

**4 June 2014 (1:00 pm – 4:00 pm)**

**Tillamook County Library (Hatfield Room)**

## **Meeting Objectives:**

- 1. Review scenarios and initial results from Coastal Tillamook County Envision model**
- 2. Elicit feedback on initial results and plan for future work**
- 3. Engage with Coastal Hazards Knowledge-to-Action Network**

**4 June 2014 (1:00 pm – 4:00 pm)**

## **Agenda**

**1:00 – 1:15 Welcome and Introductions**

**1:15 – 1:30 Meeting Objectives/Setting Expectations/Redefine scenarios and explain where we are at in the process**

**1:30 -1:45 Overview of Policy Scenario Narratives and Climate Change Scenarios**

**1:45-3:45 Review of Initial Results-Poster Session on Tillamook Coastal Future 'Stories'**



**4 June 2014 (1:00 pm – 4:00 pm)**

## **Agenda Cont'd**

**1:45-2:15 Summary of the 'Storylines' and posters  
Instructions for poster session – eliciting feedback**

- 1. Is this information clear?**
- 2. Are we making correct assumptions? Do you have knowledge or information that supports or contradicts our assumptions?**
- 3. Is the information we are presenting today useful for decision making? If not, what would be useful and what additional questions should we be asking**

**2:15-3:00 'Storyline' Poster session (Development, Property Risk, Public Good; Use sticky notes to address the above 3 questions per poster)**

**3:00-3:45 Reconvene and facilitated group discussion**

**3:45-4:00 Meeting Synthesis/Discussion of timeline/KTAN data collection exercise/Wrap up**

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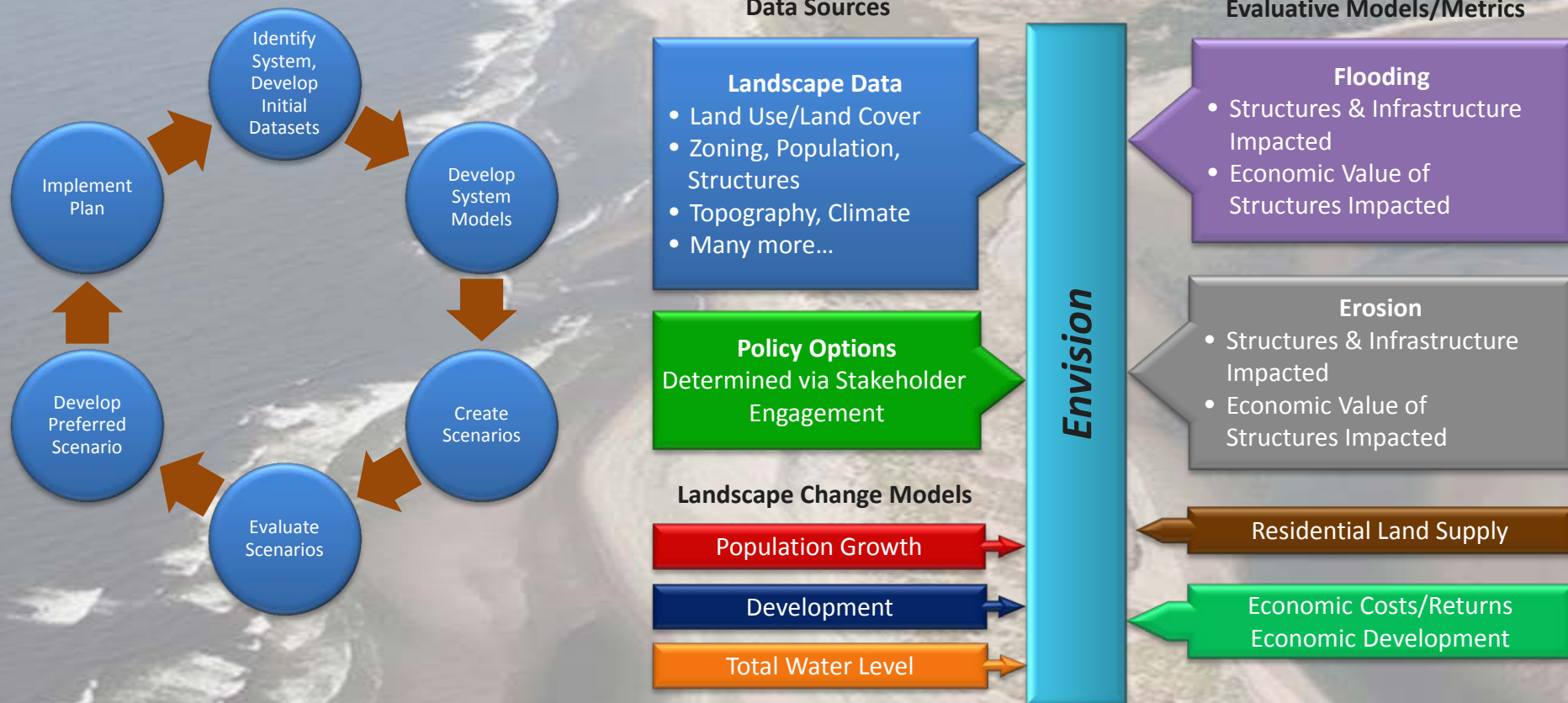
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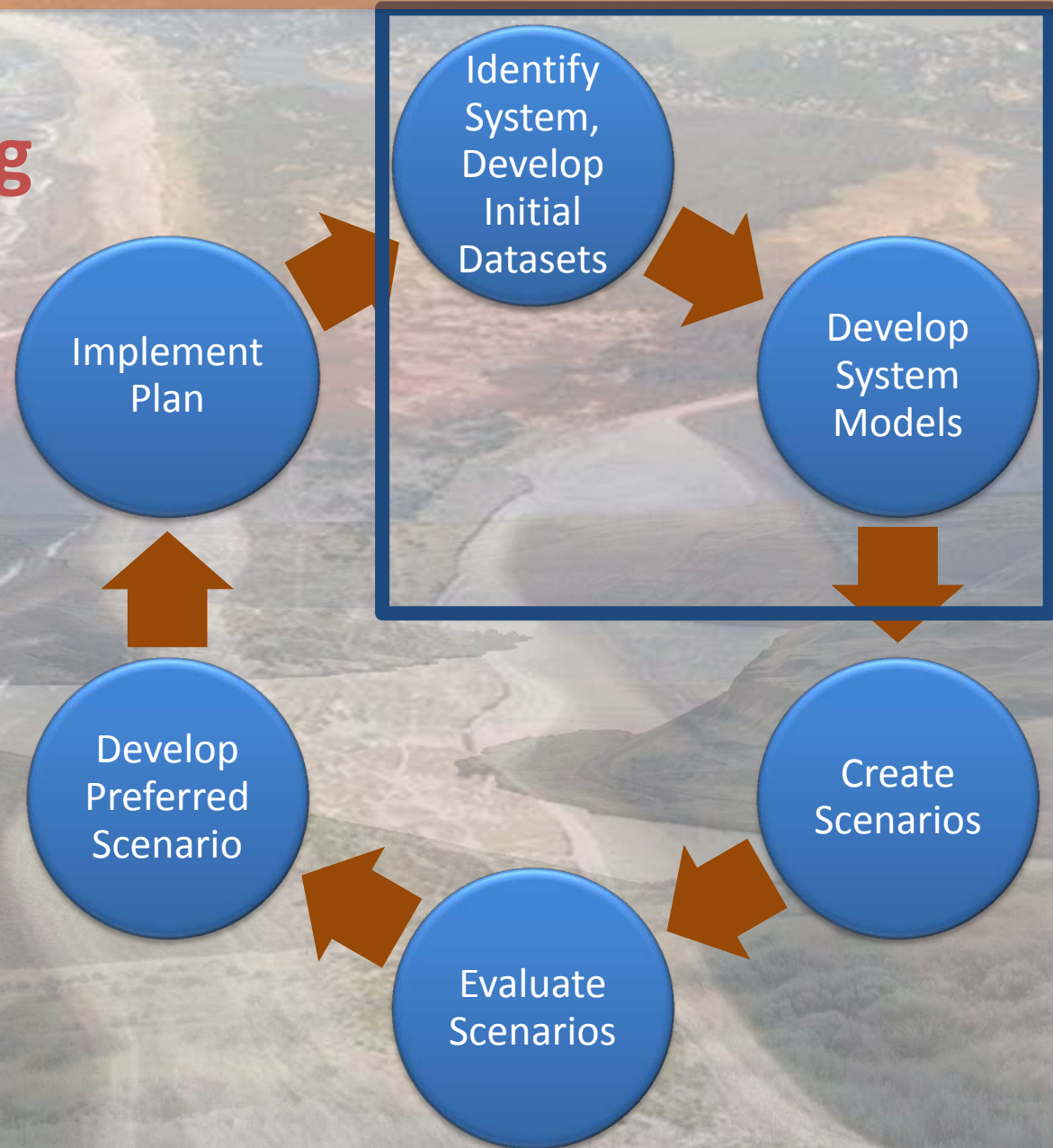
## Research Objective:

Develop the information and tools necessary to enable the KTAN to envision future scenarios, assess impacts and vulnerability, and initiate adaptation strategies.



## Scenario Planning Process

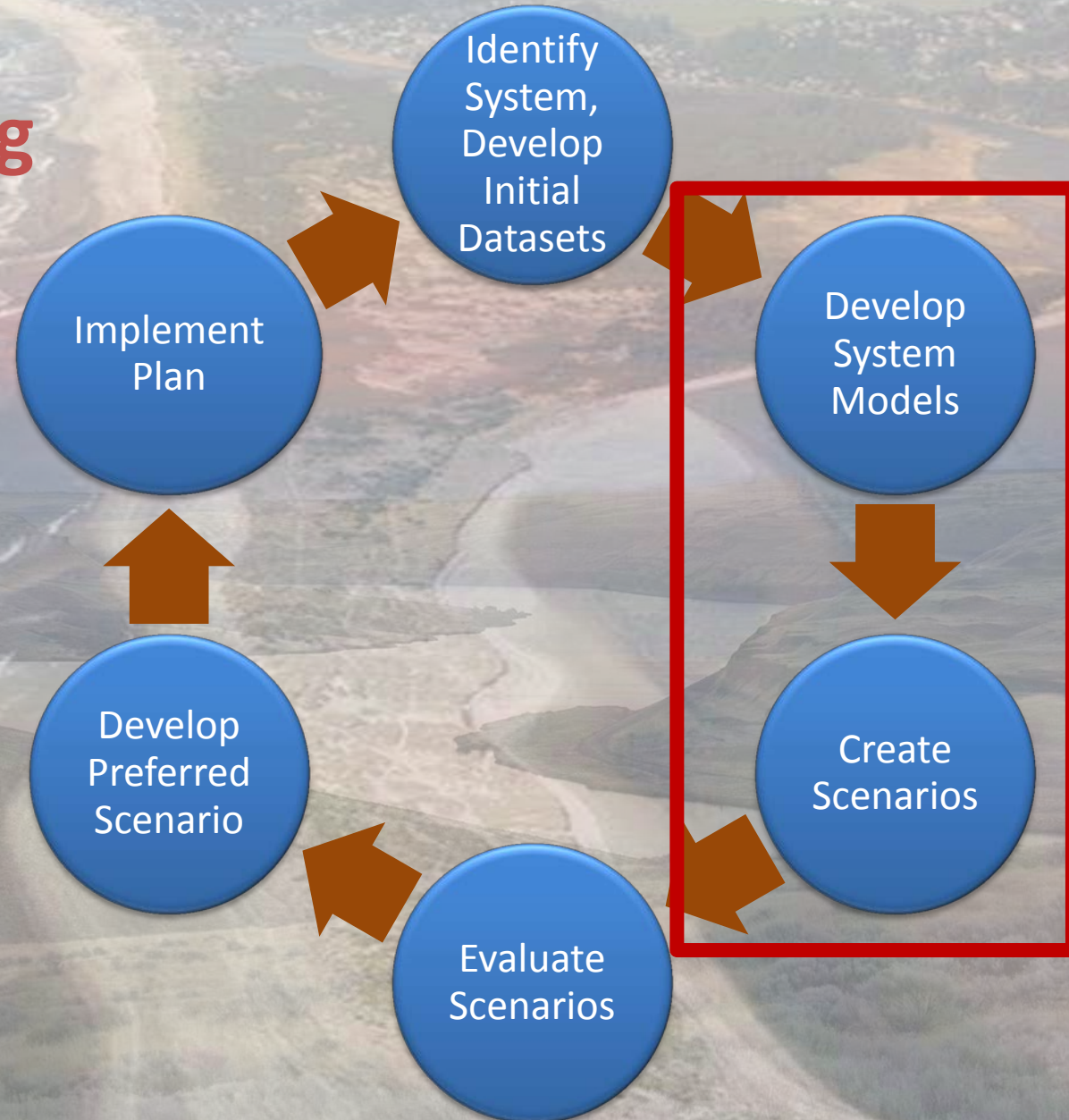
June 2013 Workshop





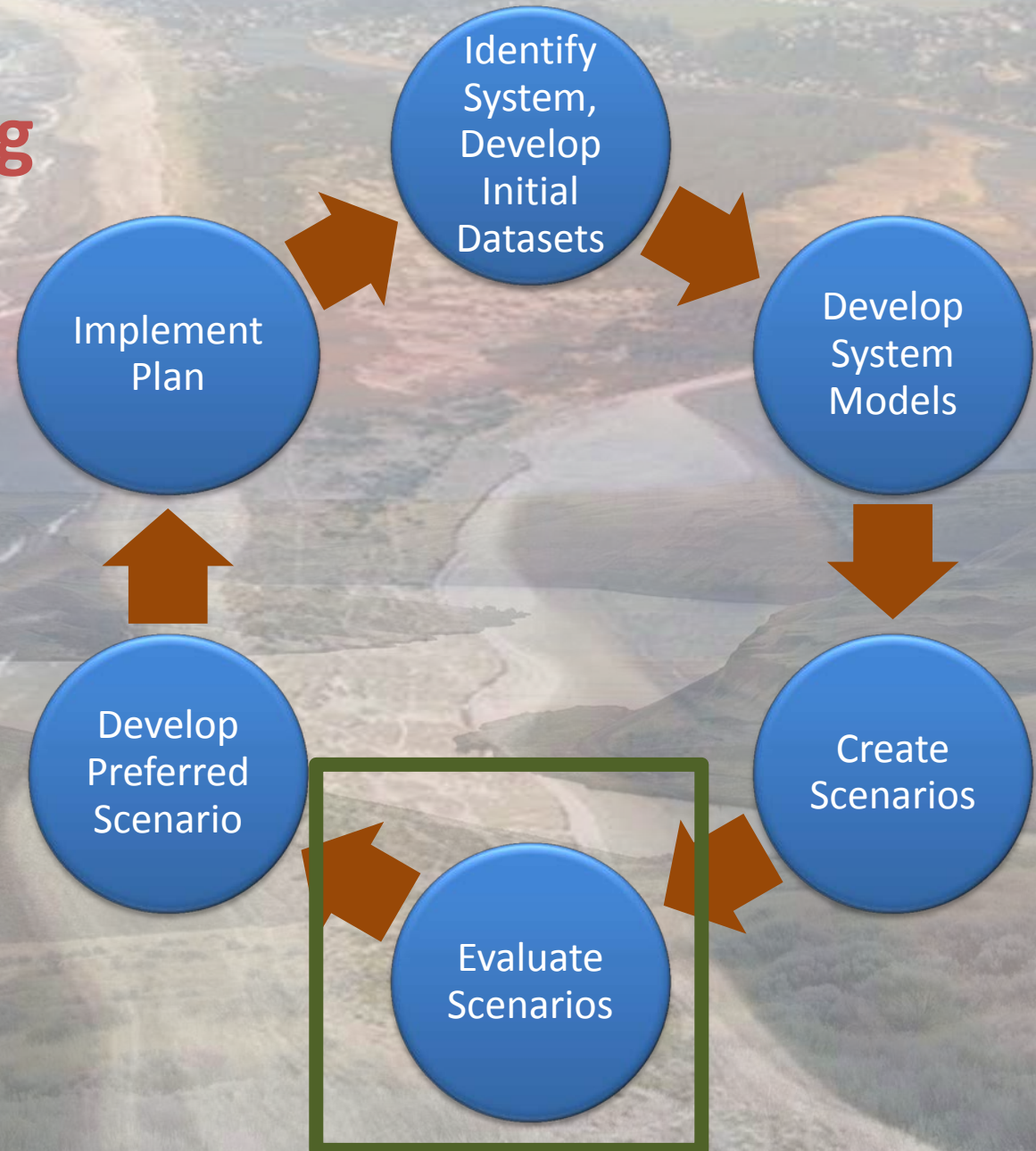
## Scenario Planning Process

October 2013  
Workshop



## Scenario Planning Process

June 2014 Workshop

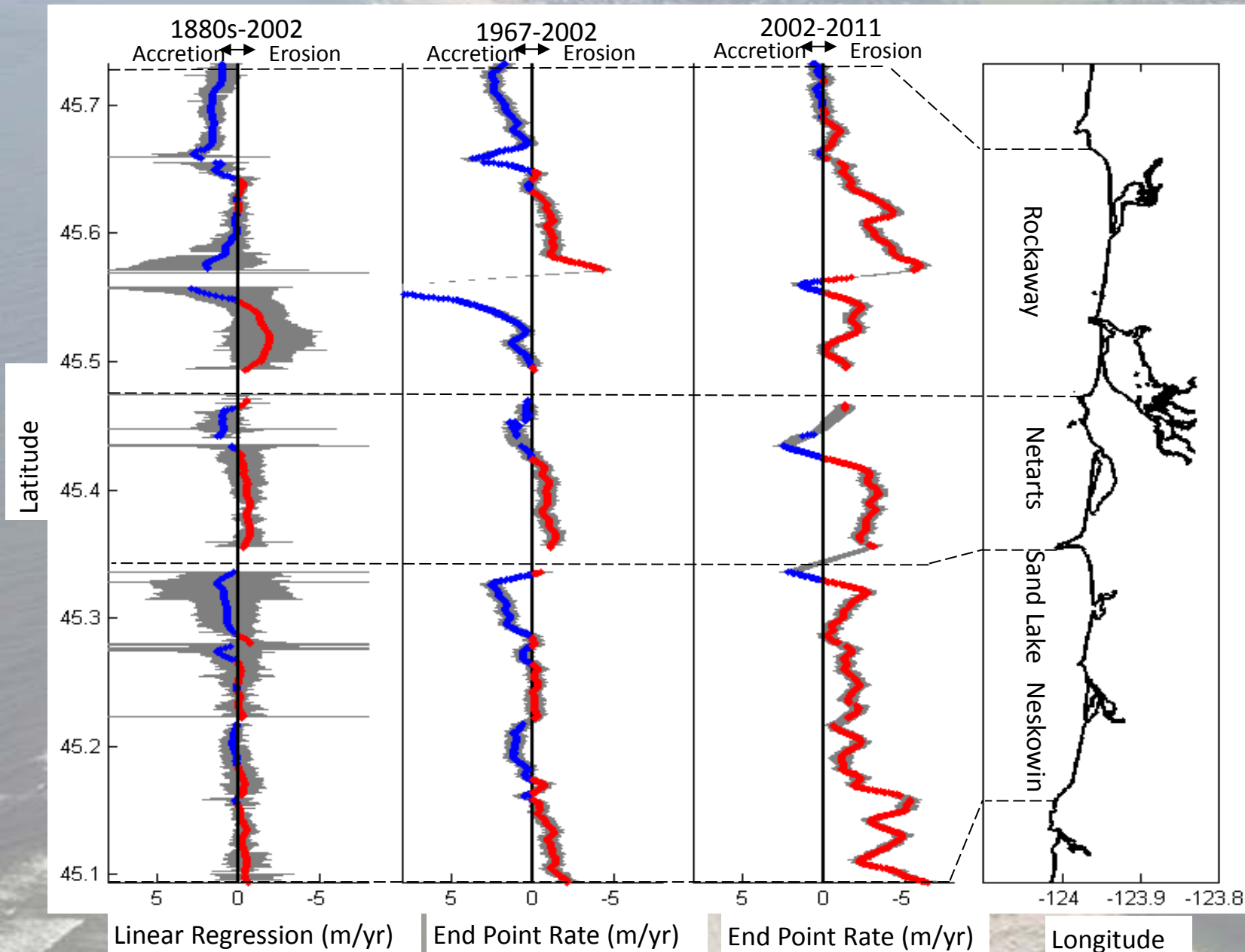




# Tillamook County Coastal Problems



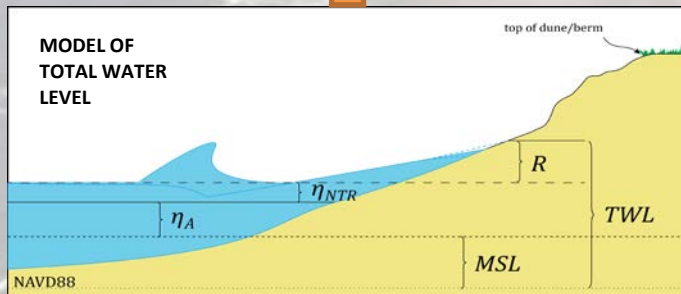
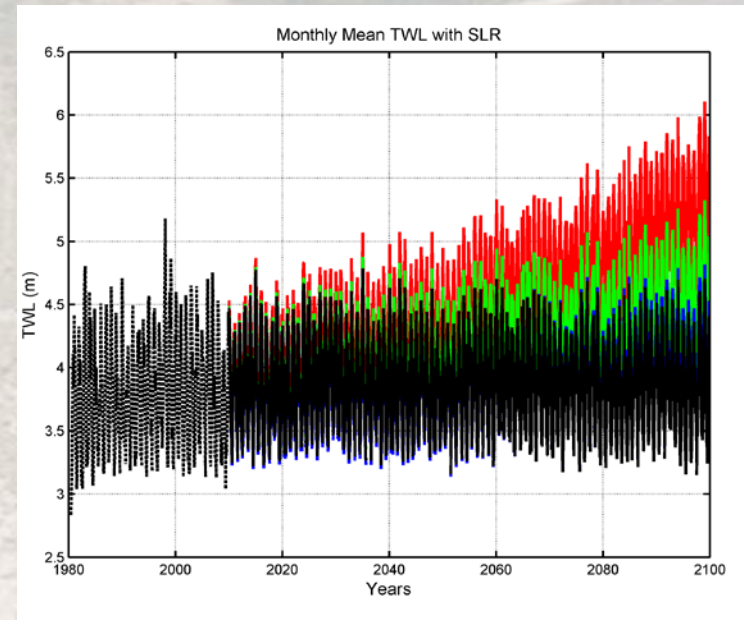
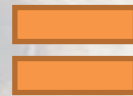
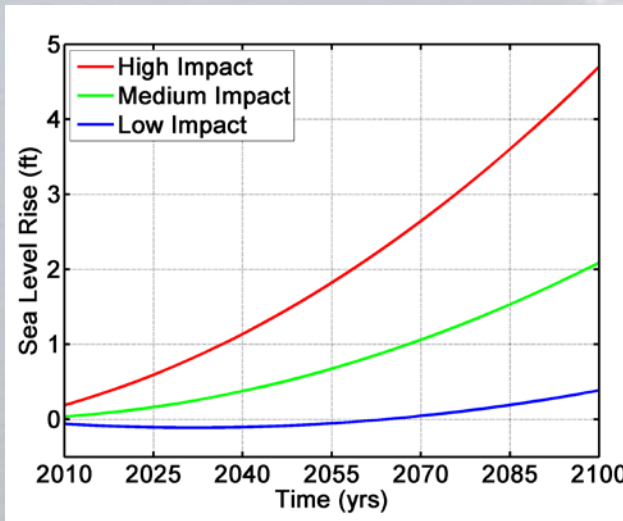
# Tillamook County Shoreline Change Rates





## Research Objective:

Develop an integrated methodology for projecting the probability of coastal flooding and erosion over time, explicitly accounting for climate controls relevant to coastal hazards.

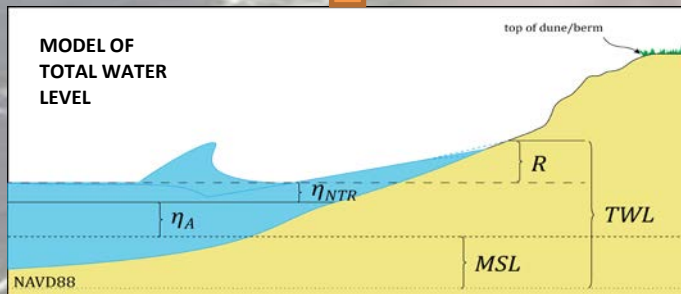
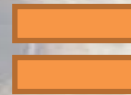
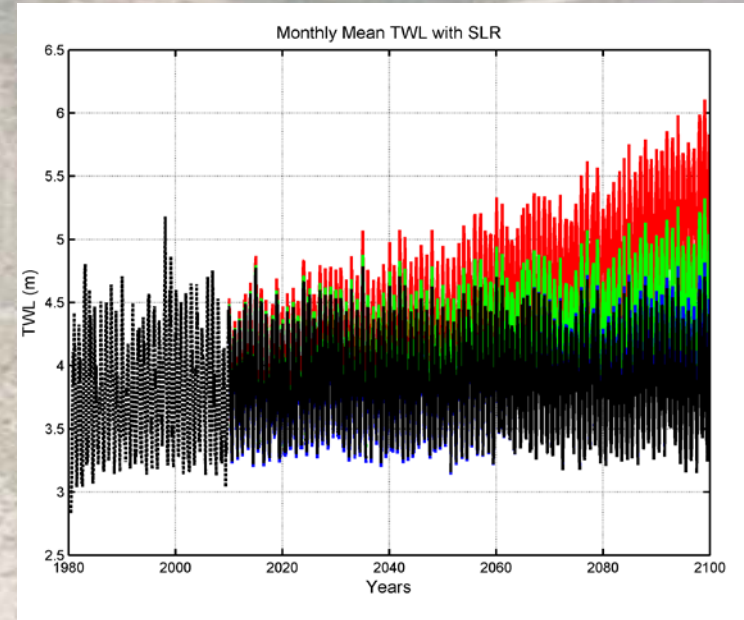
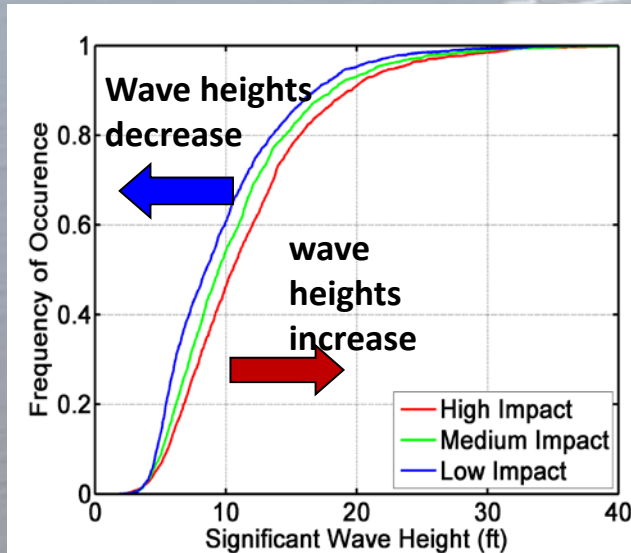


National Research Council (NRC) (2012), Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future. Committee on Sea Level Rise in California, Oregon, and Washington; Board on Earth Sciences and Resources; Ocean Studies Board; Division on Earth and Life Studies.

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# Climate Change Scenario Narratives

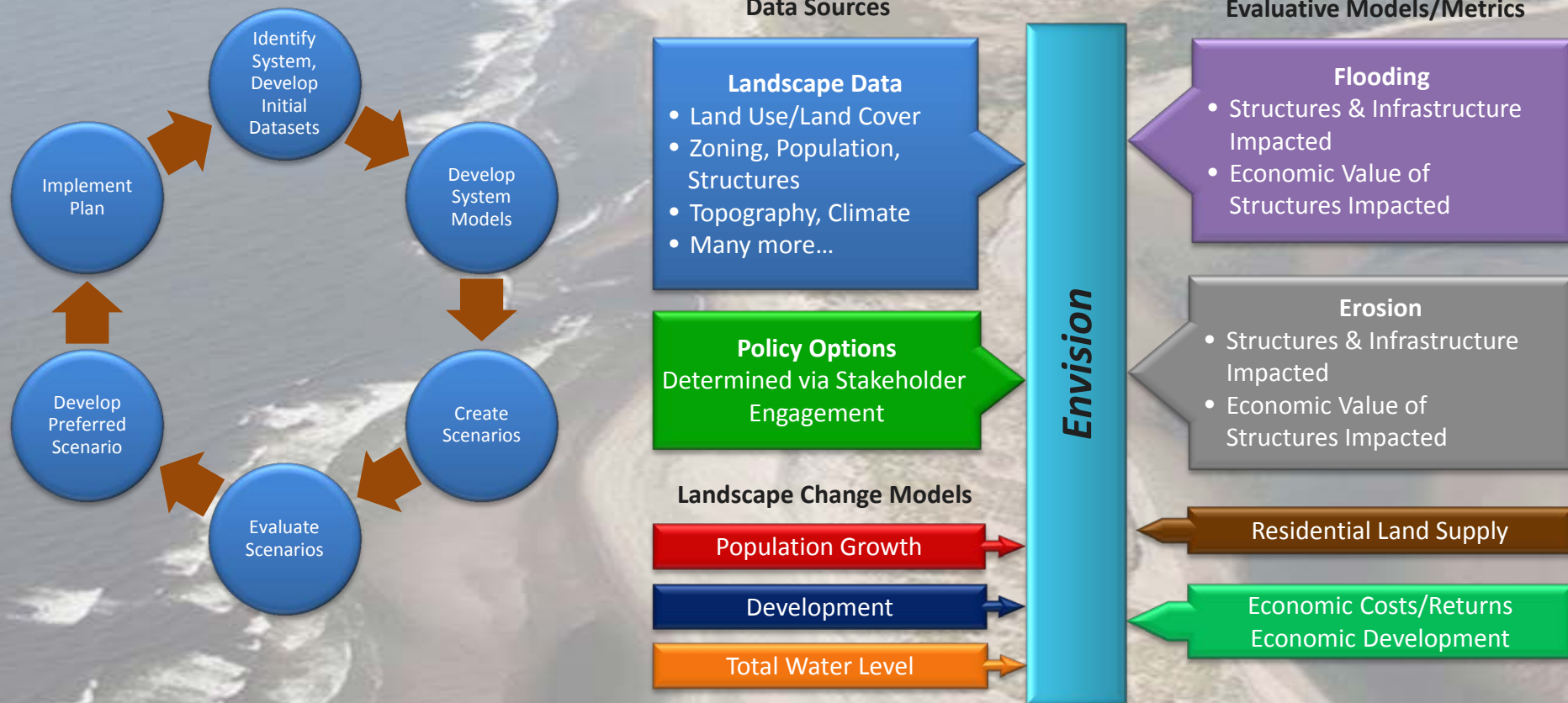
**Low:** The low climate impact scenario uses National Research Council (NRC, 2012) derived low-end estimates of regional sea level rise (SLR) of ~5 inches by 2100. This scenario assumes a decrease in storminess, and average significant wave height (SWH) decreases by 1 ft by 2100 with a slight decrease in the height of extreme waves.

**Medium:** The medium climate impact scenario uses NRC (2012) derived mean estimates of regional SLR of ~2 ft by 2100. This scenario assumes SWHs stay similar to present-day.

**High:** The high climate impact scenario uses NRC (2012) derived high-end estimates of regional SLR, ~4.5 ft by 2100. This scenario assumes an increase in storminess, and average SWH increases by 1 ft by 2100 with a slight increase in the height of extreme waves.

## Research Objective:

Develop the information and tools necessary to enable the KTAN to envision future scenarios, assess impacts and vulnerability, and initiate adaptation strategies.





## Policy Scenario Narratives

### Scenario 1: Status Quo



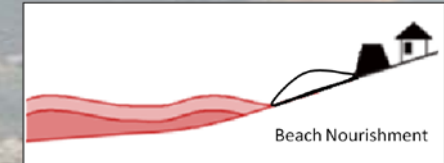
In a status quo scenario, current laws, goals, and trends are continued into the future for comparison with other scenarios.

#### Policies Applied

- Maintain current BPS and allow more BPS to be built on eligible lots.
- Urban growth boundaries (UGB) will be determined in accordance with the present-day UGB policy.

## Policy Scenario Narratives

### Scenario 2: Hold the Line



Policies or decisions are implemented that involve *resisting* environmental change (e.g. building or raising flood defences, building or strengthening shoreline armour, nourishing beaches) in order to preserve existing infrastructure and human activities (e.g. beach access).

#### Policies Applied

- Maintain current BPS and allow more BPS to be built on eligible lots.
- Add beach nourishment for locations where beach access in front of BPS has been lost (e.g., due to beach width reduction or frequent flooding).
- New homes or developments would be built only on lots with Goal 18 BPS eligibility.
- Homes must be constructed above a predetermined threshold elevation and in the safest site on each respective lot.
- Property disclosure laws at the point of sale.



## Policy Scenario Narratives

### Scenario 3: ReAlign



Policies or decisions are implemented that involve *changing* human activities to suit the changing environment (e.g. relocation of infrastructure and/or people, changing land use or livelihoods).

#### Policies Applied

- No additional properties are allowed to construct BPS.
- Coastal hazard zones are implemented and further development within hazard zones is restricted.
- Currently empty lots located outside of coastal hazard areas are inventoried and re-zoned to permit future development.
- UGB will be determined in accordance with the present-day UGB policy but with restrictions of development in hazard zones.
- Repetitive repairs are prohibited and limits on the number of times a building may be impacted by coastal events before it has to be removed are put into place.
- Establish conservation, open space, or recreation uses within the coastal hazard zones, via buyouts and rolling easements.
- Homes must be constructed above a predetermined threshold and in the safest site on each respective lot.
- Property disclosure laws at the point of sale.

## Policy Scenario Narratives

### Scenario 4: Laissez-faire



Current policies (state and county) are *relaxed* such that existing homes, infrastructure and new development all trump the protection of coastal resources, public rights, recreational use, beach access, scenic views.

#### Policies Applied

- Development is permitted outside the UGB, allowing towns to grow wherever residential land is available.
- Provisions of Goal 18 that limit BPS eligibility and OPRD permit requirements to construct BPS are eliminated, and all citizens are allowed to construct and maintain BPS as they see fit.



## Storyline Development

**Development**

**Property Risk**

**Public Good**

**Policies**

## Climate

*Low Impact*   *Medium Impact*   *High Impact*

*Status Quo*

*Hold the Line*

*ReAlign*

*Laissez-faire*



# Storyline Development –Feedback Wanted!

**Q1. Is this information clear?**

**Development**

**Q2. Are we making correct assumptions? Do you have knowledge or information that supports or contradicts our assumptions?**

**Property Risk**

**Public Good**

**Q3. Is the information we are presenting today useful for decision making? If not, what would be useful and what additional questions should we be asking?**



## Questions for the Group:

### *Development:*

- Is a single growth rate for Tillamook County appropriate? Would a more community based growth rate be more suitable?

### *Property Risk:*

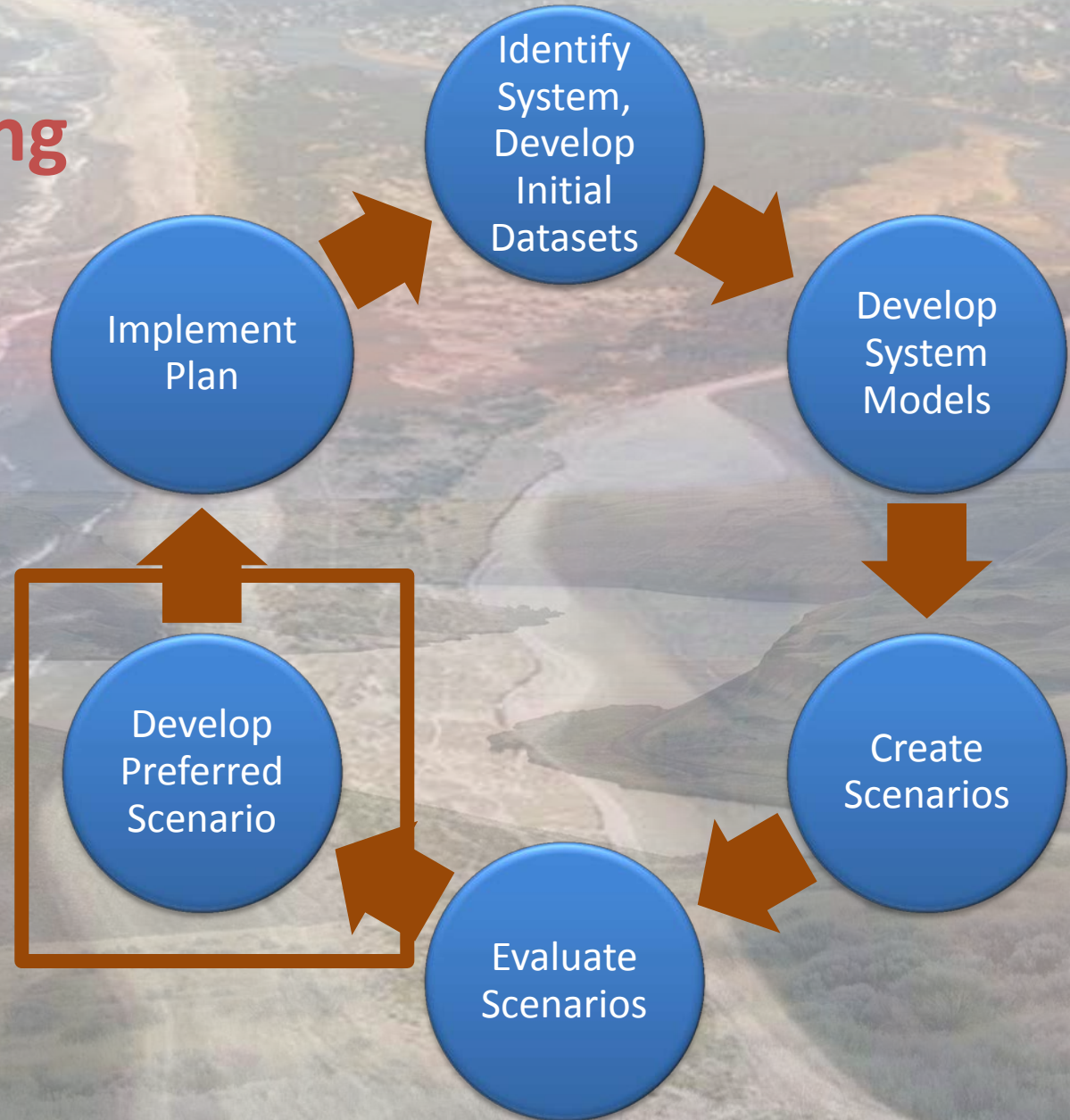
- Are the assumptions that determine which property's build BPS (30% limitation), initial construction costs (~\$125), and maintenance costs (10% of initial costs) reasonable?

### *Public Good:*

- Is the beach access assumption that the beach is unlimited when it is walkable 80% of the year at the daily maximum total water level ( ~9.5 months a year) reasonable?
- Are the costs assumed for beach nourishment realistic? Would there be an interest in utilizing beach nourishment **only** as a hazard alleviation technique?

## Scenario Planning Process

Fall 2014 Workshop





## Policy Scenario Narratives

### Scenario 5:

***A Preferred Scenario that combines a range of policies from the other scenarios.***

Policies Applied
<ul style="list-style-type: none"><li>• ??</li></ul>
<ul style="list-style-type: none"><li>• ??</li></ul>

"Scenarios do not predict future changes, but describe future potential conditions in a manner that supports decision-making under conditions of uncertainty. Scenarios are used to develop and test decisions under a range of plausible futures."

- from the National Climate Assessment SLR report (Parris et al., 2012)

## Research Objective:

Build coastal Knowledge to Action Networks (KTANs) consisting of stakeholders, researchers, and outreach specialists to co-produce knowledge and climate-resilient.

Stakeholder meetings have included input from the following groups and agencies:



State	County	Non-Governmental
Oregon Department of Land Conservation and Development	Tillamook County Office of Community Development	Pacific City & Netarts Community Advisory Committee
Oregon State Parks and Recreation Department	Tillamook County Economic Development Council	Tillamook Bay National Estuary Project Representative
Oregon Department of Transportation	Tillamook County Commissioners	Oregon Sea Grant
Oregon Department of Environmental Quality	Tillamook County Public Works	Climate Impacts Research Consortium
Senator Wyden & Merkley Representatives	Mayor of Nehalem	Local Residents
Regional Solutions Center Representative	Chief and President of Nestucca Rural Fire Protection District	Neskowin Hazards Committee
Oregon Department of Forestry		Pacific City Futures Council
Oregon Department of Fish and Wildlife		
	Oregon Coastal Process and Hazards Working Group	