

Lara Barazi-Yeroulanos



Kefalonia Fisheries S.A. Greece

Lara Barazi-Yeroulanos is CEO of Kefalonia Fisheries S.A., the first farm established in Greece for the production of Mediterranean seabass and sea bream.

She is the Greek representative to the Federation of European Aquaculture Producers, as well as a board member of the Federation of Greek Mariculture, and the European and Hellenic Aquaculture Technology and Innovation Platforms.

Barazi-Yeroulanos serves as a consultant on sustainable aquaculture development to the FAO and IUCN.

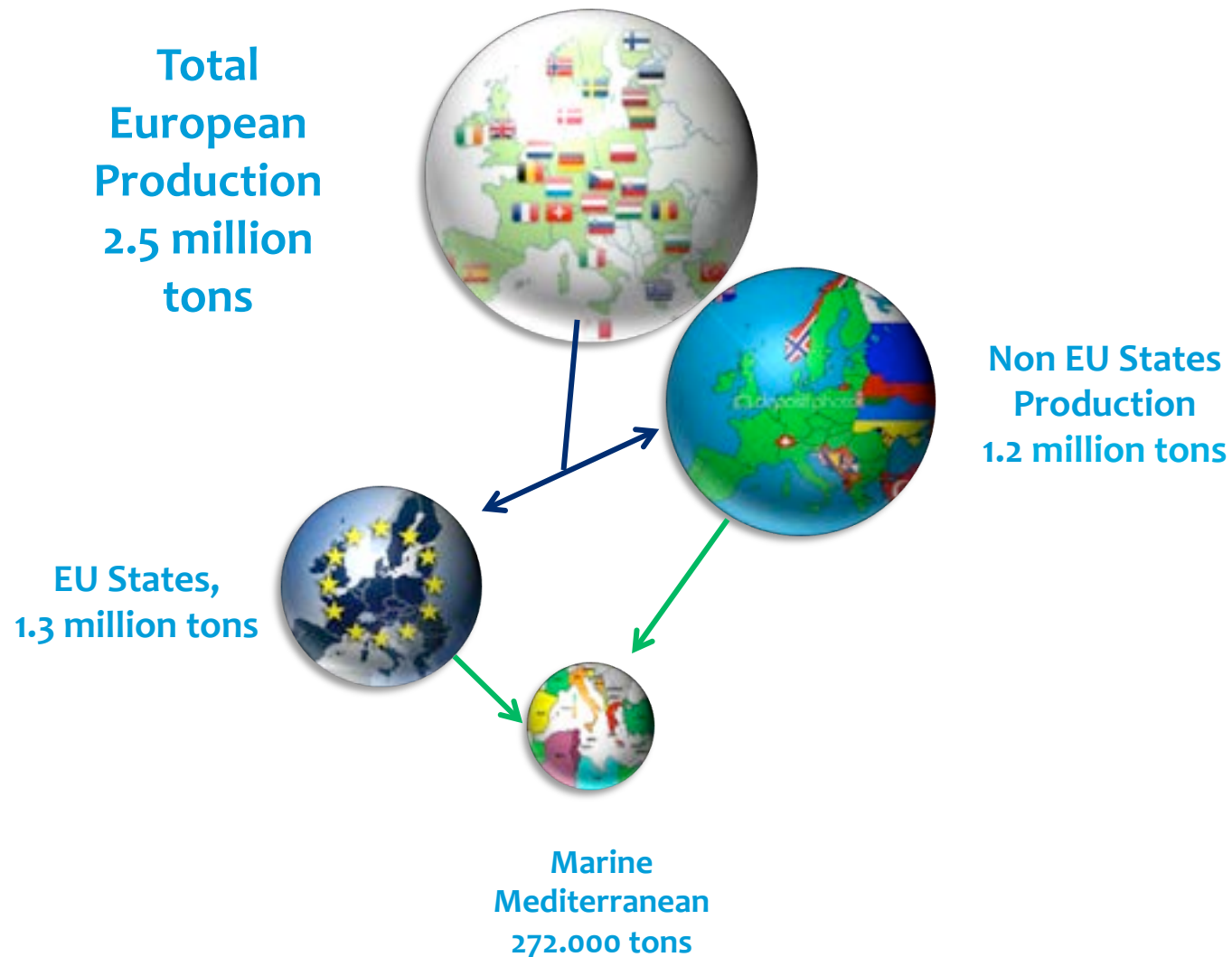


Sea Bass & Sea Bream

Potentials, Challenges & Solutions as a Future Key Global Food Supplier

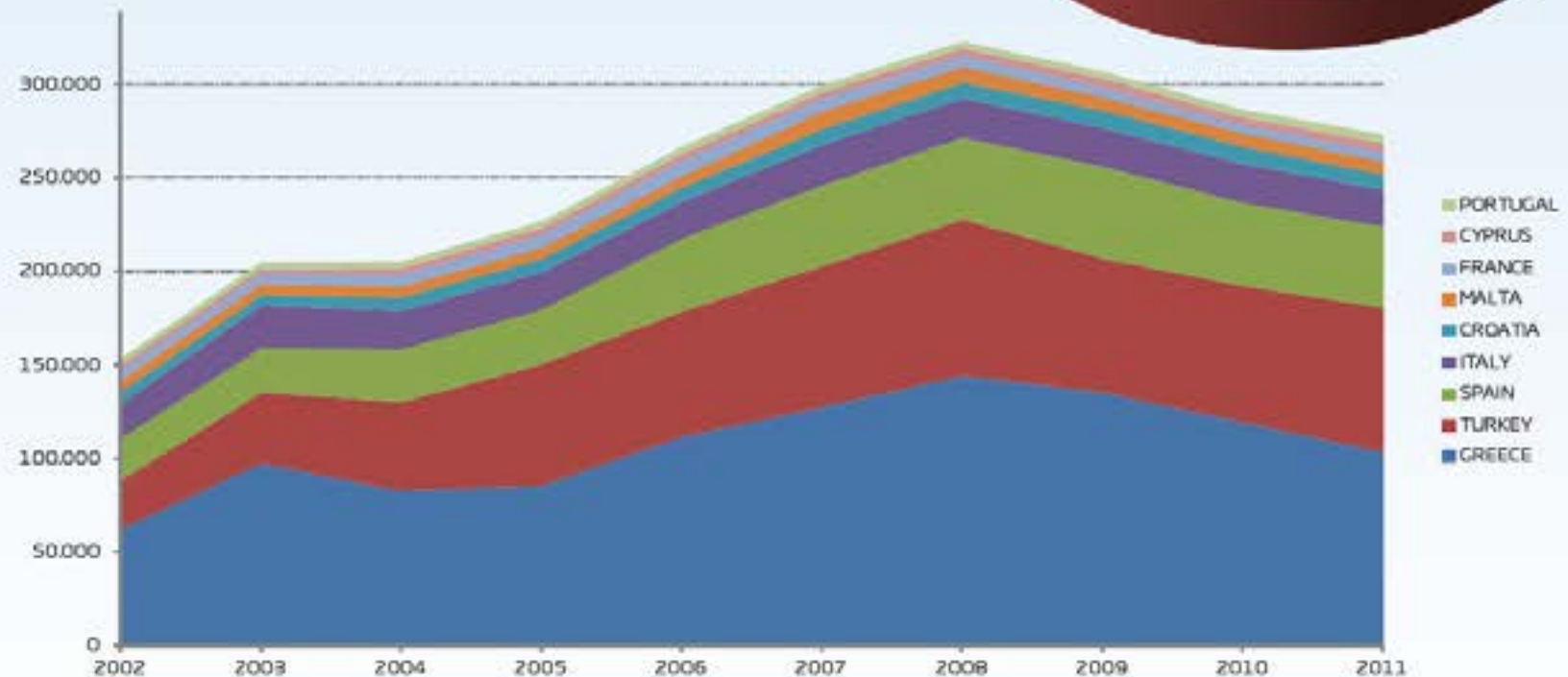
Lara Barazi-Yeroulanos
CEO - Kefalonia Fisheries S.A.

Mediterranean Aquaculture



Mediterranean Aquaculture

Evolution of Marine Mediterranean Aquaculture Production (tons)



Mediterranean Aquaculture

Seabream



Seabass



Common dentex



Common Pandora



Sharpsnout seabream



White seabream (sar)



Striped seabream



Red porgy



Meagre



Bluefin Tuna



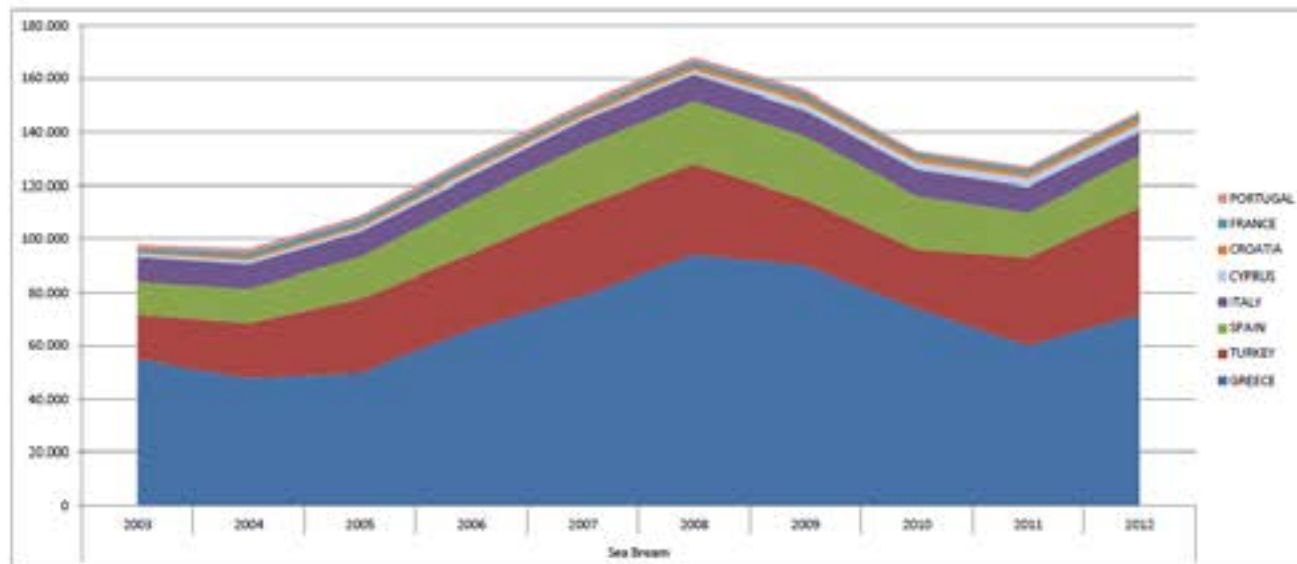
Sea Bream Production

Sea bream production (tons) 2003-2012



PRODUCTION (tons)	YEAR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sea Bream	CROATIA	923	1,200	1,200	1,500	1,500	1,800	2,000	2,000	1,719	2,400
	CYPRUS	1,181	1,356	1,465	1,879	1,404	1,600	2,572	2,799	3,065	3,121
	FRANCE	1,100	1,600	1,900	2,200	1,392	1,636	1,648	1,377	1,500	1,300
	GREECE	55,000	48,000	50,000	66,000	79,000	94,000	90,000	74,000	60,000	72,000
	ITALY	9,000	9,050	9,500	8,900	9,800	9,600	9,600	9,600	9,700	8,700
	PORTUGAL	1,449	1,685	1,519	1,623	1,930	1,635	1,383	851	1,200	1,000
	SPAIN	12,442	13,034	15,577	20,220	22,320	23,930	23,690	20,360	16,930	19,430
	TURKEY	16,735	20,435	27,634	28,463	33,500	34,000	25,000	22,000	33,000	40,000
Sea Bream Total		97,830	86,360	108,795	130,785	150,846	168,201	155,893	132,987	127,314	147,951

SOURCE: FEAP - MedAqua species commission



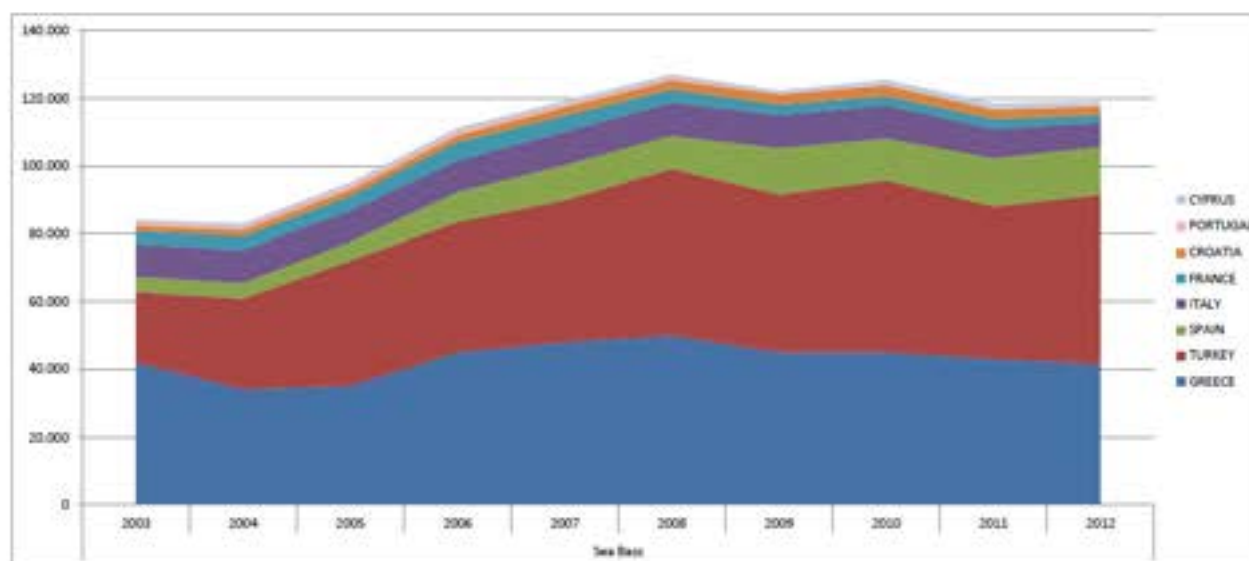
Sea Bass Production



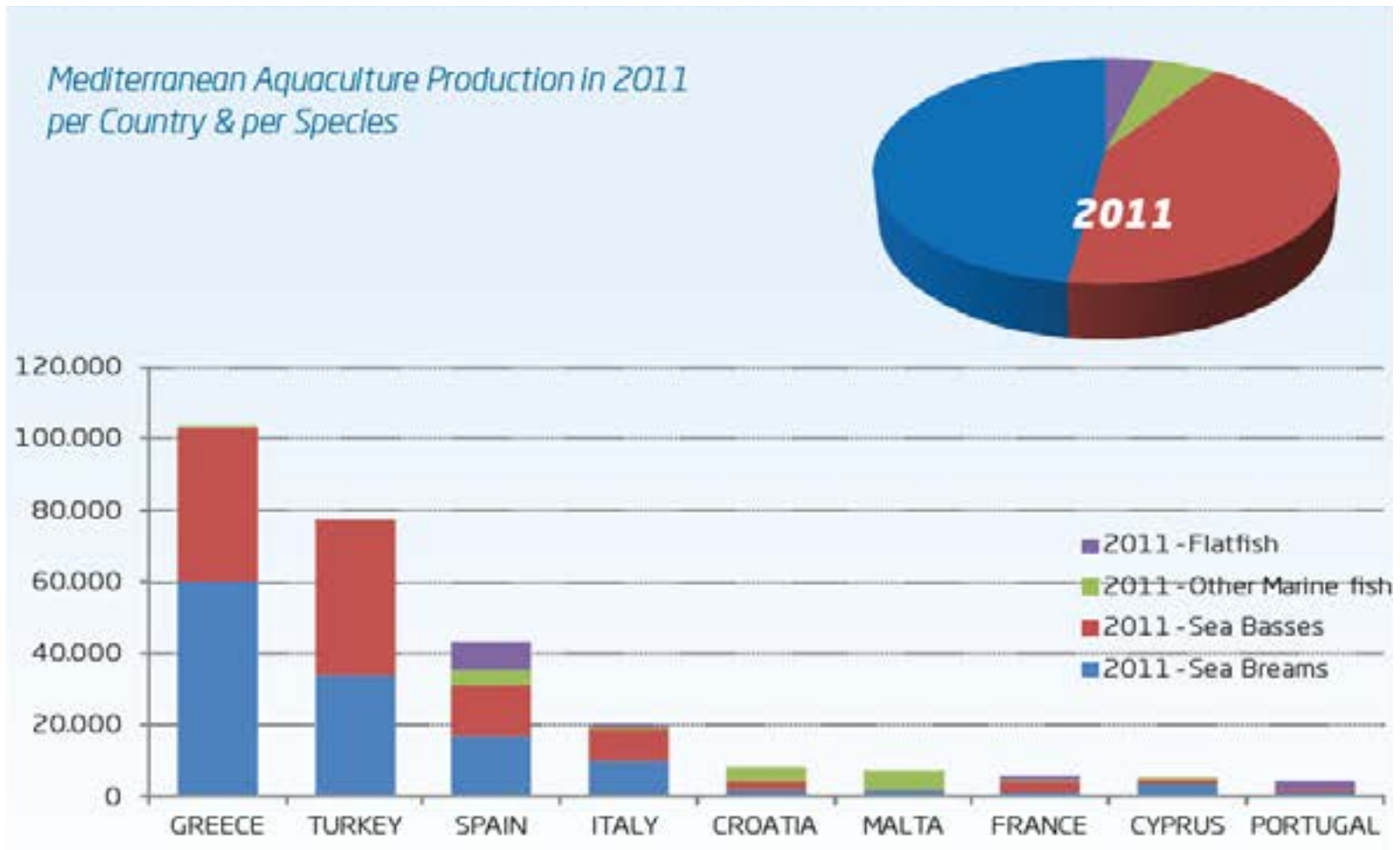
Sea bass production (tons) 2003-2012

PRODUCTION (tons)		YEAR										
SPECIES	COUNTRY	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Sea Bass	CROATIA	1,500	1,800	1,850	2,000	2,500	2,700	3,000	3,200	2,775	2,600	
	CYPRUS	447	698	583	589	740	752	703	1,217	1,500	1,096	
	FRANCE	3,700	4,000	4,300	5,585	4,764	3,968	3,204	2,779	3,000	2,300	
	GREECE	42,000	34,000	35,000	45,000	48,000	50,000	45,000	45,000	43,000	41,500	
	ITALY	9,600	9,700	9,100	9,300	9,900	9,800	9,800	9,800	8,700	7,200	
	PORTUGAL	1,386	1,234	1,530	1,584	1,205	1,069	444	396	480	500	
	SPAIN	4,529	4,700	5,492	8,930	10,480	9,840	13,840	12,495	14,370	14,270	
	TURKEY	20,982	26,927	37,290	38,408	41,900	49,270	46,554	50,796	45,000	50,000	
Sea Bass Total		84,144	83,059	95,145	111,396	110,489	122,399	122,545	125,701	118,875	119,460	

SOURCE: FEAP - MedAqua species commission

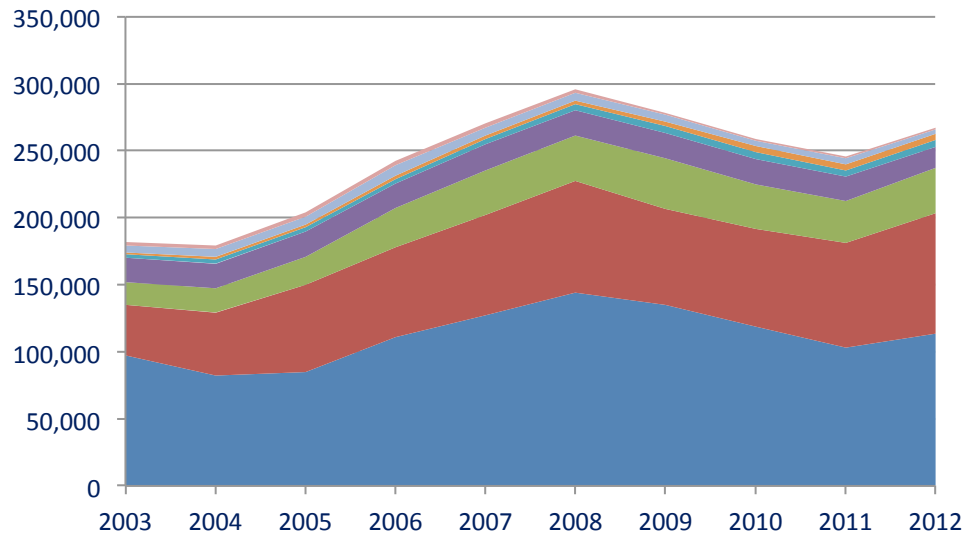


Mediterranean Aquaculture



Mediterranean Aquaculture

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
	Total	% of Total	Total	% of Total	Total	% of Total	Total	% of Total	Total	% of Total	Total	% of Total	Total	% of Total	Total	% of Total	Total	% of Total	Total	% of Total
Greece	97,000	53.3%	82,000	45.7%	85,000	41.7%	111,000	45.8%	127,000	47.0%	144,000	48.7%	135,000	48.5%	119,000	46.0%	103,000	41.9%	113,500	42.4%
% change			-18.3%		3.5%		23.4%		12.6%		11.8%		-6.7%		-13.4%		-15.5%		9.3%	
Turkey	37,717	20.7%	47,362	26.4%	64,924	31.8%	66,871	27.6%	75,400	27.9%	83,270	28.2%	71,554	25.7%	72,796	28.1%	78,000	31.7%	90,000	33.7%
Spain	16,971	9.3%	17,734	9.9%	21,069	10.3%	29,150	12.0%	32,800	12.1%	33,770	11.4%	37,530	13.5%	32,855	12.7%	31,300	12.7%	33,700	12.6%
Italy	18,600	10.2%	18,750	10.5%	18,600	9.1%	18,200	7.5%	19,700	7.3%	19,400	6.6%	19,400	7.0%	19,400	7.5%	18,400	7.5%	15,900	5.9%
Croatia	2,423	1.3%	3,000	1.7%	3,050	1.5%	3,500	1.4%	4,000	1.5%	4,500	1.5%	5,000	1.8%	5,200	2.0%	4,494	1.8%	5,000	1.9%
Cyprus	1,628	0.9%	2,054	1.1%	2,048	1.0%	2,468	1.0%	2,144	0.8%	2,352	0.8%	3,275	1.2%	4,036	1.6%	4,565	1.9%	4,217	1.6%
France	4,800	2.6%	5,600	3.1%	6,200	3.0%	7,785	3.2%	6,156	2.3%	5,604	1.9%	4,852	1.7%	4,156	1.6%	4,500	1.8%	3,600	1.3%
Portugal	2,835	1.6%	2,919	1.6%	3,049	1.5%	3,207	1.3%	3,135	1.2%	2,704	0.9%	1,827	0.7%	1,247	0.5%	1,680	0.7%	1,500	0.6%
Total	181,974		179,419		203,940		242,181		270,335		295,600		278,438		258,690		245,939		267,417	



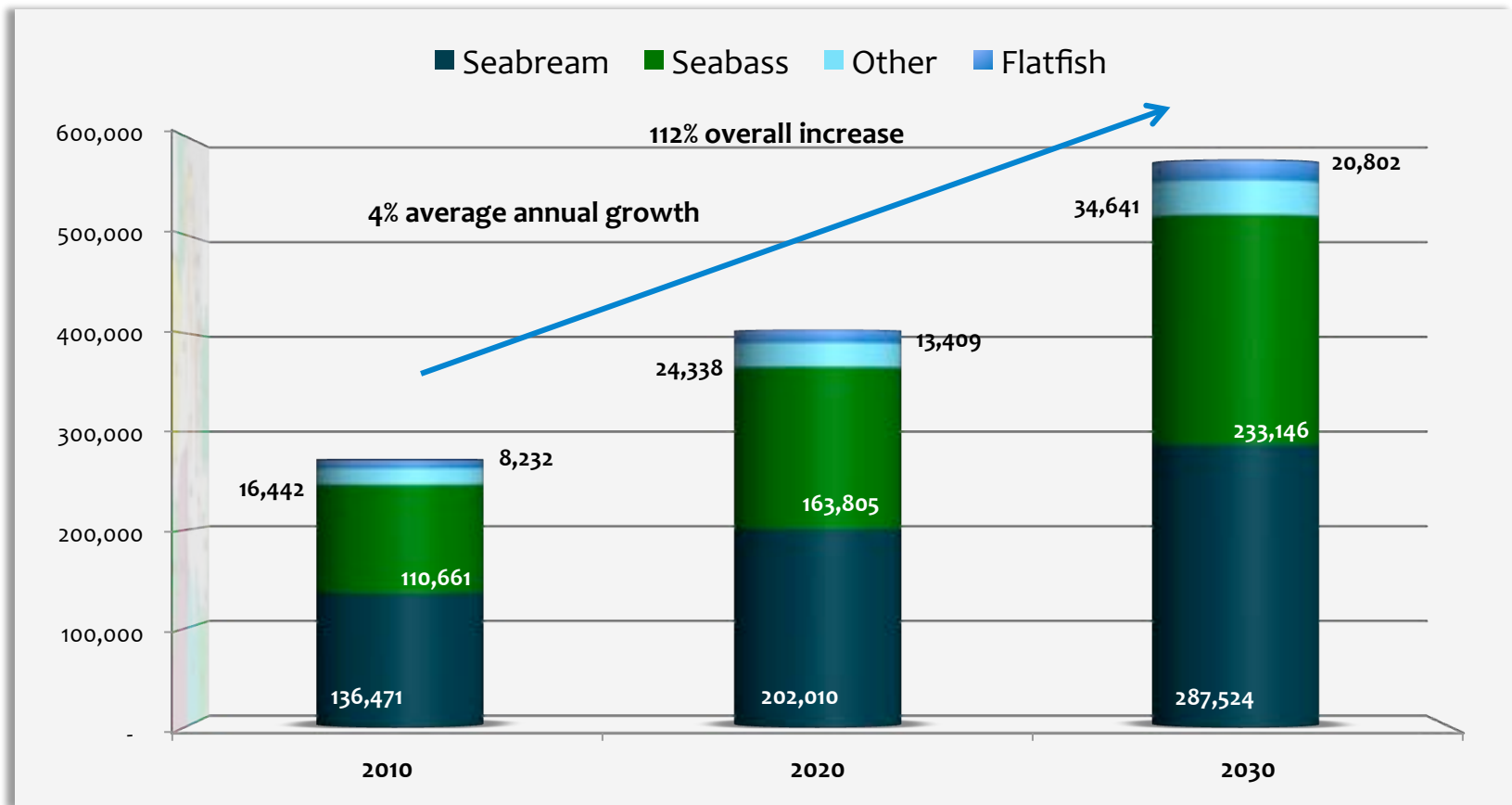
Increasing Concentration



Employment

- Sustainable prosperity in remote, rural communities
- 15,000 direct jobs of which 11,500 are on-site, farm employees
- 8,500 jobs indirectly in related industries:
 - feed production,
 - cage and net manufacturing,
 - processing,
 - services and support

Mediterranean Aquaculture Vision 2030



Mediterranean Aquaculture Vision 2030

- Production >600,000 tons of fish



- Feed demand increases by 200,000 tons



- Hatcheries to supply nearly 3 billion juveniles



- €2.7 billion ex-farm but €5 billion increase in total value



- 10,000 more jobs



- Total sea farm space of 2,100 hectares



EATiP Mediterranean Aquaculture Vision 2030

Vision 2030

- Production growth >100% = minimum 4%/year
- Higher expansion rates for meagre and sole
- FCR decreases to 1.2 (35% improvement)
- Aquaculture will diversify – functional additives, bio-energy (algae)
- Main species: seabass, seabream, sole, meagre, turbot
- Productivity/employee increases by 20%
- Juvenile survival increases by 20%



Sector Advantages



- Recognized health benefits of fish
- Mediterranean diet

>13.000 km of coastline



Race for Space



Challenges:

Policy & Legislative

- Lack of appropriate designated sites, maritime spatial planning and recognition of the industry as an equal-rights user

Aquaculture must be an equal competitor for access to space

- Regulations that are complicated, expensive to apply, and unevenly applied
 - Simplify the administrative burden of licensing
 - Promote investment by providing a stable, coherent and long-term legal status for the industry

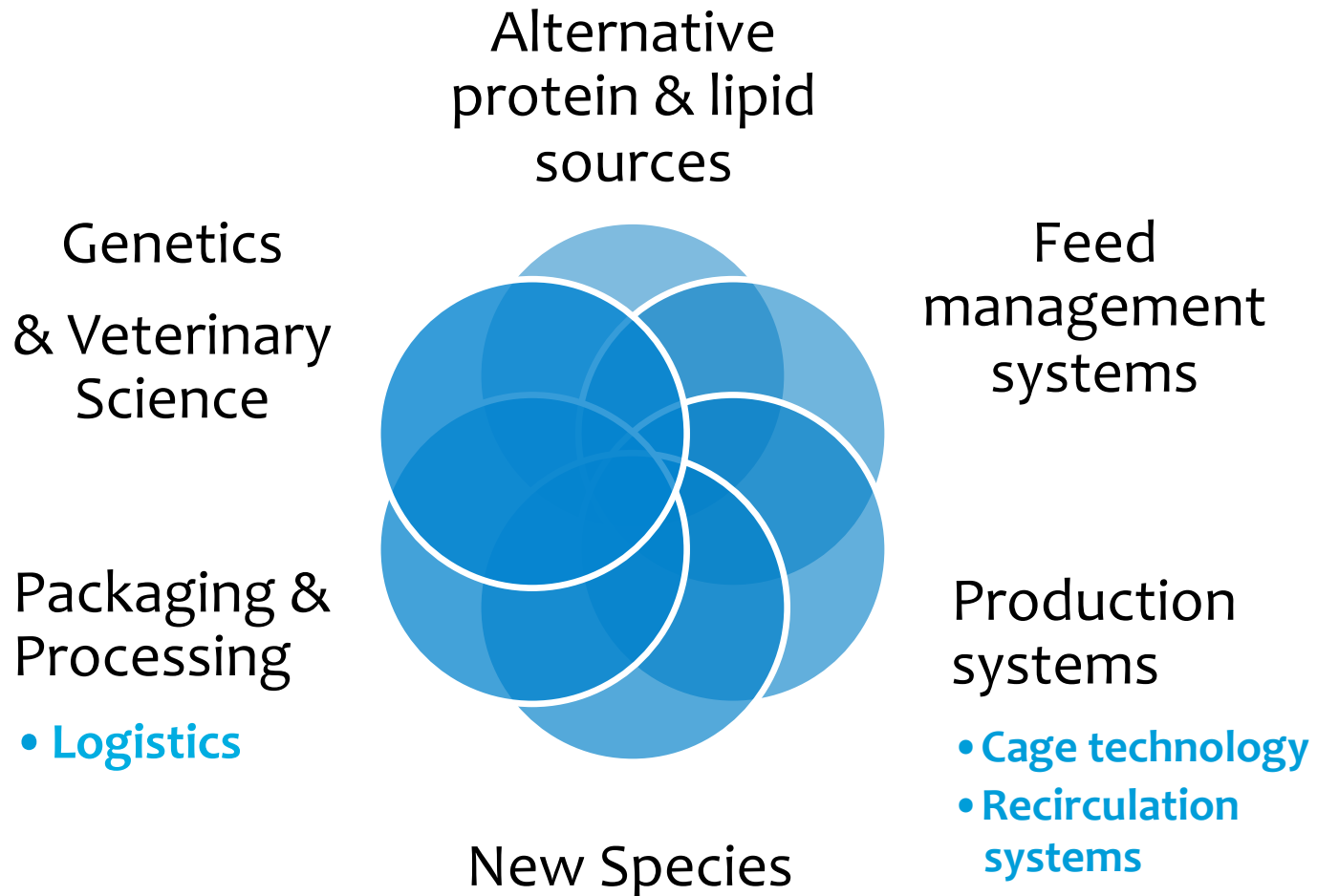
Level-playing field & improved governance

New Species



Scientific name	Common name	Successful rearing		Marketing
a. Sparidae		Reproduction	On-growing	
<i>Diplodus puntazzo puntazzo</i>	Sharpsnout seabream	✓	✓	Yes
<i>Pagrus pagrus</i>	Common seabream	✓	✓	Yes
<i>Dentex dentex</i>	Common dentex	✓	✓	Yes
<i>Pagellus bogaraveo</i>	Black spot seabream	✓	✓	Yes
<i>Pagellus erythrinus</i>	Common pandora	✓	✓	Yes
<i>Diplodus sargus sargus</i>	White seabream	✓	✓	Limited
<i>Lithognathus mormyrus</i>	Stripped seabream	✓	✓	Limited
<i>Diplodus vulgaris</i>	Common two banded seabream	✓	✓	No
<i>Pagellus acarne</i>	Axillary seabream	X	✓	Limited
<i>Sarpa salpa</i>	Salema	X	✓	No
<i>Oblada melamira</i>	Saddled seabream	X	✓	No
b. Sciaenidae				
<i>Sciaena umbra</i>	Brown meagre	✓	✓	Limited
<i>Umbrina cirrosa</i>	Shy drum	✓	✓	Limited
<i>Argyrosomus regius</i>	Meagre	✓	✓	Yes
c. Fast Growing species				
<i>Thunnus thynnus</i>	Atlantic blue fin tuna	✓	✓	Special case
<i>Seriola dumerili</i>	Greater amberjack	✓	✓	Yes
<i>Polyprion americanus</i>	Wreckfish	?	?	No

Sustainable Aquaculture Innovation



Challenges: The Market

- Consumer & Market responsiveness
- Data
- Communication

Quality of Mediterranean products

- Product form diversification

Competitiveness

Strategic level:

- ✓ Vision
- ✓ Long-term Planning



**Information
gathering**

Business level:

- ✓ Market Sensing
- ✓ Flexibility, Speed, Adaptation



**Market
positioning**

Operational level:

- ✓ Customer Linking
- ✓ Communication



**Satisfaction of
customers'
needs**

Environmental Sustainability

- Safeguarding the environment
- Adapting to climate change
- Promoting social acceptance

Long-Term Viability



Thank You!

