OPTIONS FOR IMPLEMENTING THE STATE PRIORITY GUIDELINES FOR CLIMATE CHANGE ADAPTATION

Meeting with the State of Hawai‘i Office of Planning
Ocean Resources Management Plan Working Group,
Integrated Planning Committee

March 7, 2013

Coastal Resilience Networks Project

Discussion Overview

1. Project Goal

2. Key Assumptions

3. Evolving Adaptation Strategy

4. Phase 1 Approach

5. Assessing Report Options

6. Possible Next Steps

1. Project Goal

To produce a guide that assists state and county decision-makers in making “on-the-ground” planning and regulatory decisions that implement the Climate Change Adaptation Priority Guidelines, Act 286 (2012).

2. Key Assumptions

Climate change, generally, and sea-level rise, in particular, are undisputed phenomena that are likely to have profound impacts in Hawai‘i.

The timing, spatial extent, nature, and magnitude of impacts from sea-level rise cannot yet be determined with a high level of technical certainty.

The lack of technical certainty contributes to political uncertainty about the need for current planning, regulatory, and investment decisions in coastal areas.

Nevertheless, the current level of knowledge justifies taking additional actions to address well-documented issues (e.g. coastal erosion, coastal flooding).

2. Key Assumptions

We can minimize political uncertainty by:

- Focusing on adaptation strategies that address impacts for which there is adequate technical information;
- Incorporating adaptation strategies into existing state and county management programs (e.g. SMA);
- Considering the initial adaptation strategies as the first of several phases for climate change adaptation;
- Incorporating both bottom-up and top-down adaptation strategies — but emphasizing the need for local variation; and
- Designing an explicit “learning strategy” that ensures we are assessing management efforts and making adjustments based on practice, experience, and new technical data.

3. Evolving Adaptation Strategy

PHASED APPROACH

The report comprises part of Phase 1, which also involves:

- Identifying/engaging implementing agencies;
- Further developing implementation tools; and
- Building agency consensus.

Phase 2 potentially incorporates a sea-level rise inundation area, which would involve:

- Applying technical data and agency-based sea-level rise adaptation strategies;
- Conducting community-based, first-generation vulnerability assessments;
- Building technical support for private sector adaptation; and
- Expanding capacity and technical research.

Phase 3 potentially involves:

- Conducting community-based vulnerability assessments for all climate change impacts;
- Analyzing/addressing public and private vulnerabilities; and
- Developing accommodation, protection, and retreat strategies.

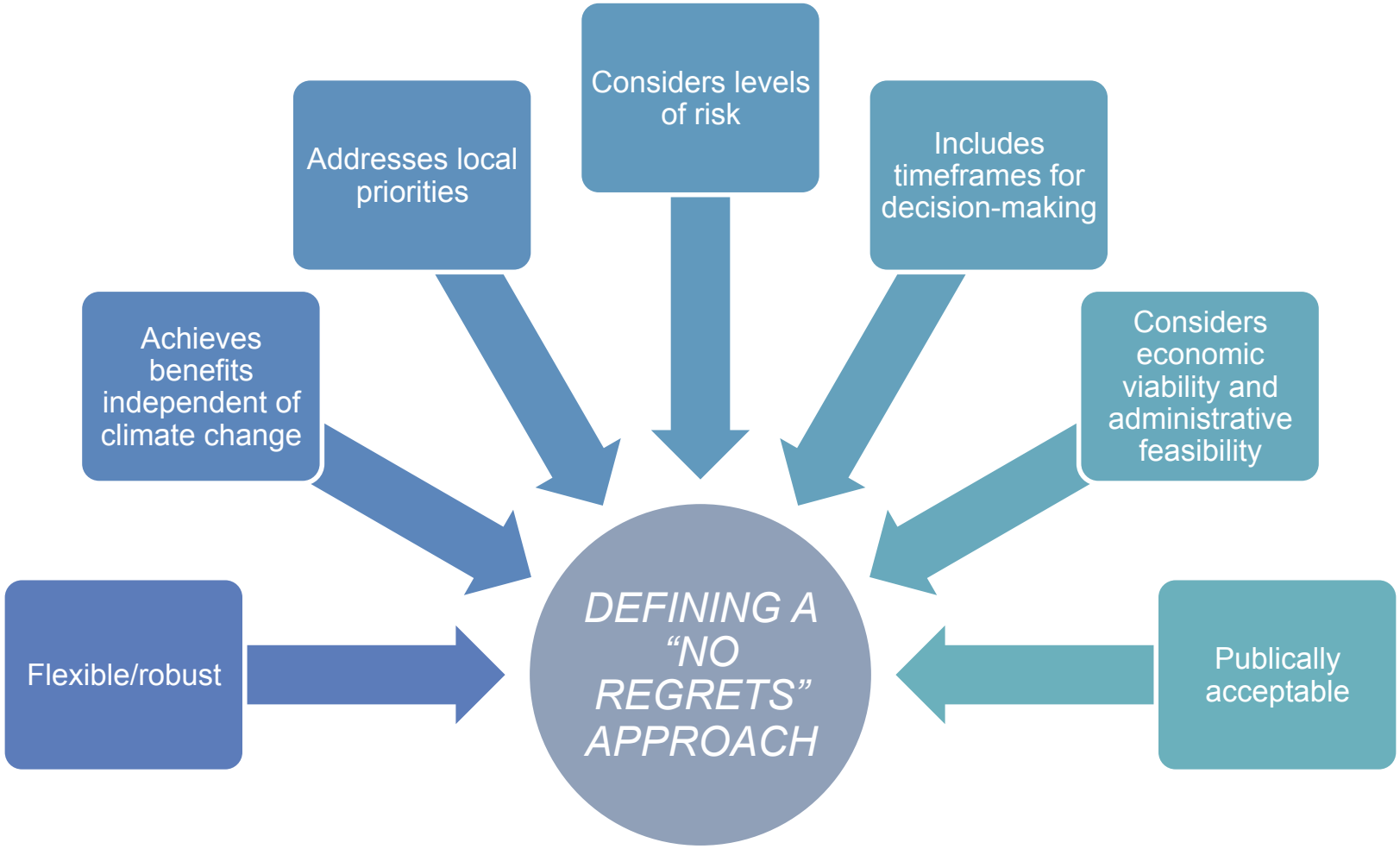
4. Phase 1 Approach

1. "No regrets" adaptation strategies

2. Flexible/reversible adaptation strategies

3. Safety margin strategies

4. Phase 1 Approach



4. Phase 1 Approach

DEFINING A FLEXIBLE/ REVERSIBLE APPROACH

- Adaptation strategies that address current or probable impacts, but can be easily updated or modified based on new or improved information.
- Costs of being “wrong” are *relatively* low.
- Examples include long-range infrastructure siting or reconstruction plans and plans for constructing dikes for surface water capture.

4. Phase 1 Approach

DEFINING A SAFETY MARGIN APPROACH

- Changes in engineering or regulatory standards in the interest of reducing risk of specific impacts.
- Examples include adding sea-level rise projections to erosion rates to increase the shoreline setback or enhancing coastal drainage infrastructure to reduce the risk of coastal flooding.

5. Assessing Report Options

- Identify priority Phase 1 options.

- Add/remove/ modify list of Phase 1 options.

- Assess implementation tools located in Appendix A and B.

5. Assessing Report Options

PART A: COMPREHENSIVE PLANNING

1. Evaluate the extent to which current plans address climate change impacts (Appendix A.1).

2. Incorporate policies and priority guidelines regarding climate change impacts, generally, and sea-level rise, in particular, into plans (Appendix A.2).

5. Assessing Report Options

PART B: REGULATORY PROCESS

SMA Permit Program

- 3. Use the model SMA permit evaluation checklist (Appendix B.1) as a component of the SMA permit application and review process.

Shoreline Setback Laws

- 4. Develop a shoreline setback ordinance that accounts for accelerated shoreline erosion due to future sea-level rise based on available methods.
- 5. In evaluating shoreline variance applications, consider the model guidance for “hardship” variance evaluation (Appendix B. 2).

5. Assessing Report Options

PART B: REGULATORY PROCESS

Floodplain Regulations

- 6. Work with FEMA to update federal flood insurance maps to incorporate best-available information on climate change and sea-level rise, eventually including a 100-year storm event under future sea-level rise scenarios.
- 7. Apply 100-year floodplain regulations to 500-year floodplain.
- 8. Develop building standards in existing 100-year floodplain that are more protective than the federal minimum standards.
- 9. Adopt or expand county-administered community rating system programs.
- 10. Develop an overlay zone adjacent to existing special flood hazard areas by overlaying sea-level rise inundation maps with federal flood insurance maps.

5. Assessing Report Options

PART B: REGULATORY PROCESS

Environmental Review

- 11. When evaluating a project under the “significance” criteria, consider whether a proposed action is likely to suffer damage from or exacerbate impacts from climate change and sea-level rise, as indicated by a climate change hazard assessment (Appendix B.3).
- 12. When considering project alternatives, evaluate relocation, elevation, and “soft” protection.
- 13. When proposing mitigation measures, incorporate climate-resilient precautions.

5. Assessing Report Options

PART B: REGULATORY PROCESS

State Land Use Classification

- 14. Require climate change hazard assessments (Appendix B.3) in Land Use District boundary amendment petitions. Exempt smaller projects or repairs that do not increase risks to public safety.
- 15. For approved boundary amendments, require safety buffers that run with the land along seaward boundaries and around natural inundation buffers, as necessary. Permit low-impact activities, such as access, within the buffer zones.
- 16. Based on assessment of climate change impacts, risks, and vulnerabilities, include recommendations for downzoning lands, where appropriate, to protect public heath and safety; also, include options for compensating landowners or incentivizing landowners to relocate.

6. Possible Next Steps

- Update list of priority Phase 1 options.

- Based on priority options, refine applicable implementation tools (found in Appendices A and B), e.g., model goals and policies for comprehensive plans, SMA permit checklists, hazard assessments.

- Identify possible consultants/partners for refining implementation tools.

- Identify possible partners/communities for implementing one or more of the tools as a case study.

- Develop a community outreach strategy.