Does your community have a pre-disaster recovery ordinance?
American Planning Association
https://www.planning.org/research/postdisaster/

Does your community need an economic recovery plan?
International Economic Development Council
http://restoreyoureconomy.org/recovery/post-disaster-planning-for-economic-recovery/

Does your community have a continuity of operations plan?
Continuity Planning & Templates
http://www.fema.gov/planning-templates

Training for disaster recovery
Emergency Management Institute
http://www.training.fema.gov/emi/

National CPCB RSF Coordinator:
Matt Campbell
Federal Emergency Management Agency
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Activity – Stormwater Management – Case Study from Takpochau Watershed

- Review case study
- Recommend *SSG* strategies/tools/solutions
- Use Chapter 7.0 of the Guidance Manual for support

Training Module 3 – The *Guidance Manual for SSG*
Handout 3
Case Study – Stormwater Management
Activity Time: 30-45 minutes

Instructions: Break into groups of 2-4.

1. Discuss the issues identified as contributing to the impairment of the freshwater streams, as indicated in the Case Study (pg 2).
2. Consult Chapter 7.0 of the *Guidance Manual* to find tools and resources that may help planners and/or project developers evaluate actions for stormwater management to help improve stream water quality in this watershed.
3. Write down your group's recommendations on the lines below and the resouces or tools that support the recommendation(s).
4. Be prepared to share your finding with the other groups.

Case Study – Central West Takpochau – Fresh Water Streams

The 2020 CNMI 305(b) and 303(d) Water Quality Assessment Integrated Report states that Central West Takpochau streams are 303(d) listed as impaired due to the presence of mercury (Hg) contamination sourced back to the hospital parking area drainage. Furthermore, previous water quality data exceeded the CNMI Water Quality Standard for Enterococci bacteria. The source of the bacteria is thought to be from urban stormwater and sewer overflows, erosion and sediment, and piggeries and other small animal pens in the upper watershed that are in close proximity to the streams. Due to the water quality of these streams, the following designated uses (DU) are not recommended for these streams: *Fish and Shellfish Consumption* and *Recreational.*

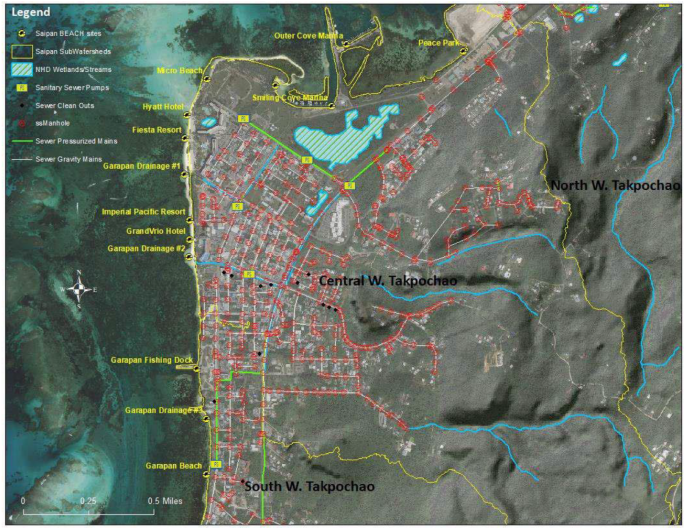
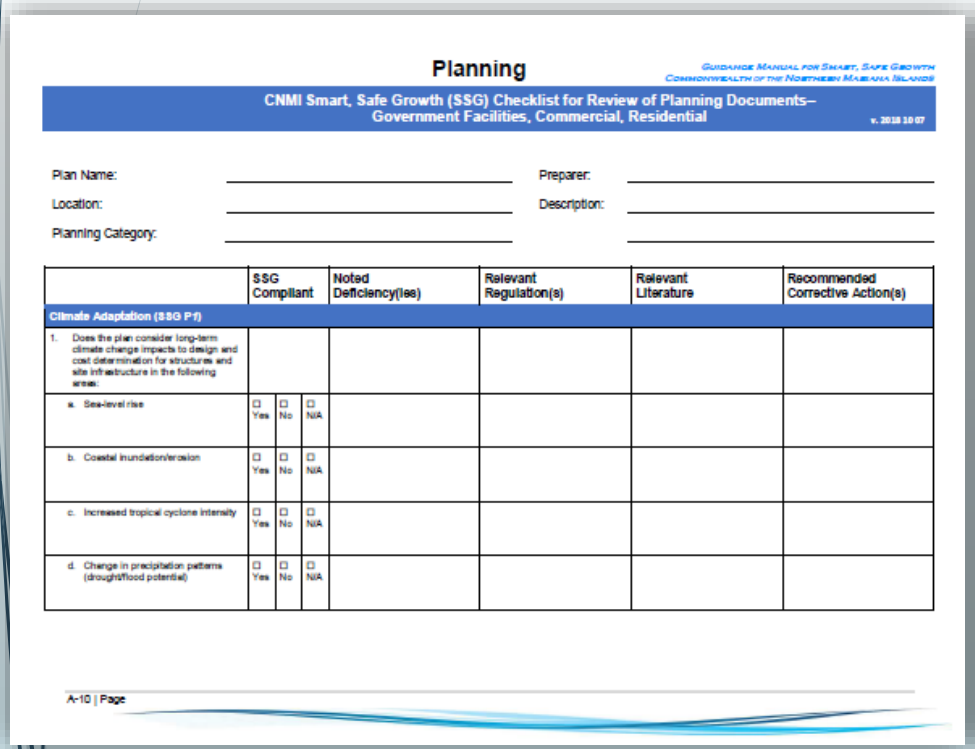


FIGURE 1. Central W. Takpochau Watershed (Segment 19B) (Source:2020 CNMI 305(b) and 303(d) Water Quality Assessment Integrated Report, pages 140 and 144.)

Appendix A - Checklists



Planning

Guidance Manual for Smart, Safe Growth Commonwealth of the Northern Mariana Islands

CNMI Smart, Safe Growth (SSG) Checklist for Review of Planning Documents– Government Facilities, Commercial, Residential v. 2018 10 07

Plan Name: _____ Preparer: _____

Location: _____ Description: _____

Planning Category: _____

	SSG Compliant			Noted Deficiency(ies)	Relevant Regulation(s)	Relevant Literature	Recommended Corrective Action(s)
Climate Adaptation (SSG P1)							
1. Does the plan consider long-term climate change impacts to design and cost determination for structures and site infrastructure in the following areas:							
a. Sea-level rise	☐ Yes	☐ No	☐ N/A				
b. Coastal inundation/erosion	☐ Yes	☐ No	☐ N/A				
c. Increased tropical cyclone intensity	☐ Yes	☐ No	☐ N/A				
d. Change in precipitation patterns (drought/flood potential)	☐ Yes	☐ No	☐ N/A				

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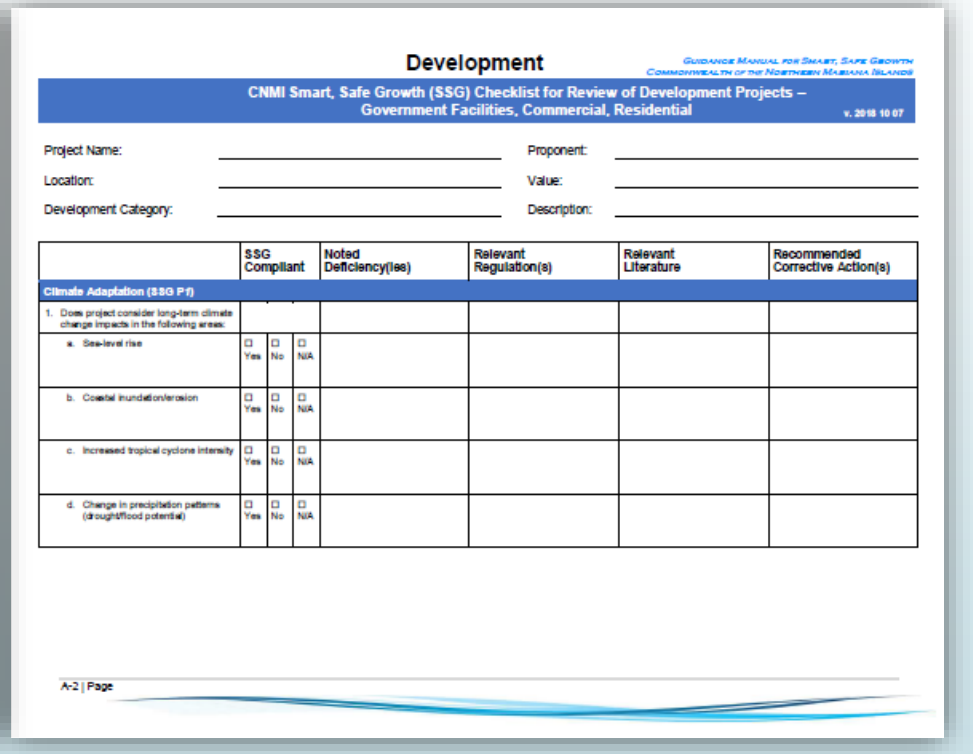

Development

Guidance Manual for Smart, Safe Growth Commonwealth of the Northern Mariana Islands

CNMI Smart, Safe Growth (SSG) Checklist for Review of Development Projects – Government Facilities, Commercial, Residential v. 2018 10 07

Project Name: _____ Proponent: _____

Location: _____ Value: _____

Development Category: _____ Description: _____

	SSG Compliant			Noted Deficiency(ies)	Relevant Regulation(s)	Relevant Literature	Recommended Corrective Action(s)
Climate Adaptation (SSG P1)							
1. Does project consider long-term climate change impacts in the following areas:							
a. Sea-level rise	☐ Yes	☐ No	☐ N/A				
b. Coastal inundation/erosion	☐ Yes	☐ No	☐ N/A				
c. Increased tropical cyclone intensity	☐ Yes	☐ No	☐ N/A				
d. Change in precipitation patterns (drought/flood potential)	☐ Yes	☐ No	☐ N/A				

A-2 | Page

Appendix B – Regulation Review

CNMI Smart, Safe Growth (SSG) Guidance – Relevant Regulations

Table B.1 Review and Summary of CNMI Regulations for Conformance with SSG Principles

				Conformance with SSG Principles[1]	
Chapter Title	**Subchapter Title**	**CMC Title / Section(s)**	**Statute Title (Public Law #)**	**Strengths**	**Deficiencies**
Bureau of Environmental and Coastal Quality – Titles 15 and 65					
Coastal Resources Management Rules and Regulations 15-10	N/A	1 CMC §§ 2081-2082 2 CMC §§1501-1543	Coastal Resources Management Act of 1983 (PL 3-47)	*P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12*	
Aboveground Storage Tank Regulations 65-5	N/A	1 CMC §§ 2646-2649 2 CMC §§ 3101-3134	Commonwealth Env. Protection Act of 1982 (PL 3-23)	*P4*	*P1, P2, P3, P5, P6, P7, P8, P9, P10, P11, P12*
Air Pollution Control Regulations 65-10	N/A	"	"	Not Applicable	Not Applicable
Drinking Water Regulations 65-20	N/A	"	"	*P1, P2, P3, P4, P6, P9, P10, P11, P12*	*P5, P7, P8*
Earthmoving and Erosion Control Regulations 65-30	N/A	"	"	*P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12*	
Harmful Substance Clean Up Regulations 65-40	N/A	"	"	Not Applicable	Not Applicable
Hazardous Waste Management Regulations 65-50	N/A	"	"	Not Applicable	Not Applicable
Litter Control Regulations 65-60	N/A	"	"	Not Applicable	Not Applicable
Pesticide Regulations 65-70	N/A	"	"	Not Applicable	Not Applicable

REGULATION EVALUATION for CNMI SSG

Administrative Agency: BECQ, Division of Coastal Resources Management (DCRM)

Regulation: Title 15-10 Coastal Resources Management Rules and Regulations

Description: Enabled by Public Law 3-47, the Coastal Resources Management Act of 1983, DCRM's regulations are intended to balance wise use and conservation within the CNMI. The 1983 legislation articulated twenty-three policy goals for coastal resource management that range from planning, education, and inter-agency coordination to permitting and enforcement. Title 15-10 established the rules and regulations that govern practice and procedure within the federally approved CRM program and establish procedures and set standards for the DCRM in implementing its responsibilities, as approved by the National Oceanic and Atmospheric Administration's office of Coastal Resources Management. Where they may conflict these regulations supersede the zoning requirements for any project or proposed use from the high tide line to 150 feet inland from the line. Nothing in this title prohibits DCRM from imposing an additional buffer zone to protect environmentally sensitive resources as appropriate regardless of any zoning or building regulations pertaining to setbacks and buffer zones. Mandatory vegetative buffers for wetlands are established in 15-10-330, while de facto buffers are established for shorelines under management standards and use priorities in 15-10-335.

Title 15-10 establishes permitting requirements for 3 types of CRM permits: temporary permits for emergency repairs, permits for major sitings, and Areas of Particular Concern (APCs). APCs include Lagoon and Reefs, Managaha and Anjota Islands, Coral Reefs, Wetlands and Mangroves, Shorelines, Ports and Industrial Areas, and Coastal Hazards. Permits are required of a proposed development wholly or partially within an APC which as or is more likely than not to have an adverse impact on an APC unless mitigated, or which constitutes a major siting under Section 15-10-501. Impact Avoidance, Minimization, and Mitigation are required for all developments. Permits are also required as early action for flood zone risk reduction through 3 measures: 1) When a major siting proposal falls within a coastal hazard APC of FEMA designated AE/AO flood zone DCRM is required to coordinate with the Zoning Office and DPW at the earliest possible time to ensure relevant flood hazard reduction standards are met; 2) Soft measures must be considered as alternatives to hard structures to limit coastal erosion; and 3) Implementation of green infrastructure elements and related best management practices must be considered for development projects in listed high priority watersheds with designated conservation management plans including Garapan, Laolao, and Talakaya.

The permitting process is detailed including fees, conditions, and enforcement. There is no fee for government agencies engaging in government projects, and APC application fees may be reduced for beneficial projects or in cases of financial hardship upon request. Fees for Major Siting projects are based upon appraisal of construction costs. Tiered discounted fees are available for qualifying "green" and /or "low impact development" projects based on "LEED Certifiable" building design and construction and, for Best Management Practices (BMP) for redevelopment and rehabilitation of existing buildings. General criteria considered for CRM permit application evaluations includes: 1) the ability to accommodate future climatic change, determination whether a reasonable alternative site exists for the proposed project; 2) effect on existing public services; 3) setbacks from hazardous lands including floodplains, erosion-

Appendix C – Master Bibliography

CNMI Smart, Safe Growth (SSG) Guidance - MASTER BIBLIOGRAPHY

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Adger, W. N., Dessai, S., Goulden, M., Hulme, M., Lorenzoni, I., Nelson, D. R., … Wreford, A. (2009). Are there social limits to adaptation to climate change? *Climatic Change*, *93*(3–4), 335–354.

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Apidae Development Innovations Pty Ltd. (2015). *Pacific Islands framework for action on climate change 2006-15, Final evaluation* (pp. 75). Apia, Samoa: Secretariat of the Pacific Regional Environment Programme.

Arriola, J., Camacho, R., Chambers, D., Derrington, E., Kaipat, J., Okano, R., & Yuknavage, K. (2016). *2016 Commonwealth of the Northern Mariana Islands 303 (d), 305 (b) and 314 water quality assessment integrated report* (pp. 140). Saipan, MP: Bureau of Environmental and Coastal Quality.

Arthur D. Little International, Inc., Chase Manhattan Asia Limited, Lyonnaise Marianas America, Inc., & Winzler & Kelly Consulting Engineers. (1988). *Plan for the Commonwealth of the Northern Mariana Islands, September 1998: CNMI seven-year strategic development plan, executive summary* (pp. 37). Saipan, MP: CNMI Government.

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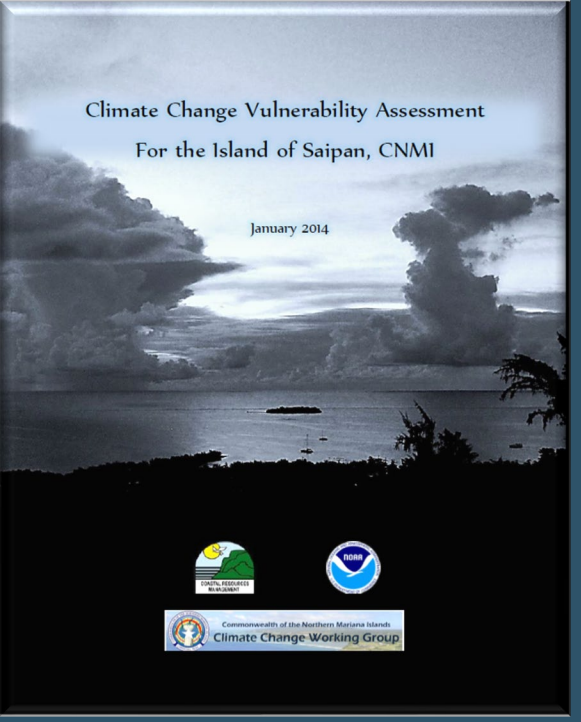
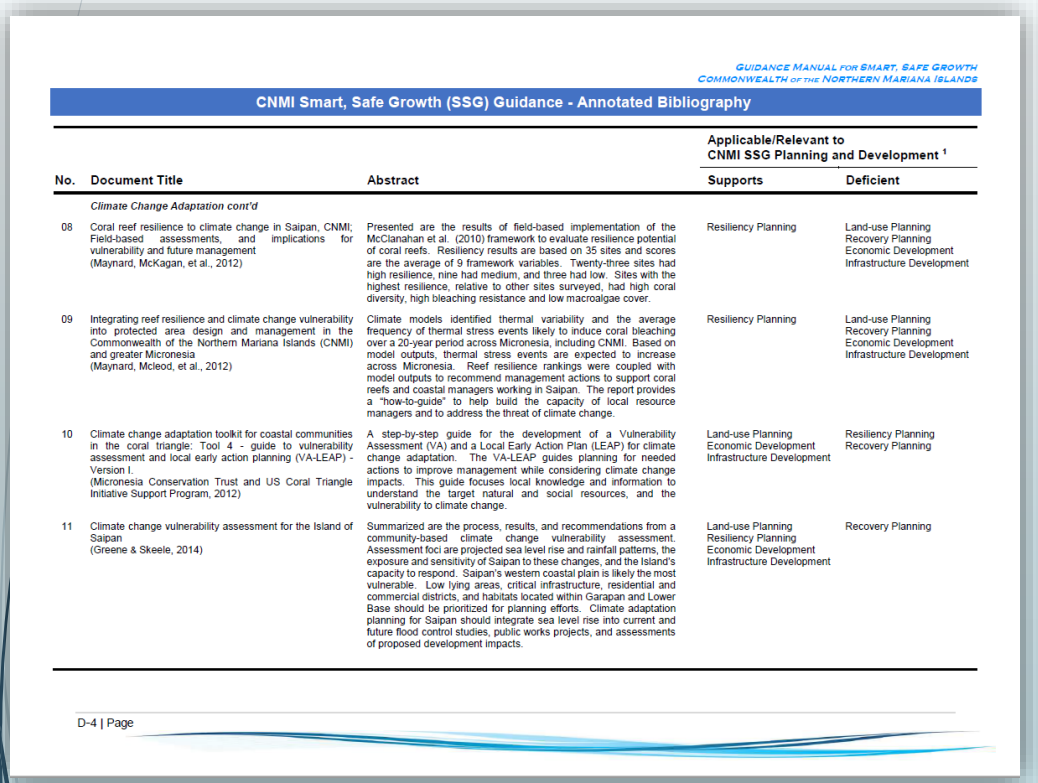
Bickel, A. (2012). *Talakhaya/Sabana Conservation Action Plan* (pp. 74). Saipan, MP: Bureau of Environmental and Coastal Quality, Division of Environmental Quality.

Boyd, A., Hokanson, J. B., Johnson, L. A., & Topping, K. C. (2017). Planning for post-disaster recovery: Next generation (No. PAS Report 576). Washington, DC: The American Planning Association.

Appendix D – Evaluations of Selected References

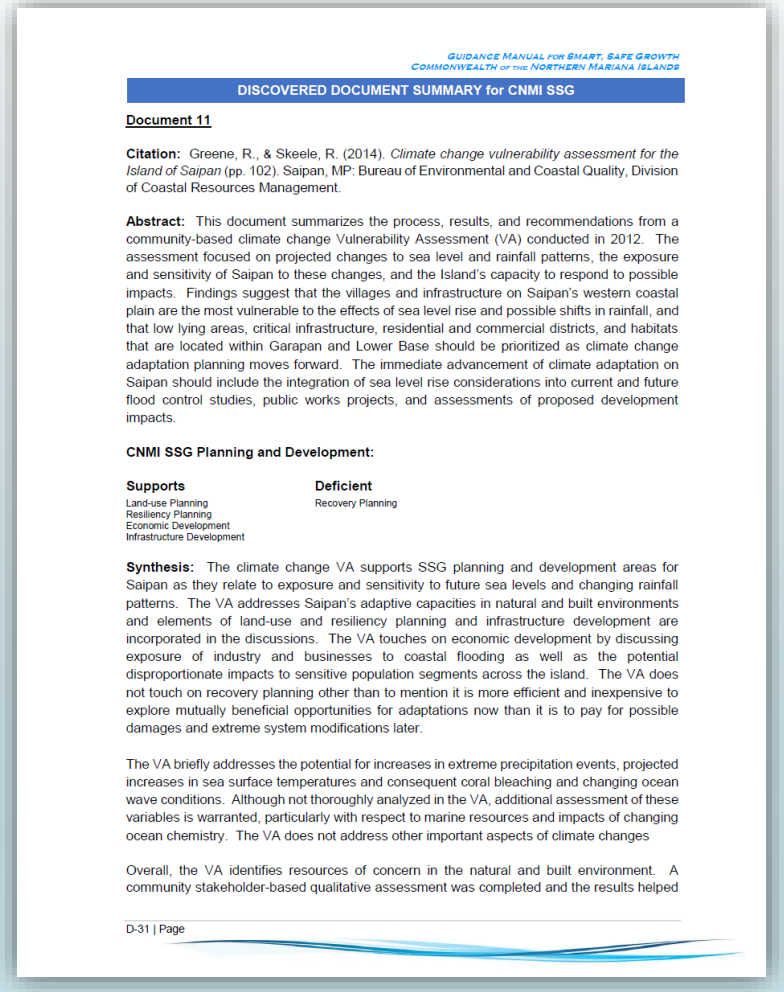




GUIDANCE MANUAL FOR SMART, SAFE GROWTH
COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

CNMI Smart, Safe Growth (SSG) Guidance - Annotated Bibliography

No.	Document Title	Abstract	Applicable/Relevant to CNMI SSG Planning and Development [1] Supports	Deficient
	Climate Change Adaptation cont'd			
08	Coral reef resilience to climate change in Saipan, CNMI; Field-based assessments, and implications for vulnerability and future management (Maynard, McKagan, et al., 2012)	Presented are the results of field-based implementation of the McClanahan et al. (2010) framework to evaluate resilience potential of coral reefs. Resiliency results are based on 35 sites and scores are the average of 9 framework variables. Twenty-three sites had high resilience, nine had medium, and three had low. Sites with the highest resilience, relative to other sites surveyed, had high coral diversity, high bleaching resistance and low macroalgae cover.	Resiliency Planning	Land-use Planning Recovery Planning Economic Development Infrastructure Development
09	Integrating reef resilience and climate change vulnerability into protected area design and management in the Commonwealth of the Northern Mariana Islands (CNMI) and greater Micronesia (Maynard, Mcleod, et al., 2012)	Climate models identified thermal variability and the average frequency of thermal stress events likely to induce coral bleaching over a 20-year period across Micronesia, including CNMI. Based on model outputs, thermal stress events are expected to increase across Micronesia. Reef resilience rankings were coupled with model outputs to recommend management actions to support coral reefs and coastal managers working in Saipan. The report provides a "how-to-guide" to help build the capacity of local resource managers and to address the threat of climate change.	Resiliency Planning	Land-use Planning Recovery Planning Economic Development Infrastructure Development
10	Climate change adaptation toolkit for coastal communities in the coral triangle: Tool 4 - guide to vulnerability assessment and local early action planning (VA-LEAP) - Version I. (Micronesia Conservation Trust and US Coral Triangle Initiative Support Program, 2012)	A step-by-step guide for the development of a Vulnerability Assessment (VA) and a Local Early Action Plan (LEAP) for climate change adaptation. The VA-LEAP guides planning for needed actions to improve management while considering climate change impacts. This guide focuses local knowledge and information to understand the target natural and social resources, and the vulnerability to climate change.	Land-use Planning Economic Development Infrastructure Development	Resiliency Planning Recovery Planning
11	Climate change vulnerability assessment for the Island of Saipan (Greene & Skeele, 2014)	Summarized are the process, results, and recommendations from a community-based climate change vulnerability assessment. Assessment foci are projected sea level rise and rainfall patterns, the exposure and sensitivity of Saipan to these changes, and the Island's capacity to respond. Saipan's western coastal plain is likely the most vulnerable. Low lying areas, critical infrastructure, residential and commercial districts, and habitats located within Garapan and Lower Base should be prioritized for planning efforts. Climate adaptation planning for Saipan should integrate sea level rise into current and future flood control studies, public works projects, and assessments of proposed development impacts.	Land-use Planning Resiliency Planning Economic Development Infrastructure Development	Recovery Planning



DISCOVERED DOCUMENT SUMMARY for CNMI SSG

Document 11

Citation: Greene, R., & Skeele, R. (2014). *Climate change vulnerability assessment for the Island of Saipan* (pp. 102). Saipan, MP: Bureau of Environmental and Coastal Quality, Division of Coastal Resources Management.

Abstract: This document summarizes the process, results, and recommendations from a community-based climate change Vulnerability Assessment (VA) conducted in 2012. The assessment focused on projected changes to sea level and rainfall patterns, the exposure and sensitivity of Saipan to these changes, and the Island's capacity to respond to possible impacts. Findings suggest that the villages and infrastructure on Saipan's western coastal plain are the most vulnerable to the effects of sea level rise and possible shifts in rainfall, and that low lying areas, critical infrastructure, residential and commercial districts, and habitats that are located within Garapan and Lower Base should be prioritized as climate change adaptation planning moves forward. The immediate advancement of climate adaptation on Saipan should include the integration of sea level rise considerations into current and future flood control studies, public works projects, and assessments of proposed development impacts.

CNMI SSG Planning and Development:

Supports	Deficient
Land-use Planning Resiliency Planning Economic Development Infrastructure Development	Recovery Planning

Synthesis: The climate change VA supports SSG planning and development areas for Saipan as they relate to exposure and sensitivity to future sea levels and changing rainfall patterns. The VA addresses Saipan's adaptive capacities in natural and built environments and elements of land-use and resiliency planning and infrastructure development are incorporated in the discussions. The VA touches on economic development by discussing exposure of industry and businesses to coastal flooding as well as the potential disproportionate impacts to sensitive population segments across the island. The VA does not touch on recovery planning other than to mention it is more efficient and inexpensive to explore mutually beneficial opportunities for adaptations now than it is to pay for possible damages and extreme system modifications later.

The VA briefly addresses the potential for increases in extreme precipitation events, projected increases in sea surface temperatures and consequent coral bleaching and changing ocean wave conditions. Although not thoroughly analyzed in the VA, additional assessment of these variables is warranted, particularly with respect to marine resources and impacts of changing ocean chemistry. The VA does not address other important aspects of climate changes

Overall, the VA identifies resources of concern in the natural and built environment. A community stakeholder-based qualitative assessment was completed and the results helped

Appendices E and F

- Appendix E – *SSG* Workshop Proceedings
- Appendix F – Glossary

Proceedings from *Smart, Safe Growth* Workshops, Saipan, 17-19 July 2018

Members from the principal CNMI planning, regulatory, and infrastructure authorities attended three days of stakeholder participation on Saipan to discuss Smart, Safe Growth strategies as a means to guide Commonwealth economic growth over the next 20 years. Daily agendas and participation lists are provided herein. Workshops were deemed the most productive and effective approach to finalize the framework of the *Guidance Manual*, to ensure project alignment with local government vision, needs, and programs.

During workshops it was presented that the intent of Smart, Safe Growth strategic applications is to provide a common framework for planning and regulatory thought among CNMI authorities. It was further presented that SSG in general, the core principles, and the *Guidance Manual* are not intended as regulatory documents. Emphasis for this *SSG* project remained on "guidance" and "tools" to help steer (rather than specifically regulate) planning and economic growth.
Attendees were universally supportive of Smart, Safe Growth (*SSG*) Principles and the *Guidance Manual*. All acknowledged that the *Guidance Manual* will foster forward thinking and promote alignment among CNMI agencies that have over-lapping jurisdictions in planning and review/approval of economic development initiatives.

"*Development*" was discussed in the major categories of *Master Planning*, *Public Infrastructure*, and *Commercial/Residential*. It was universally acknowledged among attendees that SSG Principles and the *Guidance Manual* are applicable across all development categories.

Participants were strongly in favor of the Regulations Review (Appendix A), and of revisions to strengthen regulations for application of SSG Principles to benefit regulatory due process to influence *Smart, Safe Growth* in the CNMI.

Figure E.1 Smart, Safe Growth Workshop at the CNMI BECQ, July 2018.

Participants were in universal accord that CNMI government planning and regulatory authorities must play the primary role to guide economic growth over the next 20 years. This was expressed in contrast to prevailing circumstances of market-driven growth.

The newly-formed Office of Planning and Development (OPD) was acknowledged as the flagship agency that will promote cohesion and solidarity among CNMI authorities for the implementation of SSG Principles for economic expansion. It was further acknowledged that OPD and other CNMI agencies with regulatory and

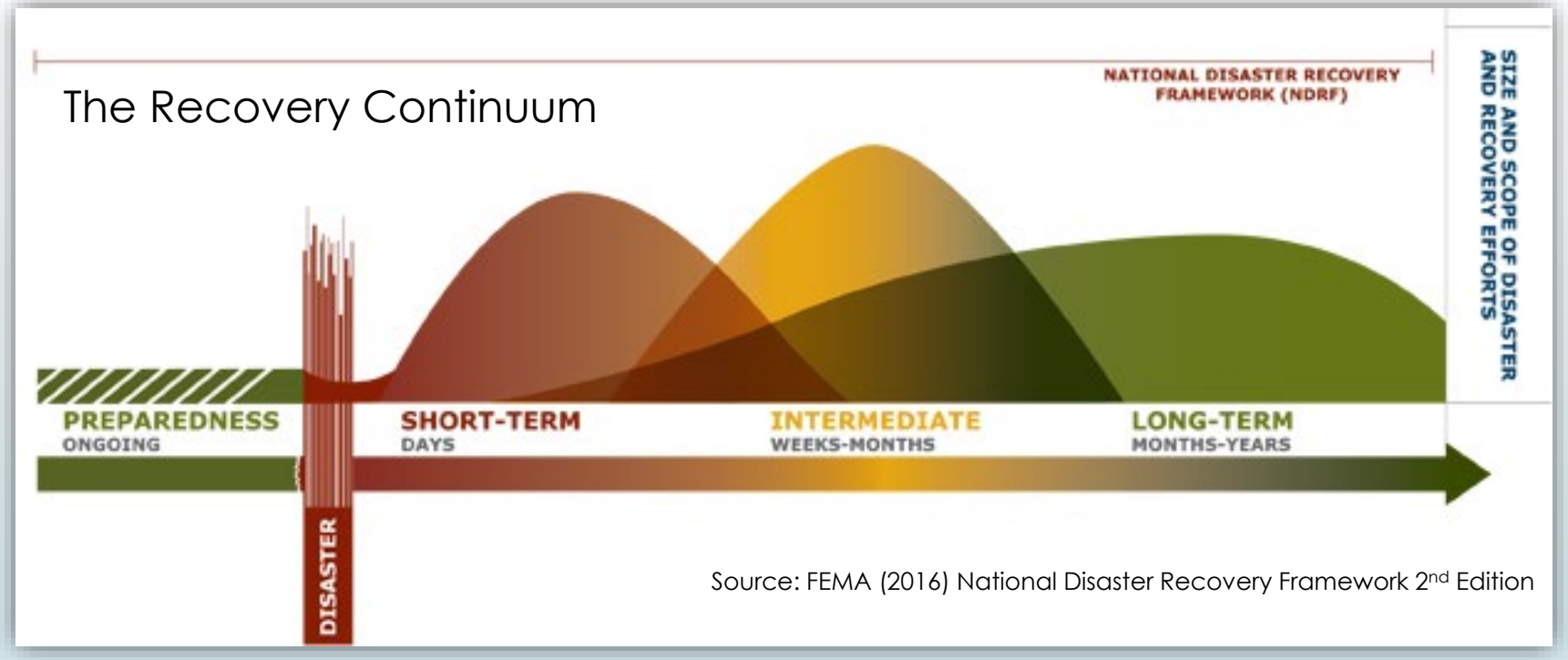
SSG in context(s) other than regulatory

- Relatability to *SSG* is a strong tool
- *SSG* Principles connect to community values
- Incorporate *SSG* Principles and community values into daily work practice to mainstream *SSG* and sustainable development

Conclusion

- Incremental process toward *SSG* and resilient communities
- Start groundwork today
- Community and government support is critical

Conclusion



Move the disaster-recovery cycle toward a cycle of planning and building resiliency.

Conclusion

- Today's actions yields tomorrow's benefits
- Implementing the strategies and tools in the Guidance Manual will place the CNMI on a course towards *Smart, Safe Growth*