

MAINE'S COAST: A 2050 VISION

SOS SACO BAY COASTAL CONFERENCE

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The TWILIGHT ZONE



*THE
TIDAL
ZONE*

A world map overlaid on a background image of a coastal town and harbor. The map highlights degraded shorelines with thick, irregular lines in shades of red, orange, and yellow. The background image shows a harbor filled with numerous boats and a town with buildings and a large industrial structure. The map shows that degraded shorelines are widespread across all major landmasses, particularly in coastal regions.

In Graphic Detail

BY 2020 HUMAN ACTIVITIES HAD DEGRADED SHORELINES AROUND THE WORLD

AS PREDICTED 30 YEARS AGO

ALONG MAINE'S COAST

- AVERAGE SEA LEVEL ROSE TO 1.5 FEET OVER 2020 LEVELS
- CRITICAL INFRASTRUCTURE HAS BEEN MOVED TO HIGHER GROUND
- NUISANCE FLOODING OCCURS 15 TIMES MORE OFTEN THAN IN 2020
 - 35 MILES OF COASTAL ROADS HAVE BEEN ABANDONED
 - DAMAGES TO MAINE'S COAST ESTIMATED AT \$20 BILLION





IN THE NEWS SINCE 2022...

- ❑ IN 2026 THE PRESIDENT OF THE UNITED STATES SIGNED NEW LEGISLATION INTO LAW – IT CREATED A FEDERAL DEPARTMENT OF COASTAL PROTECTION
- ❑ THE UNITED STATES GOVERNMENT TERMINATED ITS INVOLVEMENT IN THE COASTAL FLOOD INSURANCE BUSINESS IN 2032
- ❑ IN 2035 THE FEDERAL GOVERNMENT PASSED SWEEPING CLIMATE CHANGE ADAPTATION LEGISLATION WITH STRONG BIPARTISAN SUPPORT



2050 INDEPENDENT POLLING

- **85% OF RESPONDENTS NOW SUPPORT SCIENCE BASED ENVIRONMENTAL SOLUTIONS**
- **15% DO NOT TRUST SCIENTISTS**

CONSPIRACY THEORY
BOOKS

STAFF
CHOICE...
OR IS
IT?...



USACOE NATIONWIDE PERMIT #54 - 2017

WHAT?

- NATURE BASED
- PLANTS, STONE, SAND AND OTHER STRUCTURAL ORGANIC MATERIALS
- MARSH PLANTING
- BEACH FORMATION

HOW?

- OYSTER REEFS
- COIR LOGS AND MATS
- ROCK SILLS
- LOW PROFILE BREAKWATERS
- MARINE MATTRESSES

SCIENCE BASED SOLUTIONS

CREATION OF ARTIFICIAL REEFS/LIVING SHORELINES

- HABITAT ENHANCEMENT
 - WAVE ATTENUATION
- COASTAL WETLAND CONSTRUCTION
 - DUNE RESTORATION
- STORM SURGE PROTECTION
- RUNOFF RETENTION & FILTRATION

An aerial photograph showing a large, irregularly shaped island covered in dense green mangrove forest. The island is surrounded by shallow, brownish water, likely a lagoon or bay. A long, narrow breakwater structure, composed of numerous concrete or stone blocks, extends from the island's eastern side into the deeper, blue water. The breakwater is composed of several parallel lines of blocks, creating a series of small, sheltered bays. The island's coastline is sandy and irregular. The overall scene depicts a coastal environment with significant human-made infrastructure for maritime protection.

INSTALLED AT CAMP ELLIS IN 2031



STRATFORD, CONNECTICUT



COASTAL MAINE COMMUNITIES PURCHASED A DREDGE IN 2027



OGUNQUIT



LIVING SHORELINES

Healthy shorelines combat erosion!



UNIVERSITY OF NEW ENGLAND DEMONSTRATION PROJECT

A scenic view of a coastal area. In the foreground, there is a rocky breakwater extending into the water. To the left of the breakwater is a lush green marsh. The water is calm and reflects the sky. In the background, there is a dense line of trees and a distant shoreline. The sky is blue with scattered white clouds. A white buoy with a yellow top is visible in the water near the breakwater.

**STONINGTON
BLUE HILL
NEWCASTLE
GEORGETOWN
ARROWSIC**

The many benefits of rebuilding healthy oyster reefs

Fertilizer runoff from farmland is filtered, leaving water cleaner

Futureproof: Reefs grow as sea levels rise

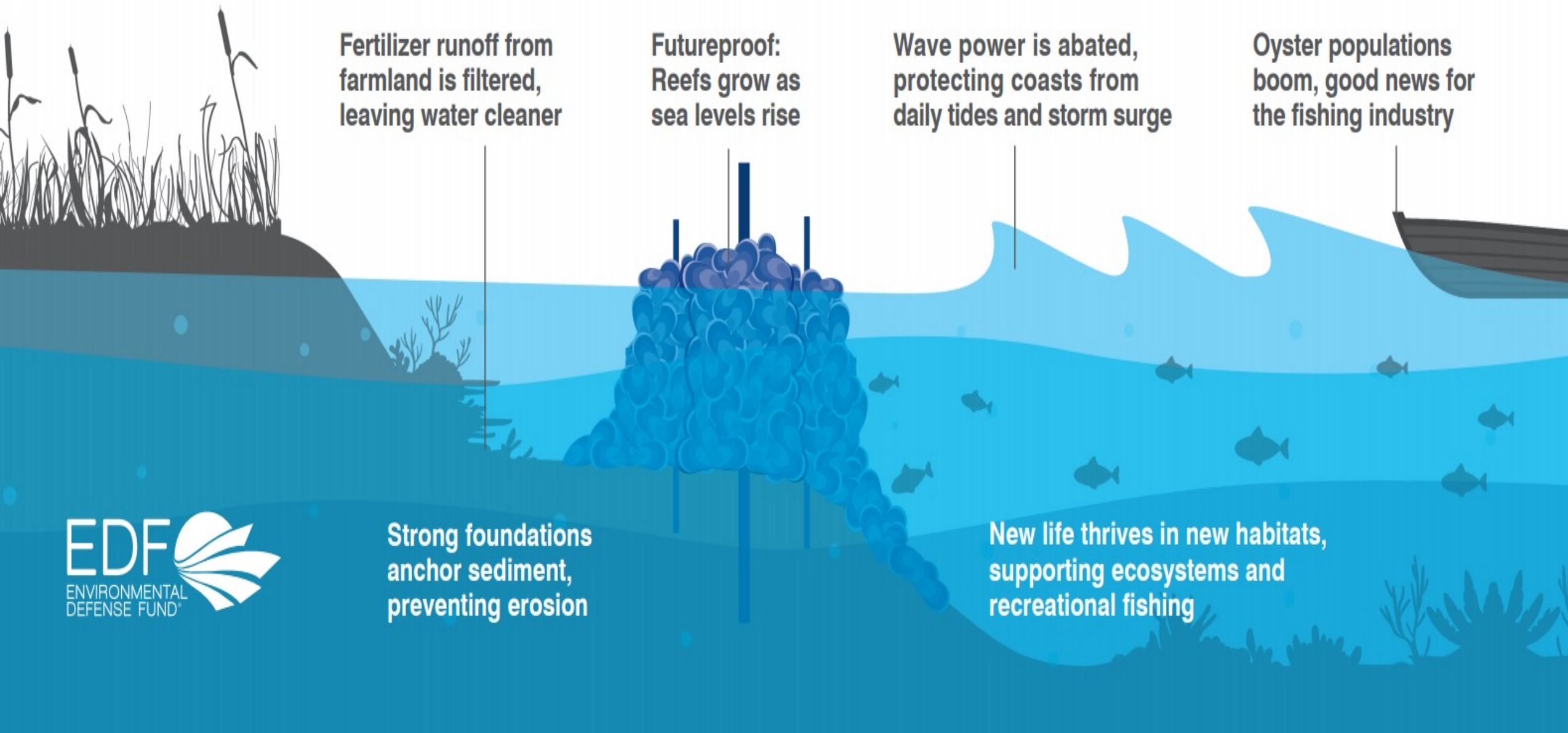
Wave power is abated, protecting coasts from daily tides and storm surge

Oyster populations boom, good news for the fishing industry



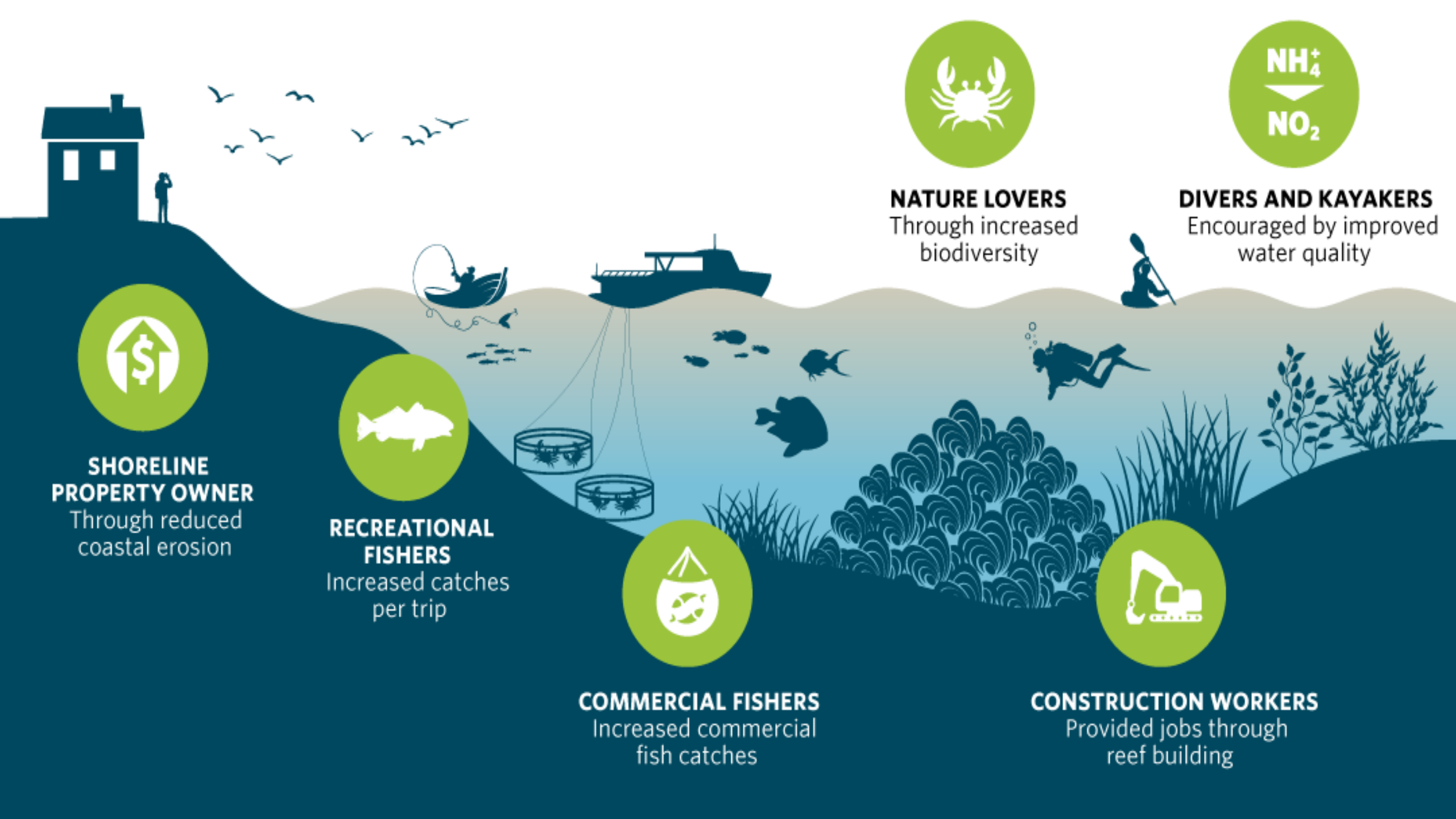
Strong foundations anchor sediment, preventing erosion

New life thrives in new habitats, supporting ecosystems and recreational fishing





HARPSWELL . YARMOUTH . SCARBOROUGH . WELLS . KITTERY



**SHORELINE
PROPERTY OWNER**
Through reduced
coastal erosion



**RECREATIONAL
FISHERS**
Increased catches
per trip



COMMERCIAL FISHERS
Increased commercial
fish catches



NATURE LOVERS
Through increased
biodiversity

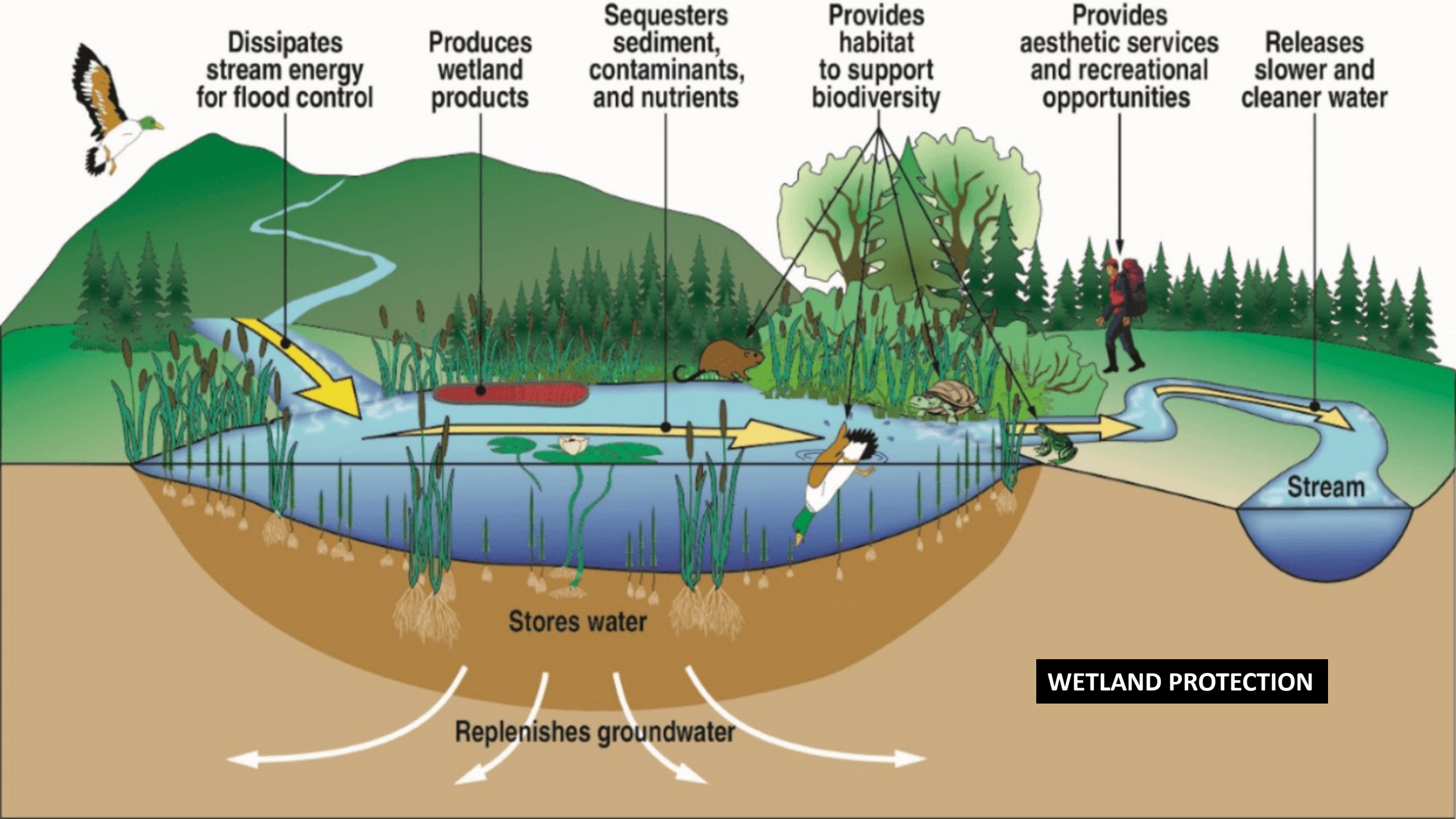


DIVERS AND KAYAKERS
Encouraged by improved
water quality



CONSTRUCTION WORKERS
Provided jobs through
reef building





NON-TIDAL
FRESHWATER
COASTAL
WETLANDS



“HEAD OF TIDE”
(INLAND EXTENT OF
TIDAL INFLUENCE)

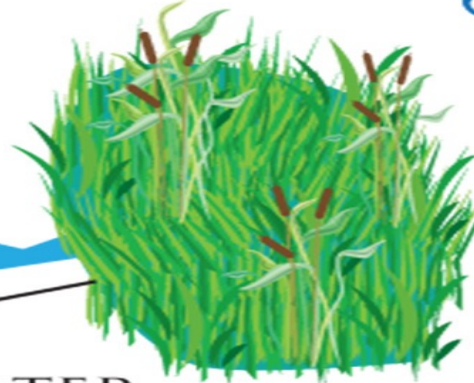


WATERSHED BOUNDARY

TIDAL
SALTWATER
COASTAL
WETLANDS



TIDAL
FRESHWATER
COASTAL
WETLANDS

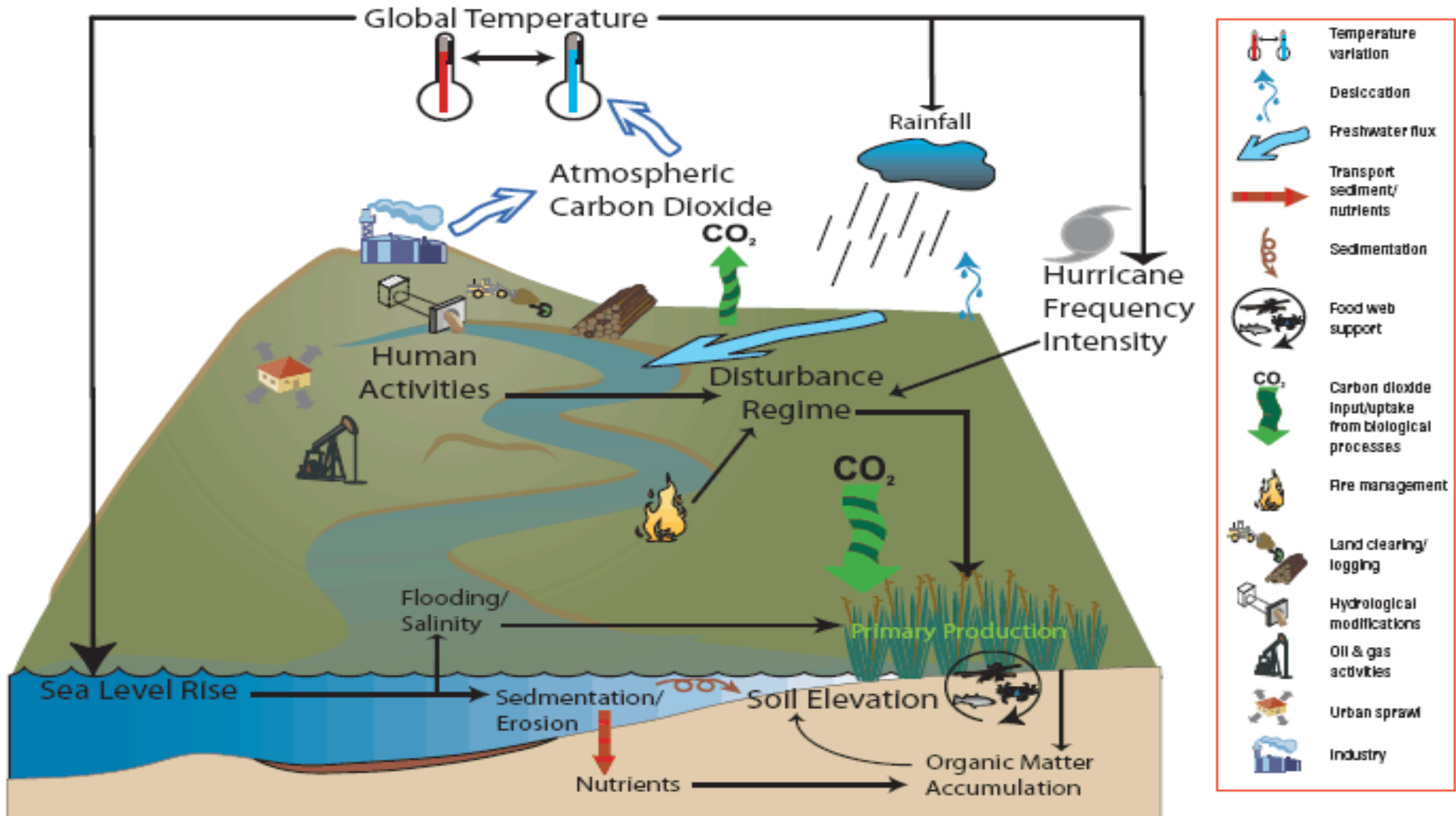


TIDAL
SALTWATER
COASTAL
WETLANDS



COASTAL WETLANDS





INFLOW TO THE WATER STREET CULVERT WILL BE VIA OVERFLOW WEIR FROM THE STORM DRAINS ON MARCY STREET.

CATCH BASINS WILL BE ADDED AS NEEDED NEAR MARCY STREET - WATER STREET INTERSECTION TO CAPTURE STREET FLOODING.

STORM DRAINS INSTALLED TO CONNECT DRY WELLS TO WATER STREET OUTFALL.

CULVERT INSTALLED ALONG WATER STREET.

MOVING AND RAISING THE SHAW WAREHOUSE.

OUTFALL TO BE LOWERED AND UP-SIZED TO ACCOMMODATE ADDITIONAL RUNOFF.

TEMPORARY STORMWATER HOLDING AREA

RAISING AND IMPROVING THE SEA WALL.

ALL EXISTING OUTFALLS WILL HAVE TIDE GATES IF NOT ALREADY IN PLACE.

PORTSMOUTH, NH 28 YEARS AGO

0 50 100 200 FT





ELEVATED



VEGETATED



RECREATED



HARPSWELL

PERKINS COVE



SAINT-LOUIS, SENEGAL







FAIRBOURNE, WALES



EDUCATION!







