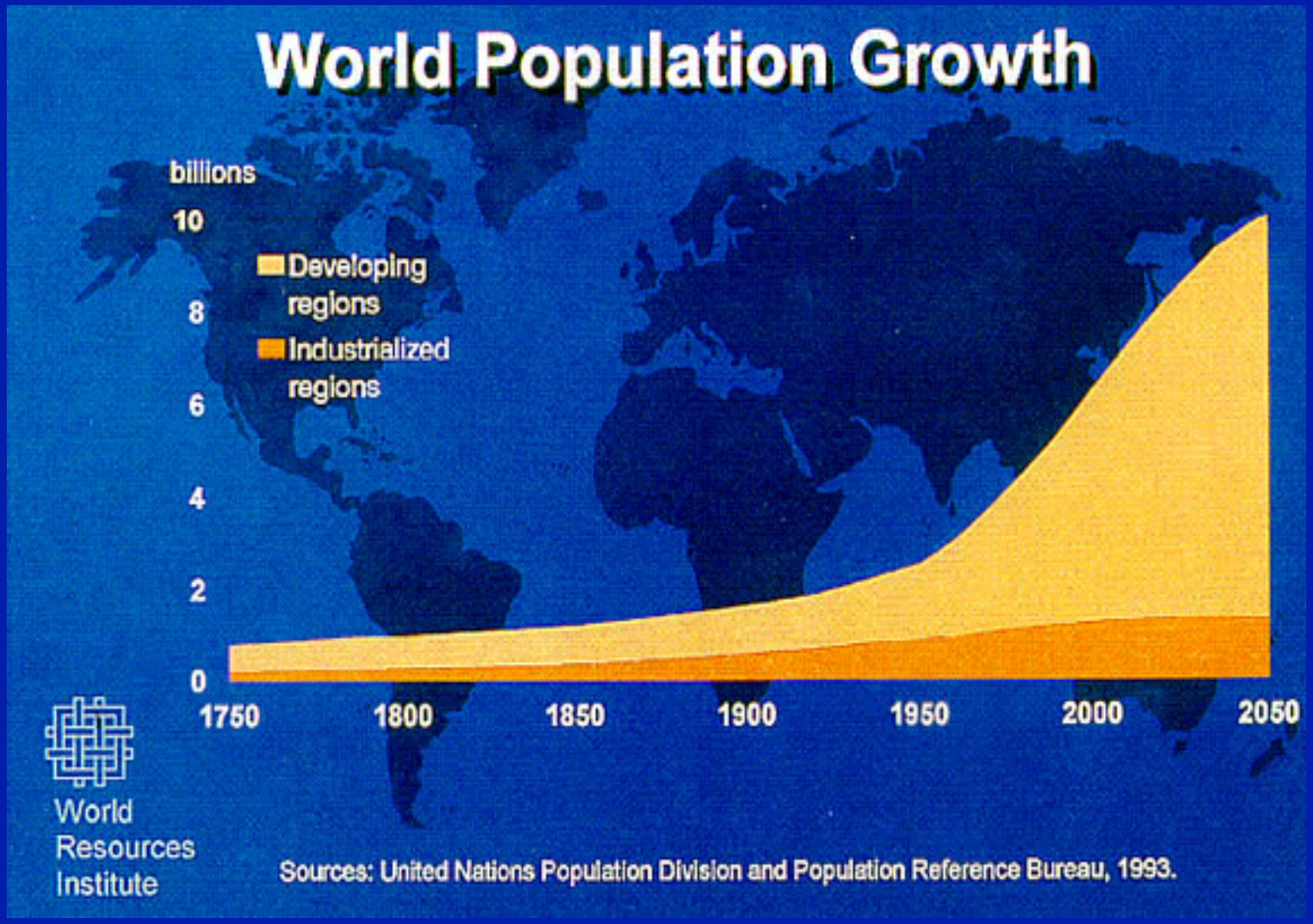
MAINEAQUACULTURE

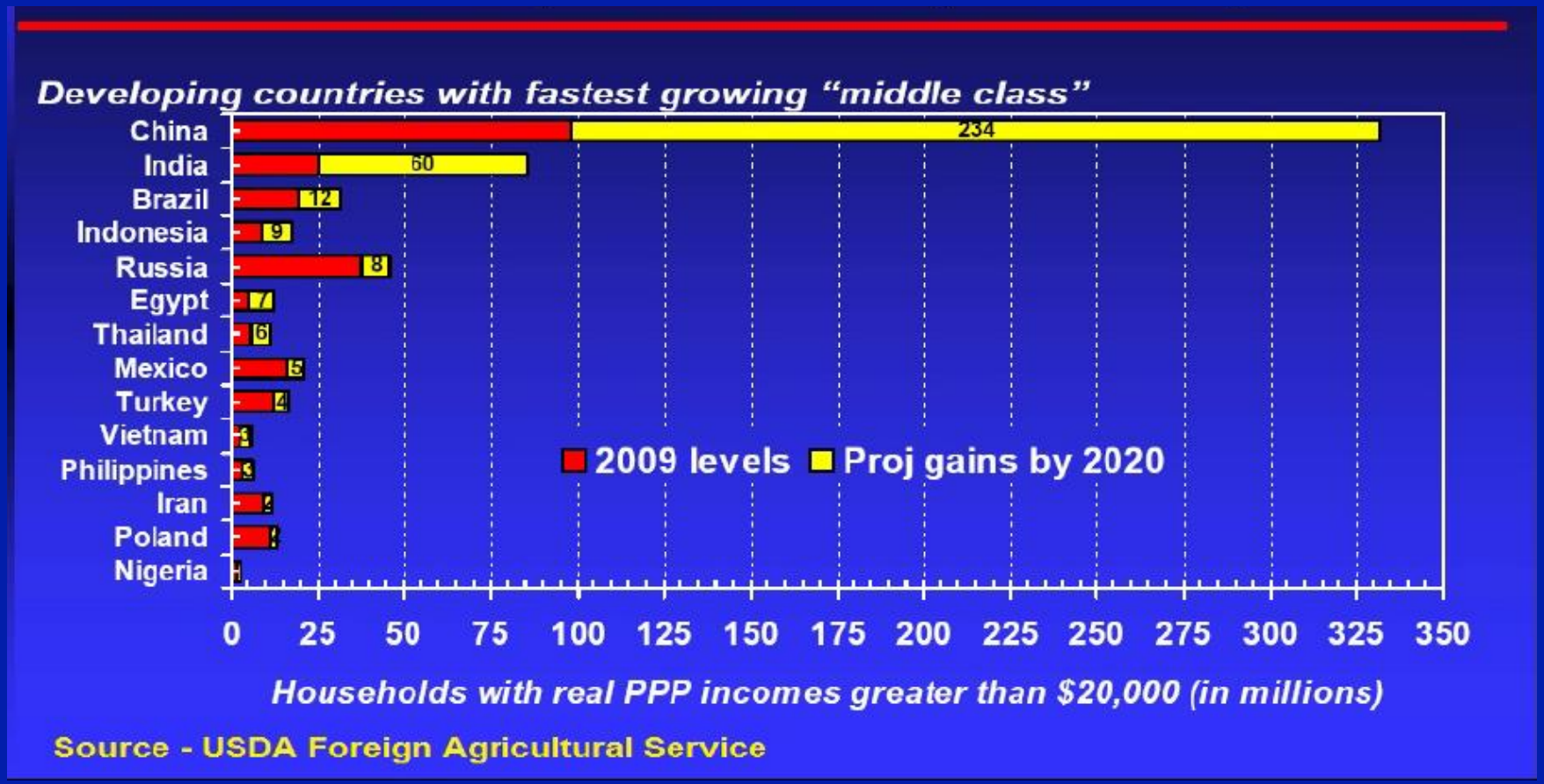
LOCAL - HEALTHY - SUSTAINABLE

GROWING MAINES FUTURE BY FEEDING AMERICA

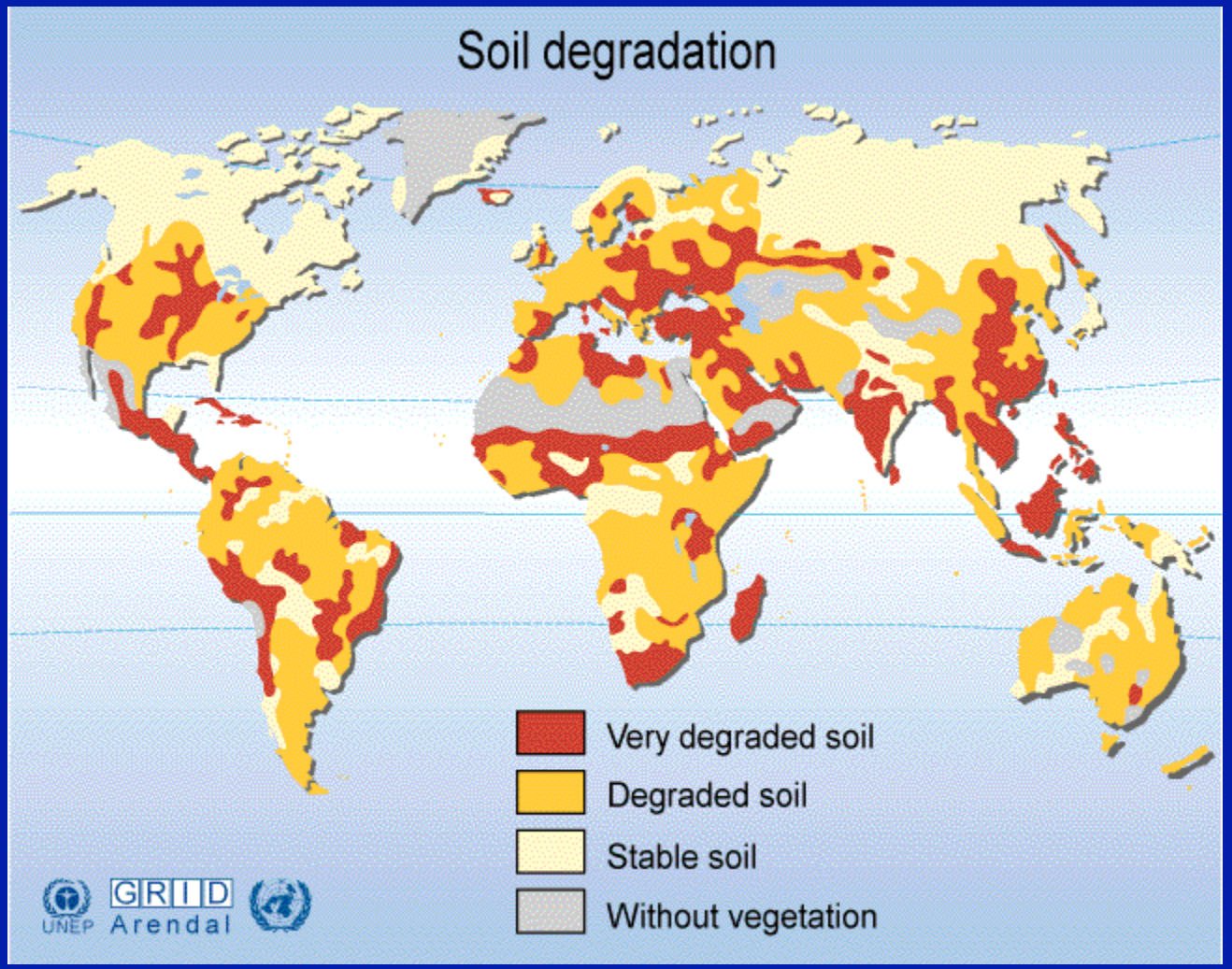


MAINE AQUACULTURE ASSOCIATION

RISING LIVING STANDARDS



LAND



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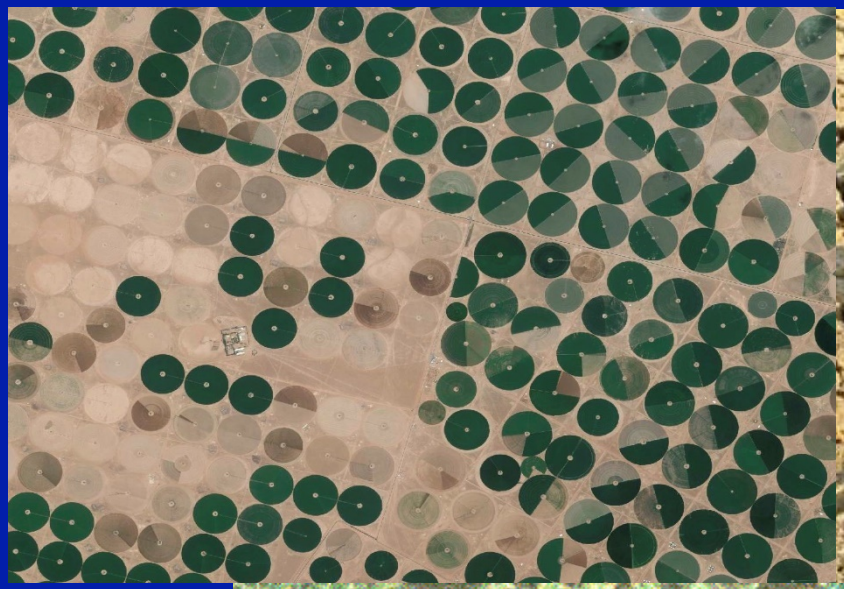
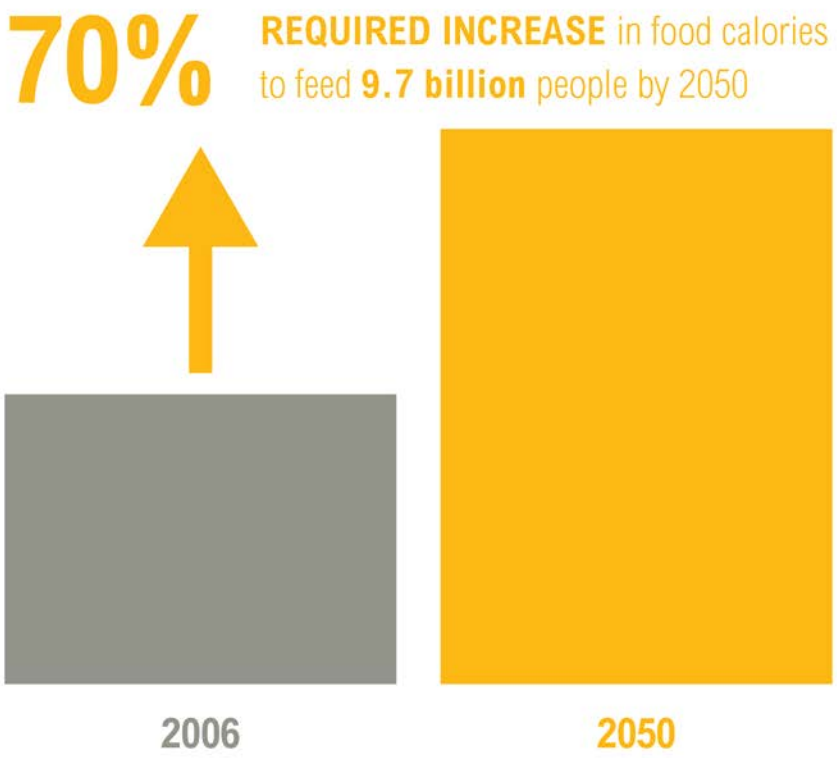
WATER - NUTRIENTS



MAINE AQUACULTURE ASSOCIATION

The World Needs to Close a 70% Food Gap



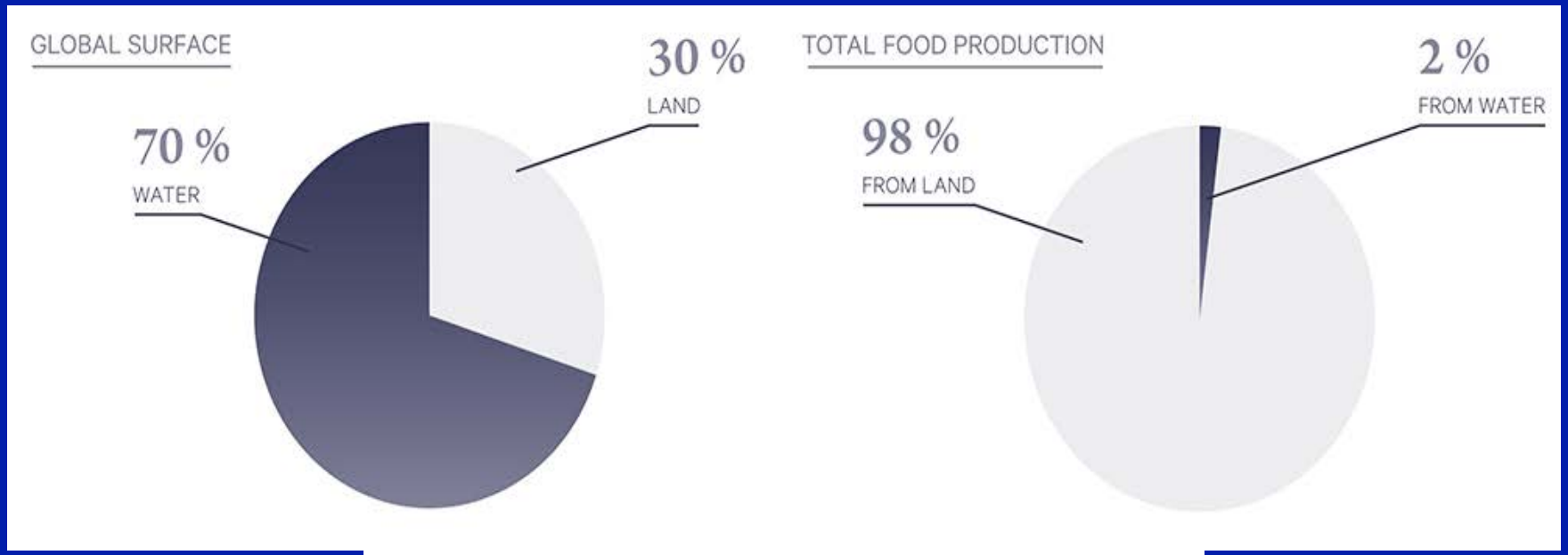
wri.org/shiftingdiets

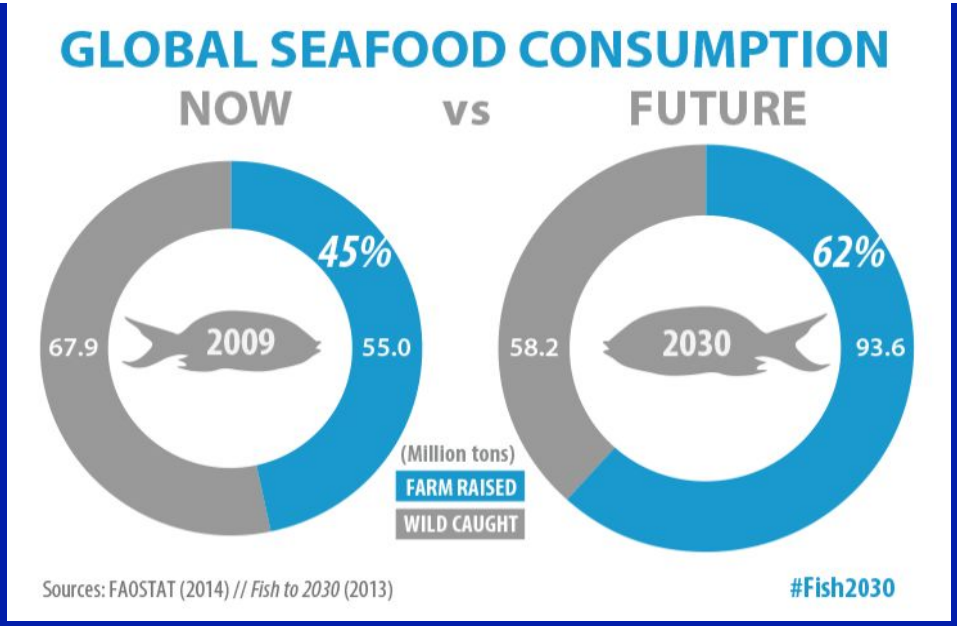
WORLD RESOURCES INSTITUTE

75 % OF EARTHS SURFACE IS WATER

ALL FOOD IS CURRENTLY GROWN ON <8% EARTHS SURFACE AREA

MOST SOLAR RADIATION HITS THE EARTH IN UNFARMED AREA





MAINE AQUACULTURE ASSOCIATION

EFFICIENCIES OF DIFFERENT ANIMAL PROTEIN SECTORS

INPUT REQUIREMENTS TO PRODUCE 1 KG RAW PRODUCT

8 kg feed

1857 gallons

2 kg feed

469 gallons

3 kg feed

756 gallons

1.1 kg feed

132 gallons

0 kg feed

.01 gallons

AQUATIC ANIMALS 10-20% MORE EFFICIENT THAN LAND ANIMALS

ONE ACRE OF FARMED MUSSELS PRODUCES 1000 X MORE MEAT THAN ONE ACRE OF GRAZING LAND FOR CATTLE

EFFICIENCIES OF DIFFERENT PLANT PRODUCTION

FRESHWATER REQUIRED TO PRODUCE 1 KG RAW PRODUCT

Wheat

1500 Liters

Corn

1400 Liters

Rice

4700 Liters

Seaweed

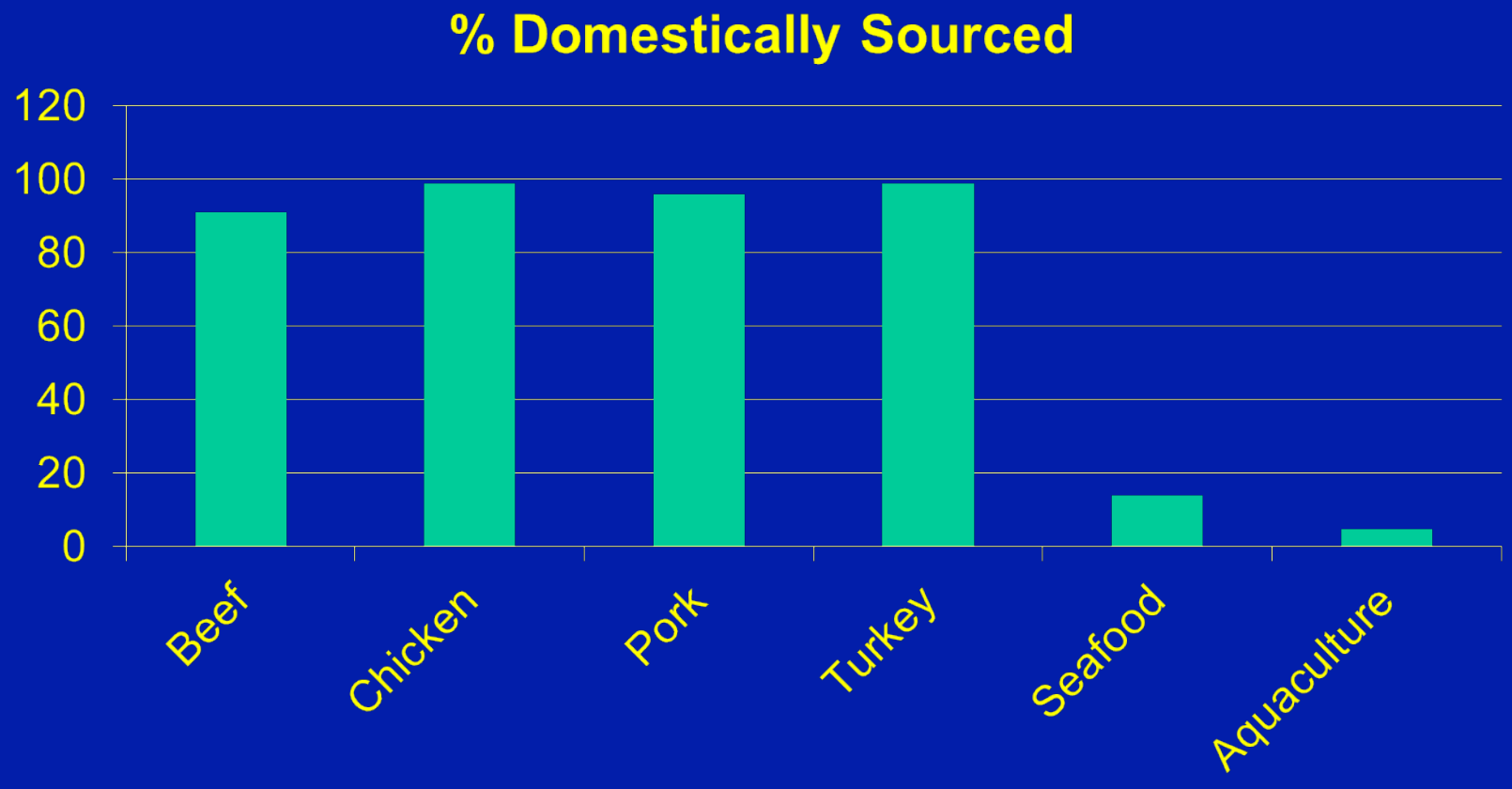
.01 Liters

10% MORE EFFICIENT THAN LAND PLANTS

LITTLE OR NO FERTILIZER REQUIRED

LITTLE OR NO FRESHWATER REQUIRED

SHARE OF CONSUMPTION SUPPLIED BY DOMESTIC PRODUCTION



Source: **USDA2010,USDOC2012**

ONE OF LONGEST COASTLINES IN U.S.

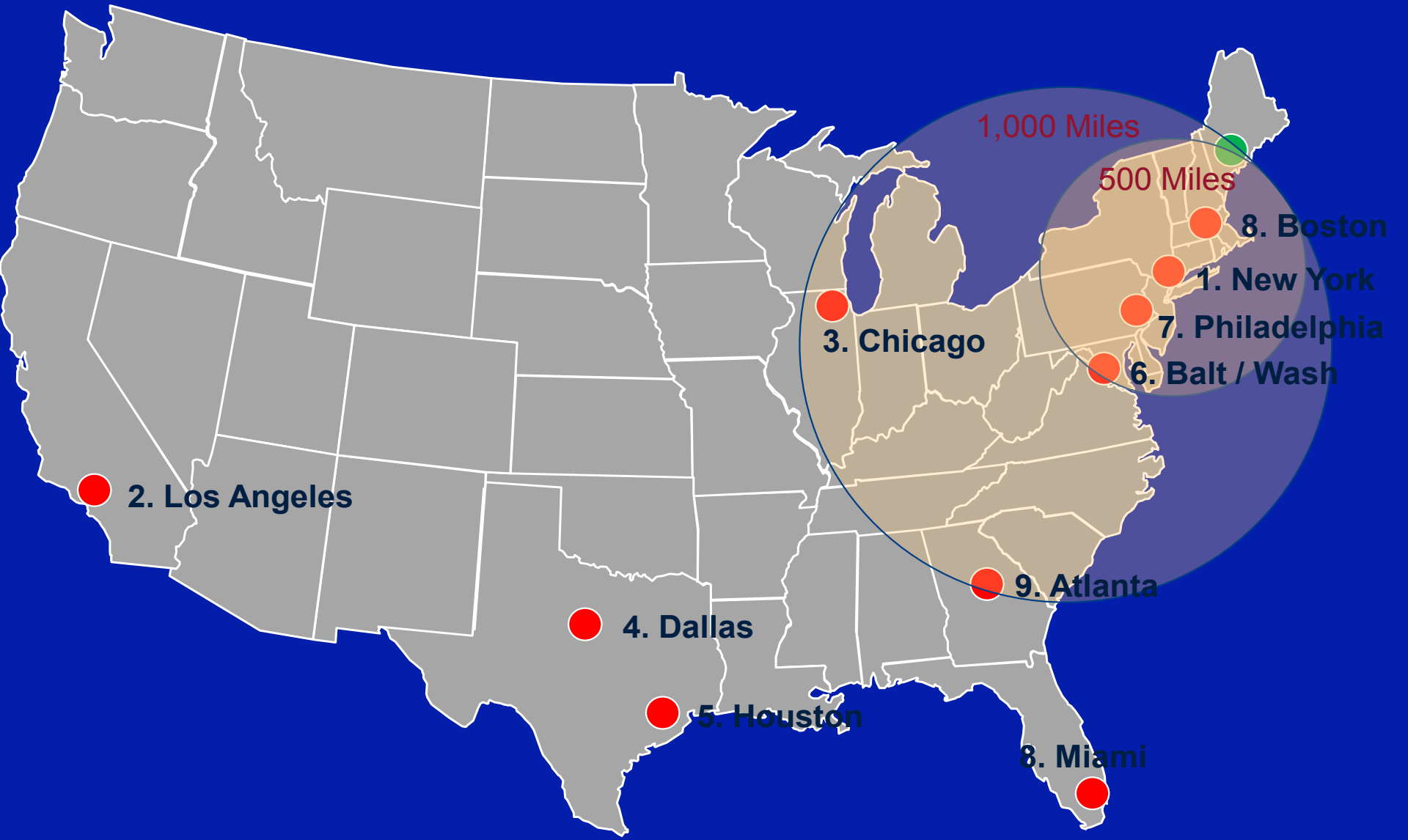
COASTAL COMMUNITIES ARE CHANGING

INCREASED RESIDENTIAL DEVELOPMENT

COMMERCIAL FISHING PERMITS ↓ ↓ ↓

<25 MILES OF WORKING WATERFRONT LEFT

MAINE HAS >130 MILLION CUSTOMERS WITHIN 24 HOURS



MAINE AQUACULTURE

- FRESH WATER AND SALTWATER
- >25 SPECIES GROWN
- ± 1300 ACRES <.003% STATE WATERS

- NUMBER OF LEASE SITES 2016
  - 26 FINFISH
  - 57 SHELLFISH
  - 19 EXPERIMENTAL
  - ≈290 LIMITED PURPOSE LICENSES ???

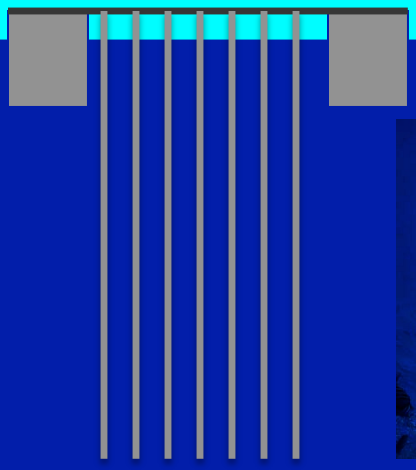
- EMPLOYMENT

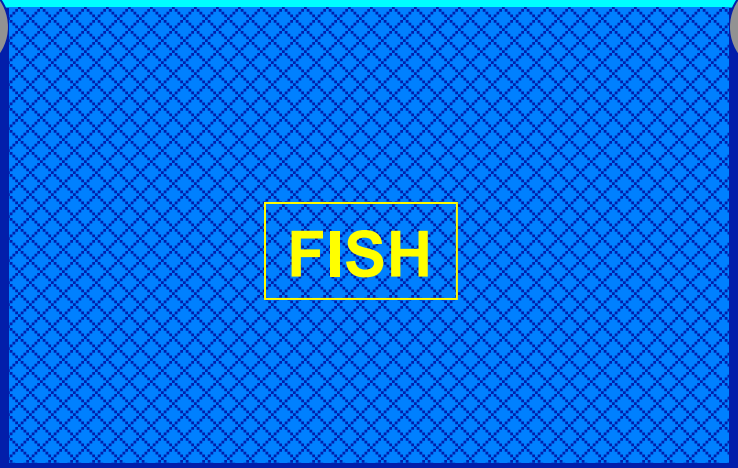
	2002	03	14
DIRECT	600	524	571
INDIRECT	800	837	507

- ECONOMIC IMPACT ($millions)

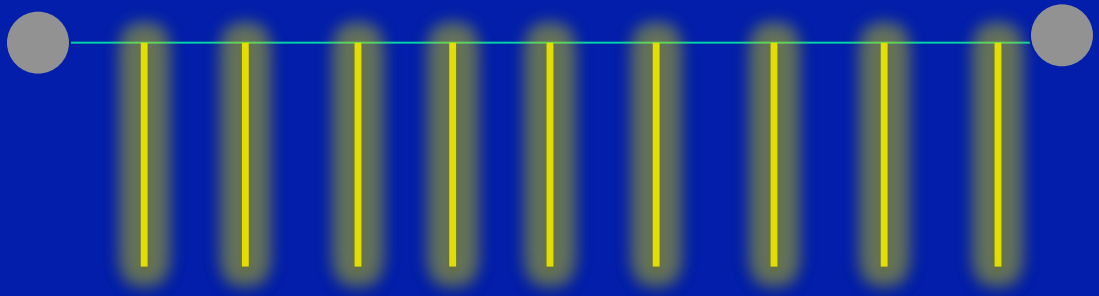
	2002	03	14
DIRECT FARM GATE	56.9	81.9	73.4
INDIRECT		48.6	64.3
TOTAL		130.5	137.7

OUR FARMS ARE EMBEDDED IN THE ECOSYSTEM THEY DEPEND ON





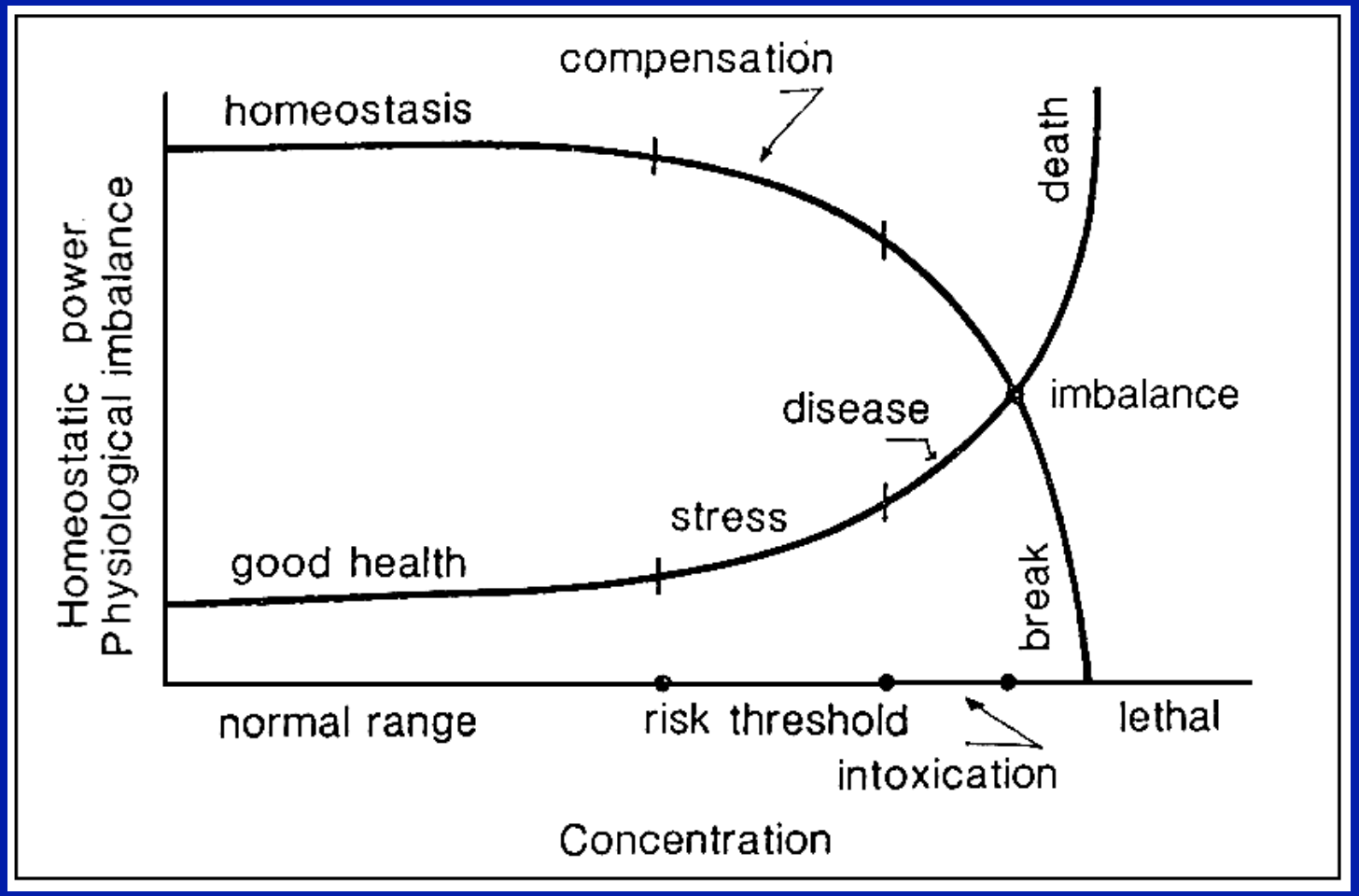
MUSSELS AND SCALLOPS



MACROALGAE

OYSTERS, MUSSELS, URCHINS, WORMS AND SEA CUCUMBERS

ANIMAL/PLANT ENVIRONMENTAL LINKAGES



MAA COOPERATIVE MANAGEMENT PROGRAMS

MAA CODE OF PRACTICE

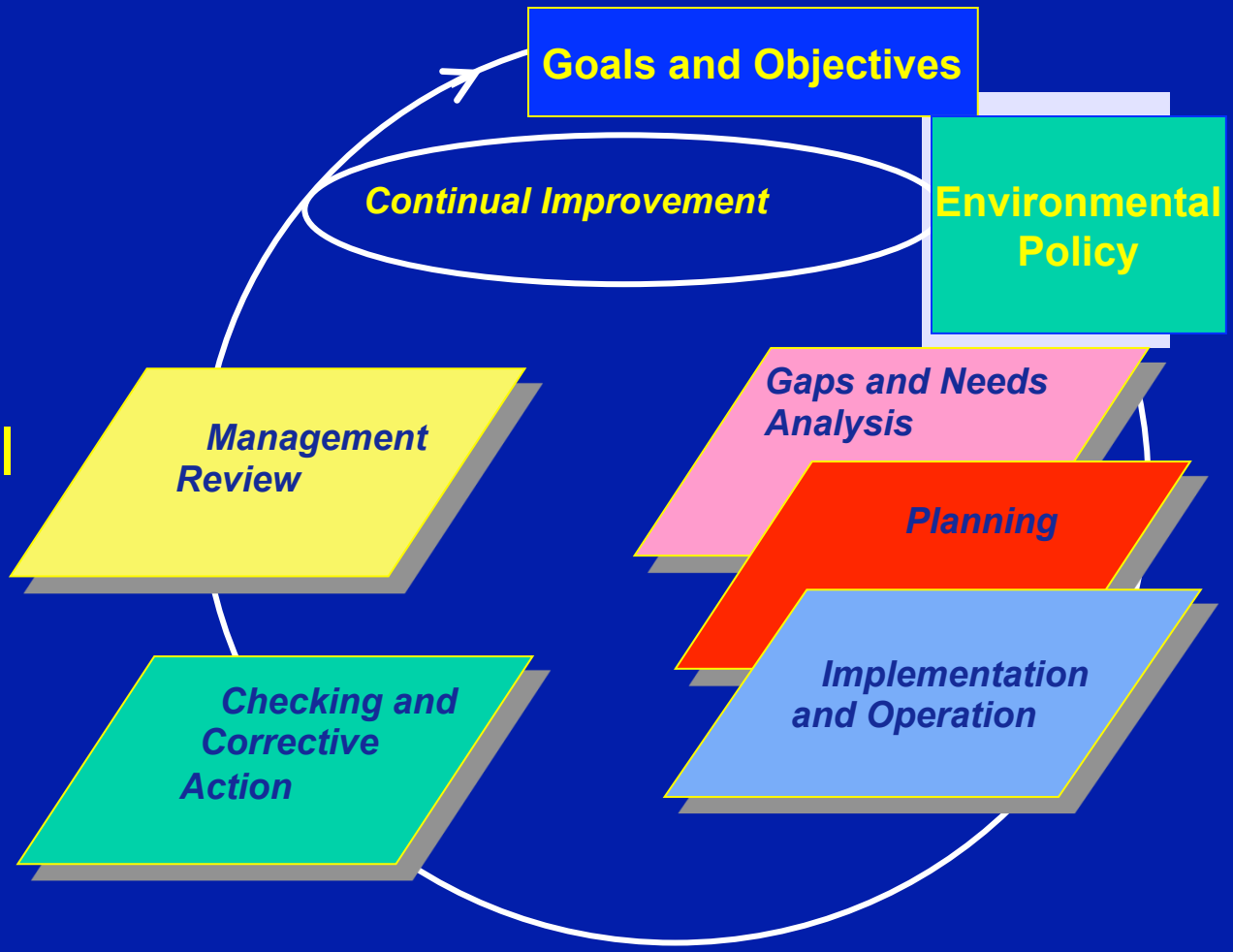
- MAA SHELLFISH HEALTH AND BIOSECURITY AGREEMENT
- MAA FINFISH BAY MANANGEMENT AGREEMENT
  - MAA FINFISH CONTIANMENT MANAGEMENT SYSTEM

KEY AQUACULTURE BMP CATEGORIES

- SITE SELECTION
- SITE MONITORING AND CC ASSESSMENT
- FEED MANAGEMENT
- NUTRIENT MANAGEMENT
- WATER MANAGEMENT
- WASTE MANAGEMENT
- SITE ROTATION AND FALLOWING
- ANIMAL/PLANT HEALTH MANAGEMENT
- ESCAPE PREVENTION AND RESPONSE
- WILDLIFE INTERACTION MANAGEMENT

Environmental Management System

Elements of a Successful Environmental Management System



GROWN IN USA

WE HAVE ALWAYS BEEN LOCAL

MAINEAQUACULTURE

GROWING MAINES FUTURE

GOOD JOBS - RESPONSIBLE STEWARDSHIP - HEALTHY FOOD