

TOWARDS A SUSTAINABLE FUTURE FOR THE OCEAN & PEOPLE

MANAGING THE PLANET DIALOGUE

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**Under Secretary of Commerce for Oceans and Atmosphere
& NOAA Administrator**

May 18, 2011



OUTLINE

- 1. Challenges**
- 2. Advances in science and policy**
- 3. Ocean Management**
- 4. Tools to Advance Management**
- 5. Urgency and hope**

SUSTAINABILITY CHALLENGES

**Rapid, Radical Changes with
Profound Consequences**

Depletion and Disruption

**Loss of Resilience and Increased
Likelihood of Abrupt Change**



LOSS of ECOSYSTEM SERVICES

Ecosystem depletion and disruption leads to the loss of ecosystem services



RECREATION



COASTAL BUFFERING



PEST & PATHOGEN CONTROL



FOOD PROVISION

DEEPWATER HORIZON



SCIENTIFIC ADVANCES

**Our Common
Journey**

**Millennium
Ecosystem
Assessment**

**Explosion of
sustainability
science**



Insights:

- Resilience
- Complex Adaptive Systems
- Scale
- Coupled human-natural systems

Oceans Commissions' DIAGNOSIS



— Failure of Understanding

— Failure of Governance

Obama Administration ACTIONS

Science – natural and social

National Ocean Policy

Ecosystem-Based Management

Catch Shares

Aquaculture Policy

Climate Services and Adaptation

NATIONAL OCEAN POLICY

Healthy Oceans Matter

Holistic, ecosystem-based coastal
and ocean management



THE WHITE HOUSE COUNCIL ON ENVIRONMENTAL QUALITY

*Final Recommendations
Of The
Interagency Ocean Policy
Task Force
July 19, 2010*



July 19, 2010

NATIONAL OCEAN POLICY



Nine Priority Objectives

COASTAL & MARINE SPATIAL PLANNING

America's coasts: tens of millions of jobs and trillions of dollars to economy annually



Framework:

- **Ecosystem-based management**
- **Minimizes user conflicts, reduces impacts**
- **Focus on stewardship**



CMSP FOSTERS SUSTAINABLE USES OF COASTS & OCEANS

Advancing economic and environmental interests

Improving capacity to address long-term impacts of climate and other environmental changes

Providing lasting foundation for improved stewardship

Enhancing vital National benefits derived from coastal and ocean ecosystems

Commercial Fishing



Aquaculture



Wave Energy



Coastal Protection



Recreational Interests



NEW TOOLS

Marine InVEST

INtegrated Valuation of Ecosystem Services and Tradeoffs

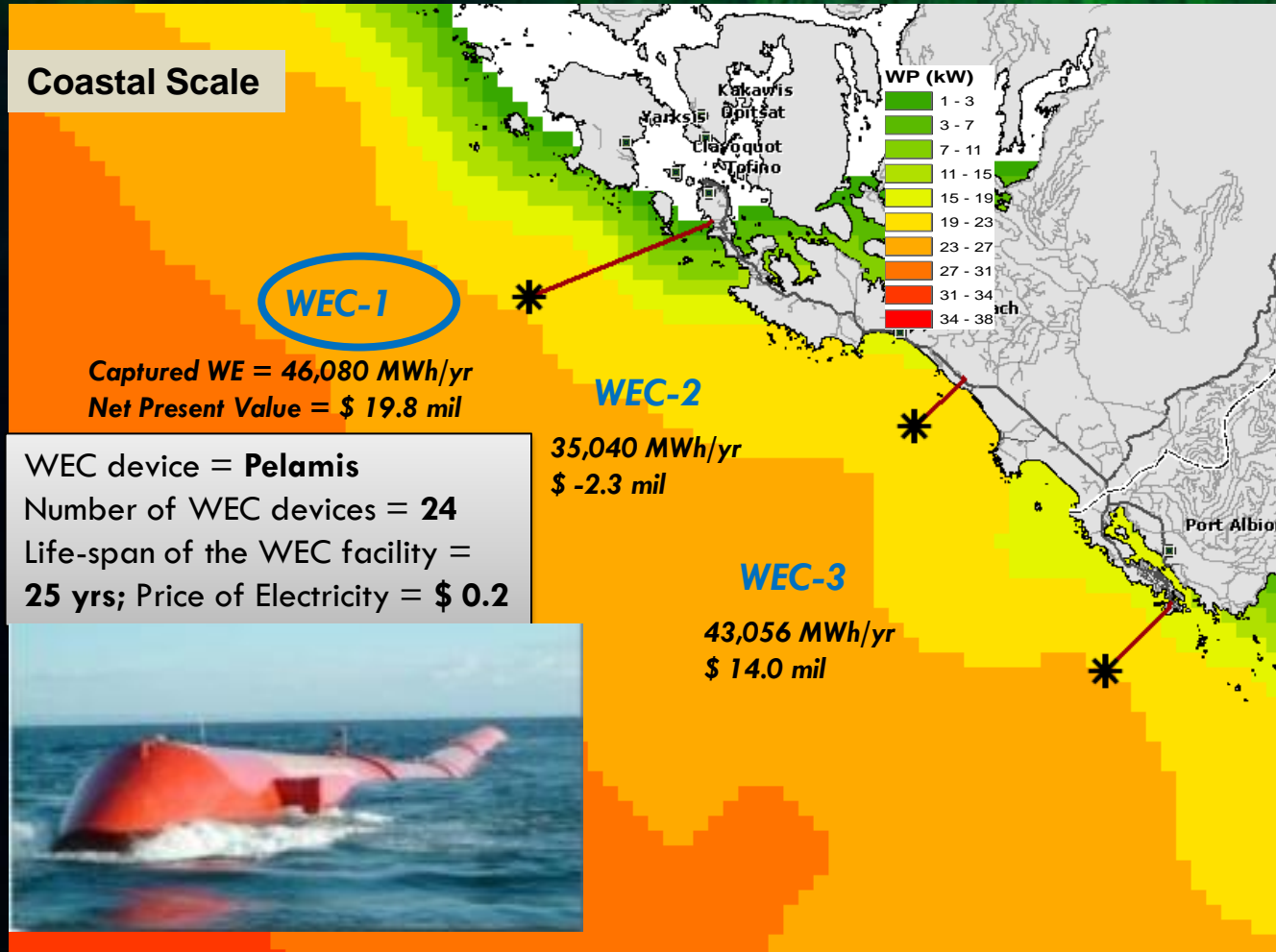
INPUT DATA
reflect scenarios

MODELS

MODEL OUTPUT
ecosystem services & values



MARINE InVEST WAVE ENERGY SITING



WEC device = **Pelamis**
 Number of WEC devices = **24**
 Life-span of the WEC facility =
25 yrs; Price of Electricity = \$ 0.2



**Vancouver
 Island: Pelamis
 wave capture
 devices –
 3 potential sites**

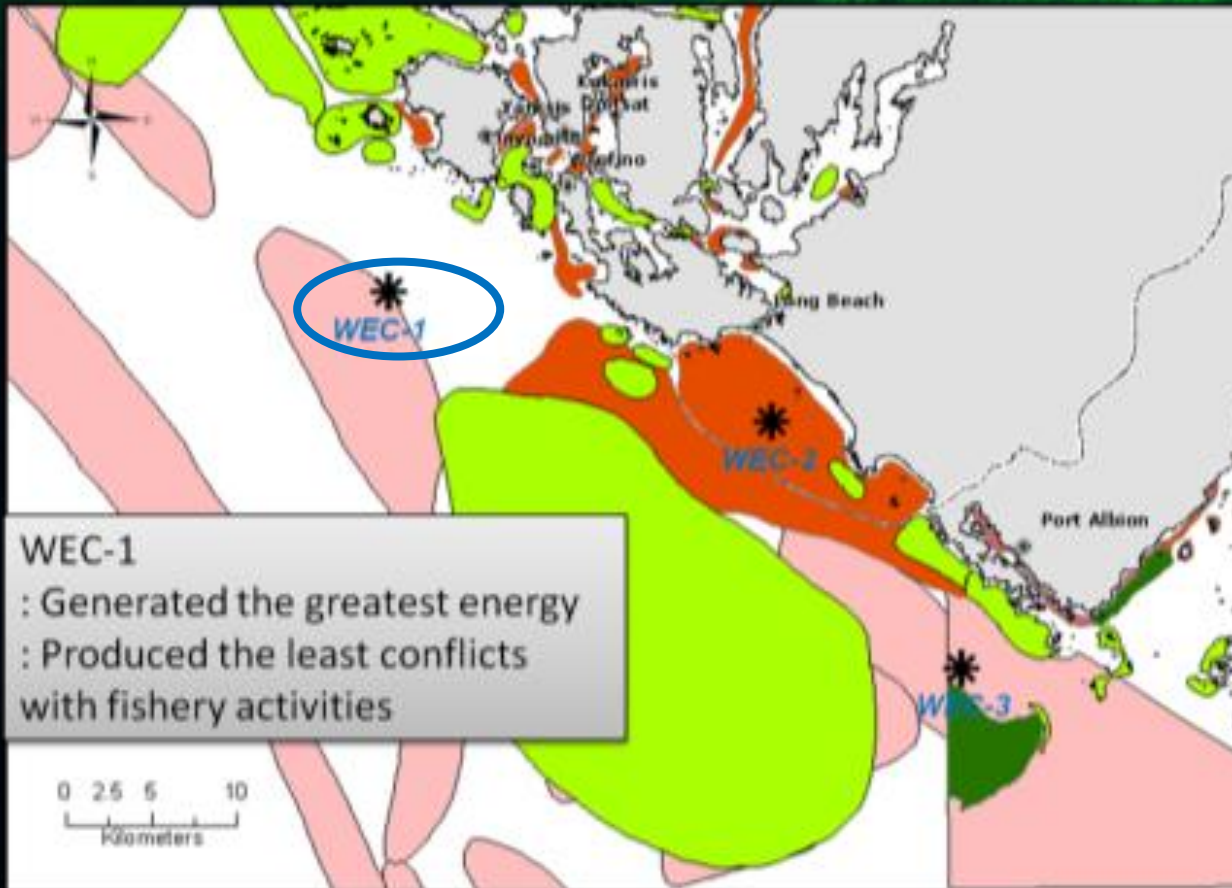
**Marine InVEST
 models energy
 generation and
 dollar value at
 each site**

MARINE InVEST INFORMING DECISIONS

Intersection between
energy potential and
fishing areas:

Site #1 has least
impact

Site #1 achieves best
balance: maximized
energy potential,
minimized fisheries
impacts



Commercial Salmon Trawl

Recreational Groundfish

Commercial Salmon Net

Recreational Salmon

Commercial Crab



CATCH SHARES

Decreased by-catch

Eliminates overfishing

**Strong incentives for
conservation &
management**

Increased safety at sea

Better economic returns

ELEMENTS FOR SUCCESS

Manage for resilience; expect surprises

Avoid irreversible changes

Minimize impacts from stressors over which we have direct control

Create flexible institutions

Use learning networks

Invest in research, monitoring, & assessment

REASONS FOR URGENCY

**While public understanding of sustainability opportunities and challenges has grown...
...it has not grown quickly enough**

While we have made progress on sustainability efforts...

...further progress could be hindered by economic crisis and pending budgetary decisions

REASONS FOR HOPE

Social change is highly non-linear

Innovative solutions to sustain ecosystem services

Inspiring actions at local-to-global scales:

- Commitments to source sustainably caught or farmed seafood**
- Consumers making more informed choices**
- Business focus on “triple bottom line”**

THANK YOU

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