



VISION 2050

**BIODIVERSITY CONSERVATION GOALS
FOR THE COMMONWEALTH**



TERRESTRIAL



AQUATIC

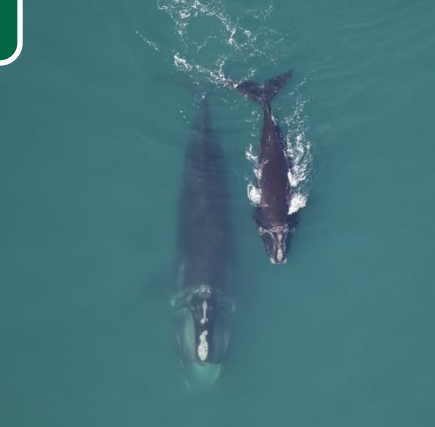


IMPORTANT & ICONIC SPECIES

COASTAL



MARINE



CONSERVING BIODIVERSITY: OUR SHARED COMMITMENT

The Department of Fish & Game's mission is to preserve the state's natural resources, including marine and freshwater fisheries, wildlife species, plants, and natural communities, as well as the habitats that support them.



516 species of birds
11,000 global

7 species of frogs
7,500 global

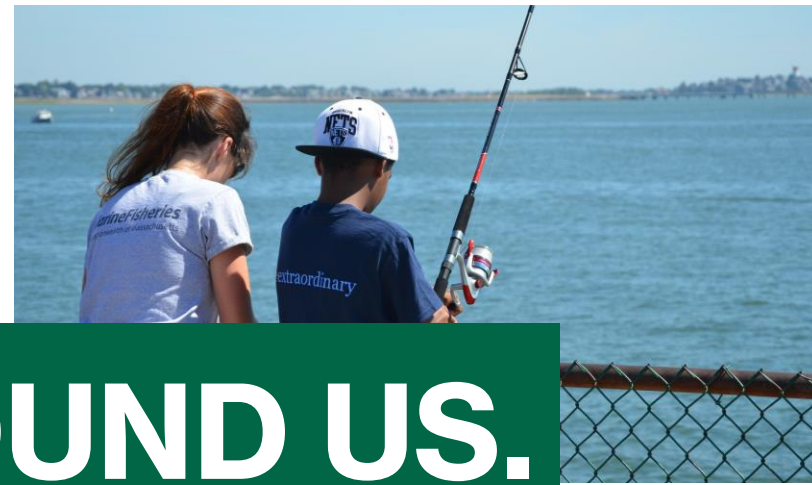
82 species of trees
73,000 global

83 species of mammals
6,400 global

BIODIVERSITY one of Earth's most important resources

Biodiversity – or biological diversity - is the **extraordinary variety and abundance of living things**: species of plants, insects, birds, and other animals and their genetic diversity.

Species **evolved over millennia** and have **inherent, intrinsic value**. Biodiversity anchors our history and culture, sustains our health and economy, and enriches our quality of life.



BIODIVERSITY IS ALL AROUND US.



We all have a role to play in protecting and supporting the extraordinarily complex web of life.



BIODIVERSITY SUSTAINS US



HUMAN HEALTH

Healthy ecosystems create **healthy communities**—nature provides us with essential clean water, clean air, food, medicine, materials, and physical + mental well-being.



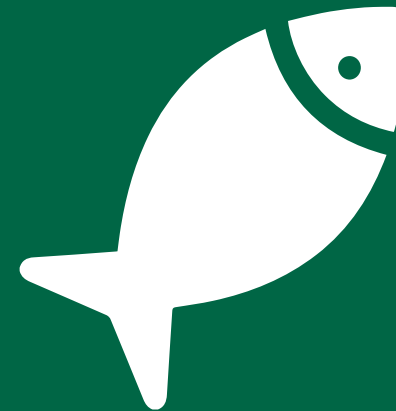
OUTDOOR RECREATION & TOURISM

Biodiversity plays a vital role in Massachusetts' **economy + quality of life**—special places make our state an attractive place to visit and live.



CLIMATE RESILIENCE

Nature is a **climate solution**—restoring forests, rivers, estuaries + wetlands is a cost-effective, impactful way to prepare cities + towns for climate hazards.



SUSTAINABLE FISHERIES

Protecting biodiversity will sustain Massachusetts' **nation-leading seafood industry** + commercial fisheries for future generations.



CARBON SEQUESTRATION

Restoring biodiversity hotspots—wetlands, salt marshes, eelgrass—will help MA **restore the ability of nature to help us reach net-zero**.

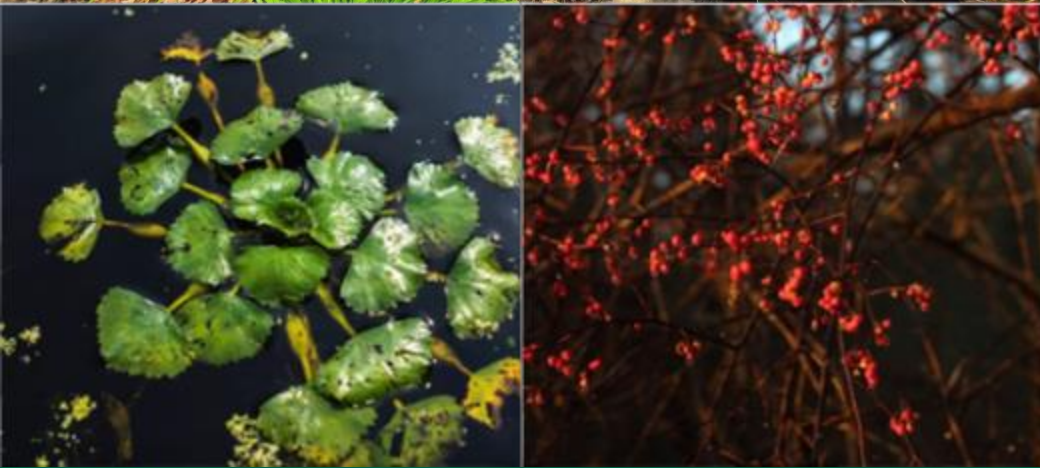


FOOD SECURITY

Biodiversity sustains our **local food systems + economy**—ensuring viability of agriculture, hunting + fishing, wild harvest in a time of climate uncertainty.



- **40% of animal species**
34% of plant species
in US at risk of extinction
- **432 species listed in MA**



BIODIVERSITY IN CRISIS



POLLUTION OF LANDS & WATERS

Ecosystems are significantly degraded—legacy + present-day pollution threatens ecosystems and human health.



HABITAT LOSS

We are losing critical natural spaces at an alarming rate—conversion of unprotected lands threatens essential remaining habitats.



ENVIRONMENTAL JUSTICE

Stark disparities exist in access to nature and its many benefits—especially for underserved + EJ communities.

INVASIVE SPECIES

Fast-growing, non-native terrestrial and aquatic plants, invasive species outcompete native species and **overtake the ecosystem.**

HABITAT FRAGMENTATION

Poorly placed infrastructure—defunct dams, undersized culverts, excessive pavement—**fragments habitats**, blocking wildlife migration + harming our state's ability to withstand climate impacts.

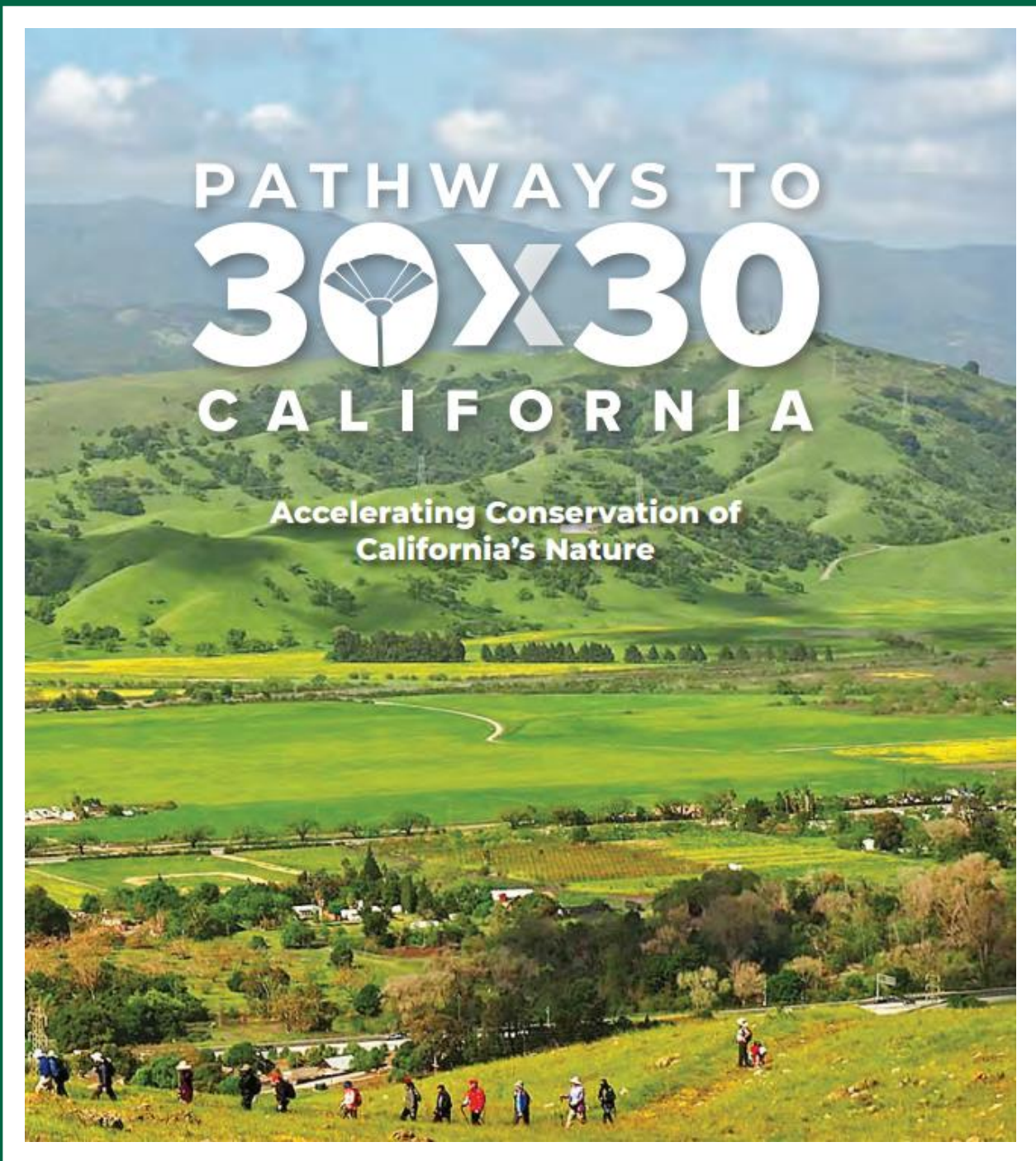
CLIMATE CRISIS

Climate change is amplifying threats—Without action, we will see loss of essential species + habitats that sustain us, threatening our public health, safety, food security, and economy.



Executive Order No. 618

**BIODIVERSITY CONSERVATION
GOALS FOR 2030, 2040, 2050**
Signed by Governor Maura Healey



European Environment Agency

Topics Analysis and data Countries Newsroom About

POLICY DOCUMENT

EU Biodiversity Strategy for 2030

The European Commission has adopted the new EU Biodiversity Strategy for 2030 and an associated Action Plan (annex) - a comprehensive, ambitious, long-term plan for protecting nature and reversing the degradation of ecosystems. It aims to put Europe's biodiversity on a path to recovery by 2030 with benefits for people, the climate and the planet. It aims to build our societies' resilience to future threats such as climate change impacts, forest fires, food insecurity or disease outbreaks, including by protecting wildlife and fighting illegal wildlife trade. A core part of the European Green Deal, the Biodiversity Strategy will also support a green recovery following the COVID-19 pandemic.

Vermont Sets Ambitious Goal to Save Half of the State for Nature

New biodiversity measure aims to conserve 50 percent by 2050

By Lindsey Botts

August 10, 2023

THIS IS PART OF A GLOBAL MOVEMENT

- Kunming-Montreal Global Biodiversity Framework (GBF)
- EU Biodiversity Strategy for 2030 + Action Plan
- California Biodiversity Initiative Roadmap & Pathways to 30x30 Strategy
- Vermont Community Resilience and Biodiversity Protection Act of 2023



NATURE-BASED SOLUTIONS
Climate Chief Melissa Hoffer's Recommendations for a whole-of-government approach to climate crisis call out **bold biodiversity conservation goals** as a **key strategy for adaptation**.

BIODIVERSITY IS A KEY CLIMATE SOLUTION

Preserving biodiversity is a critical climate resilience strategy—protecting + restoring key habitats will allow Massachusetts to **boost the power of nature** to withstand future climate impacts, adapt to rising seas, extreme weather, and drought, and **store and sequester carbon** to meet our net-zero goals.

**PHASE #1
IDENTIFYING DRAFT
GOALS & STRATEGIES**

FALL 2023 – WINTER 2024

- **Assessment & Research** by DFG Working Group
- **Develop Framework:**
 - PROTECT
 - RESTORE
 - SUSTAIN
 - CONNECT
- **Draft:** Goals, Strategies, and Metrics

**PHASE #2
ENGAGEMENT
& REVIEW**

SPRING - SUMMER 2024

- **Public Engagement Process**
- 1:1 Engagement with **Divisions, EEA Sister Agencies** (CZM, DEP, DCR, MDAR, DOER) **other Secretariats** (DOT, DESE, DCAMM, EOHED, EOHLC)
- **Biodiversity Workshops and Presentations** to engage agencies, conservation partners, commercial interests, government, academics, EJ + Indigenous communities
- Public listening sessions in July

**PHASE #3
FINAL GOALS &
STRATEGIES**

FALL 2024

- Continue engagement
- **Biodiversity Goals finalized + announced**
- Release kicks off statewide **"Movement for Biodiversity"**

VISION 2050 FOR BIODIVERSITY



PROTECT

KEY HABITATS,
LANDSCAPES,
SEASCAPES

RESTORE

HABITATS,
SPECIES,
CONNECTIVITY

SUSTAIN

ECOSYSTEM SERVICES,
FOOD SECURITY,
ECONOMY

CONNECT

ALL PEOPLE
WITH NATURE



CRITICAL NATURAL LANDSCAPES

CORE HABITATS

GLOBALLY RARE "HOT SPOTS"



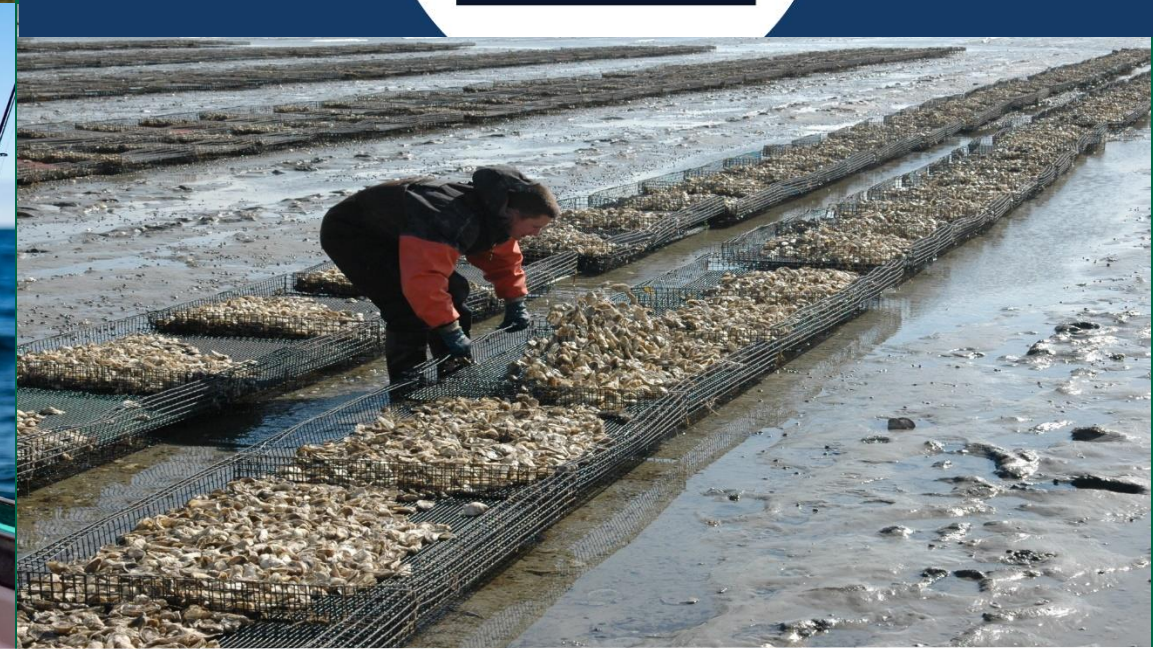
PRIORITY 40%

CONSERVE KEY HABITATS FOR SPECIES

- Prioritize key lands to protect under Clean Energy + Climate Plan 40% by 2050
- Protect 500,000+ acres identified by BioMap
- Best management practices used to maximize species diversity
- Active management goals established for forest biodiversity



EXAMPLE: CONSERVE MARINE ESSENTIAL HABITATS
Mapping to identify + guide protection and restoration of critical seascapes—eelgrass, complex hard bottom.



BLUE ECONOMY

SUSTAINING A THRIVING SEAFOOD INDUSTRY FOR FUTURE GENERATIONS

Protect and restore **core coastal + marine habitats to boost marine biodiversity, commercial fishing, and climate resilience.**

- Restore eelgrass habitats; identify sensitive, special, unique habitats (SSUs) identified by MA Ocean Plan
- Protect and restore salt marshes to **maximize carbon sequestration**
- Upgrade stormwater + wastewater treatment for **No Net Loss of Shellfish Growing Areas**



EXAMPLE: RESTORE RIVERS & STREAMS
300+ dam removals +
300+ culvert replacements
by 2050 for fish passage,
aquatic connectivity, +
climate resilience.



MAKE ROOM TO MOVE

CLIMATE CORRIDORS FOR MIGRATION & RESILIENCE

- Targets prioritize **landscape-scale + watershed-scale restoration** to
- Knit together disconnected core habitats
 - **Restore fish passage** for all diadromous/cold water fisheries
 - Support species in **climate migration** by providing refuges + mobility
 - Facilitate **salt marsh, beach, + flood plain migration** as sea levels rise



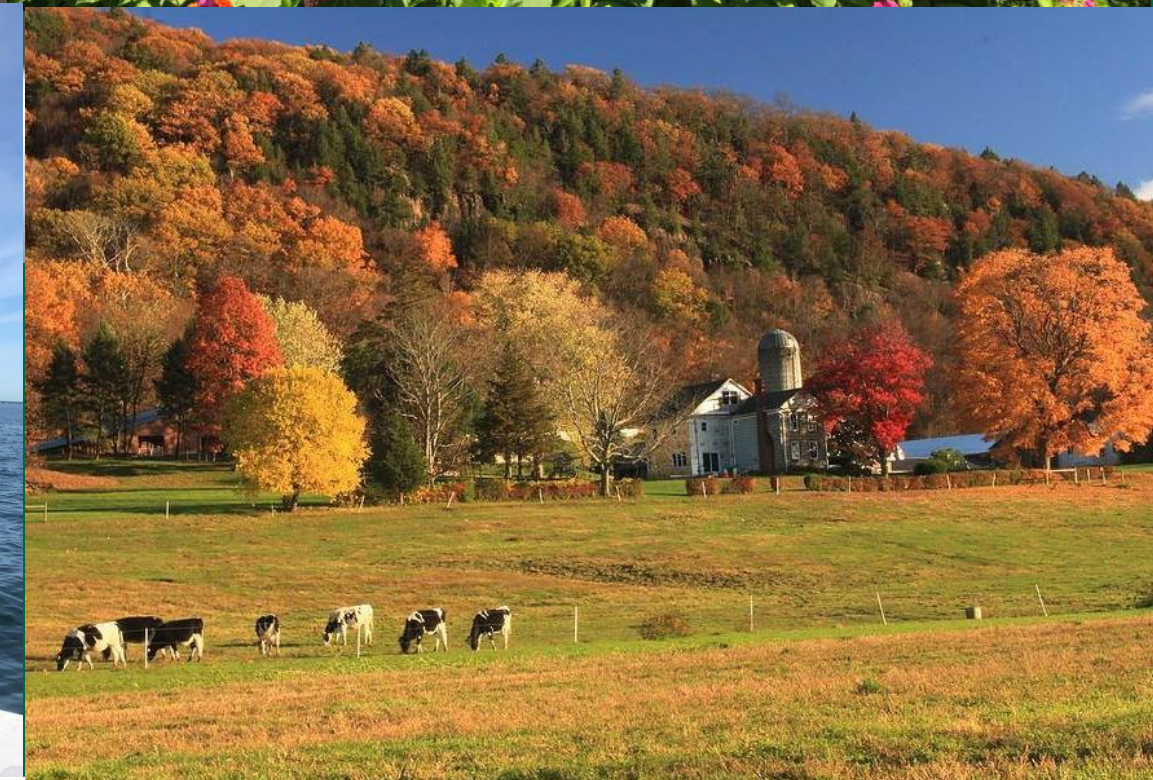
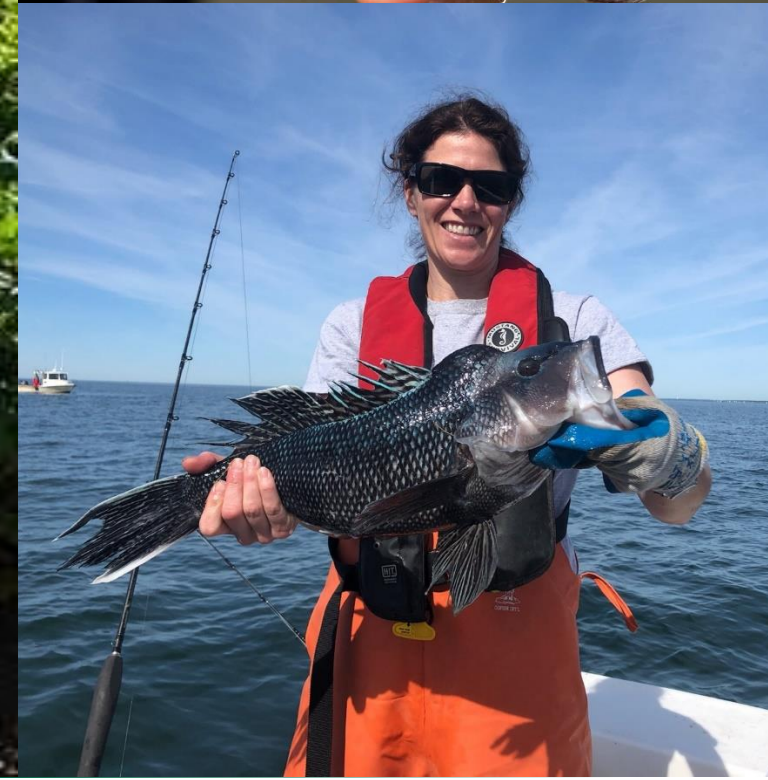
**EXAMPLE: BIODIVERSITY
SUITABILITY TOOLS & SITING
POLICY**
Guide sustainable development
around **sensitive habitats +
climate-vulnerable areas.**

LAND USE PLANNING

**SUSTAINABLE DEVELOPMENT
FOR PEOPLE & NATURE**

Elevate biodiversity as a priority—meet our climate, clean energy, transportation, and housing goals and:

- Avoid impacts to **core habitats + critical natural landscapes**
- Inform housing + transportation goals and projects
- Inform **clean energy generation + carbon sequestration policy + actions**



EXAMPLE: FARMS + BIODIVERSITY
Encourage farmers to incorporate **biodiversity-friendly** farming practices to boost productivity + sustain ecosystem health.

FOOD SECURITY

SUSTAINABLE HARVEST & FARMLAND BIODIVERSITY

- Support farms in applying biodiversity-friendly practices for healthy soils, pollinator edges, agroforestry, intercropping
- **No Net Loss of Farmland**
- Bolster food security by growing "Hunters Share the Harvest" + "Share the Catch"
- Ensure sustainable, equitable access to wild harvest



EXAMPLE: INNOVATION PATHWAY & CHAPTER 74
Develop pathways for future workforce for climate + biodiversity.

NATURE IN THE CLASSROOM

Support inherent appreciation for + belonging in nature from a young age:

- Launch the **Nature in our Schools Initiative** to educate all students on the nature of Massachusetts and biodiversity principles in the classroom, after-school, or summer programming.
- Reach **all students** in Environmental Justice + underserved areas.



EXAMPLE: BIODIVERSITY STEWARDSHIP
Launch a "Movement for Biodiversity" campaign to foster individual adoption of biodiversity-friendly practices.



NATURE IN NEIGHBORHOODS

- Ensure every person has access to a **biodiverse greenspace** (pocket forest, urban garden, food forest, pollinator pathway) in walking distance of their home
- **Supporting municipal-led initiatives** – partner with municipalities
- **Supporting community-led initiatives**—partner with local organizations



STAY IN TOUCH!

As we develop our recommendations, we are looking for **you** to bring us your vision for nature in 2050!

Over the next months, we will have **opportunities to engage**— including public listening sessions and surveys.

VISIT OUR NEW WEBSITE:

Sign up for the latest news, events, and ways to take action!

mass.gov/biodiversity

