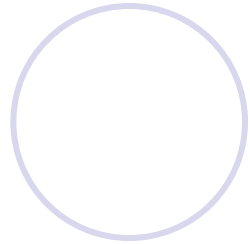




Overview of European Aquaculture

Courtney Hough
Federation of European
Aquaculture Producers



Goals of the FEAP

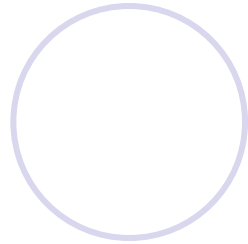
- To provide a forum for the National Associations that represent European Fish Farming
- To develop common opinions on issues of importance
- To communicate those opinions to the relevant authorities
- These opinions **MUST** be representative of the profession to be credible



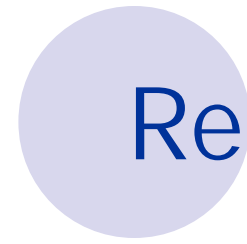
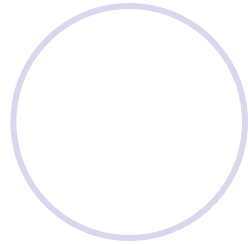
Representation of the FEAP

- The Federation is composed of National Aquaculture or Fish Farming Associations
- 31 Associations represent 21 European Nations





- Member of the EU Commission's Advisory Committee on Fisheries and Aquaculture
 - Active in the ACFA Working Groups on
 - Aquaculture
 - Markets
 - Issues of General Interest
- Member of the Confederation of European Agriculture (Observer to the Council of Europe)



Representation



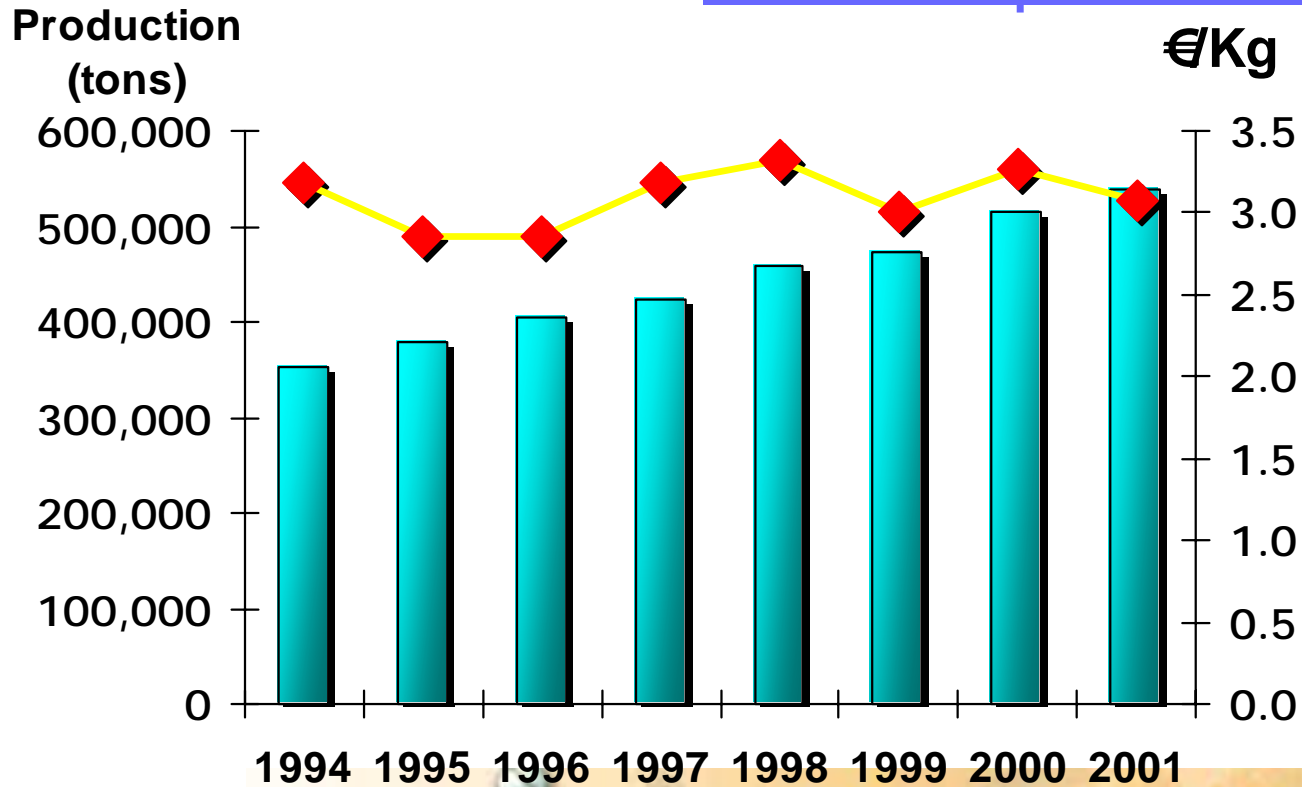
- Liaison Status with the Food & Agriculture Organisation of the United Nations (FAO)
 - Sub-Committee on Aquaculture of the Committee on Fisheries (COFI)
 - European Inland Fisheries Advisory Committee (EIFAC)
 - Aquaculture Committee of the General Fisheries Council of the Mediterranean (GFCM)
- Active participant in initiatives of interest to the European fish farming sector



Production Information

www.feap.info &

www.aquamedia.org



The Federation of European Aquaculture Producers

■ Total Production ◆ Average Value

european aquaculture



Global Fish Farming Development

Production
(tons)

Rest of World EU 15

25,000,000

20,000,000

15,000,000

10,000,000

5,000,000

0

Rest of the World 98% (1999)

APR = 10.4%

EU-15 2%

APR = 7.9%

1970

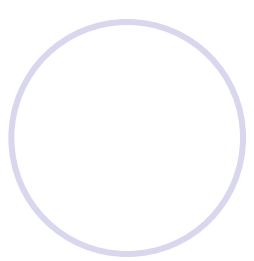
1975

1980

1985

1990

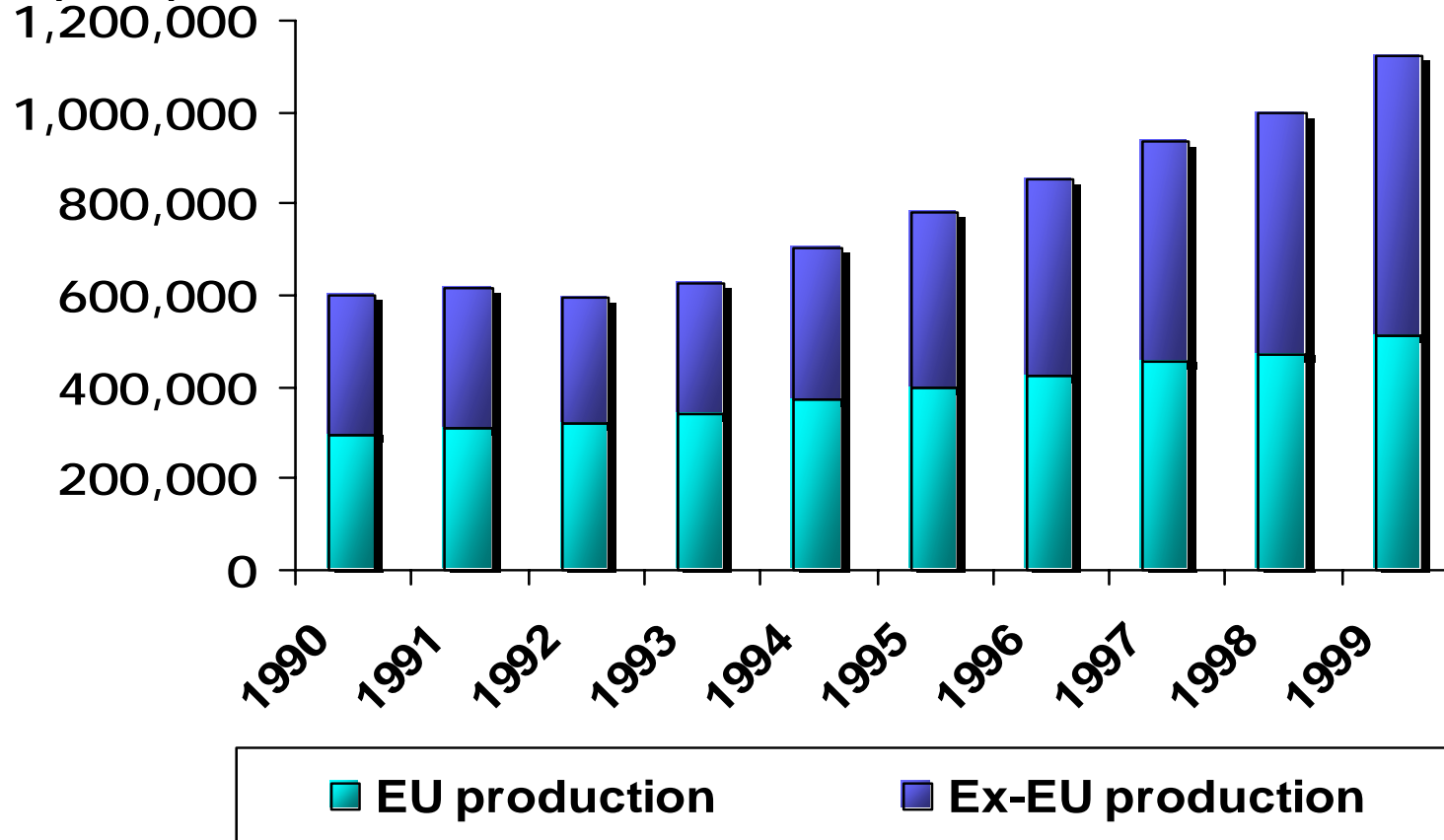
1995





Production of European Fish Farming

**Production
(tons)**





EU Fish Farming Development Production and Value

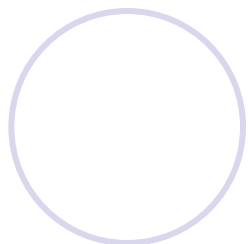
Production
(tons)

M€



57,000 tons in 1970
125,000 tons in 1980
300,000 tons in 1990
520,000 tons in 2000

~12% of EU fisheries landings
~23% of value of EU fisheries

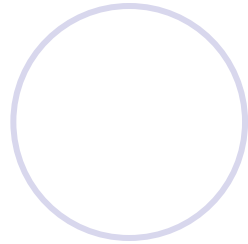


Accession effects on EU Fish Farming

GROUP	1997	1998	1999	2000	2001	2002
Carps	18,394	17,987	17,930	17,700	17,700	18,100
Catfish	2,050	2,400	3,000	2,750	2,750	2,250
Eels	7,893	10,338	10,890	10,820	9,980	8,985
Sturgeon	572	463	514	135	156	150
Tilapias	300	300	200	150	150	150
Trout	236,460	239,619	231,860	239,701	239,686	226,270
Grand Total	265,669	271,107	264,394	271,256	270,422	255,905

Difference	56,632	56,516	65,031	72,664	70,793	67,194
-------------------	---------------	---------------	---------------	---------------	---------------	---------------



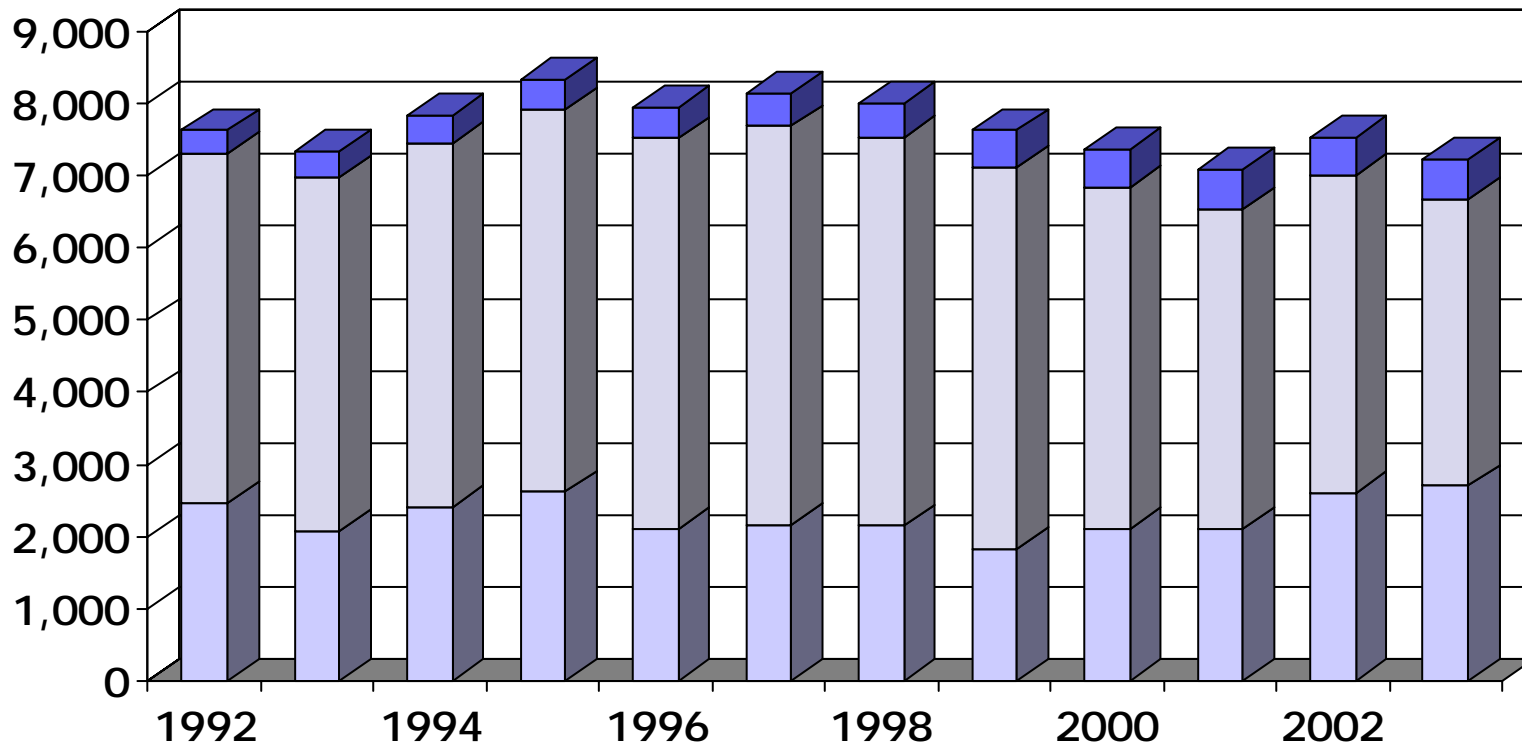


Accession effects on EU Fish Farming

- Major effect will be on freshwater fish farming - increased production of ~25%
 - Major species – carps/inland fisheries
 - Major market effect – limited to inland markets
- Marine species – low production effect
 - Major market effect – should open new markets for affordable products

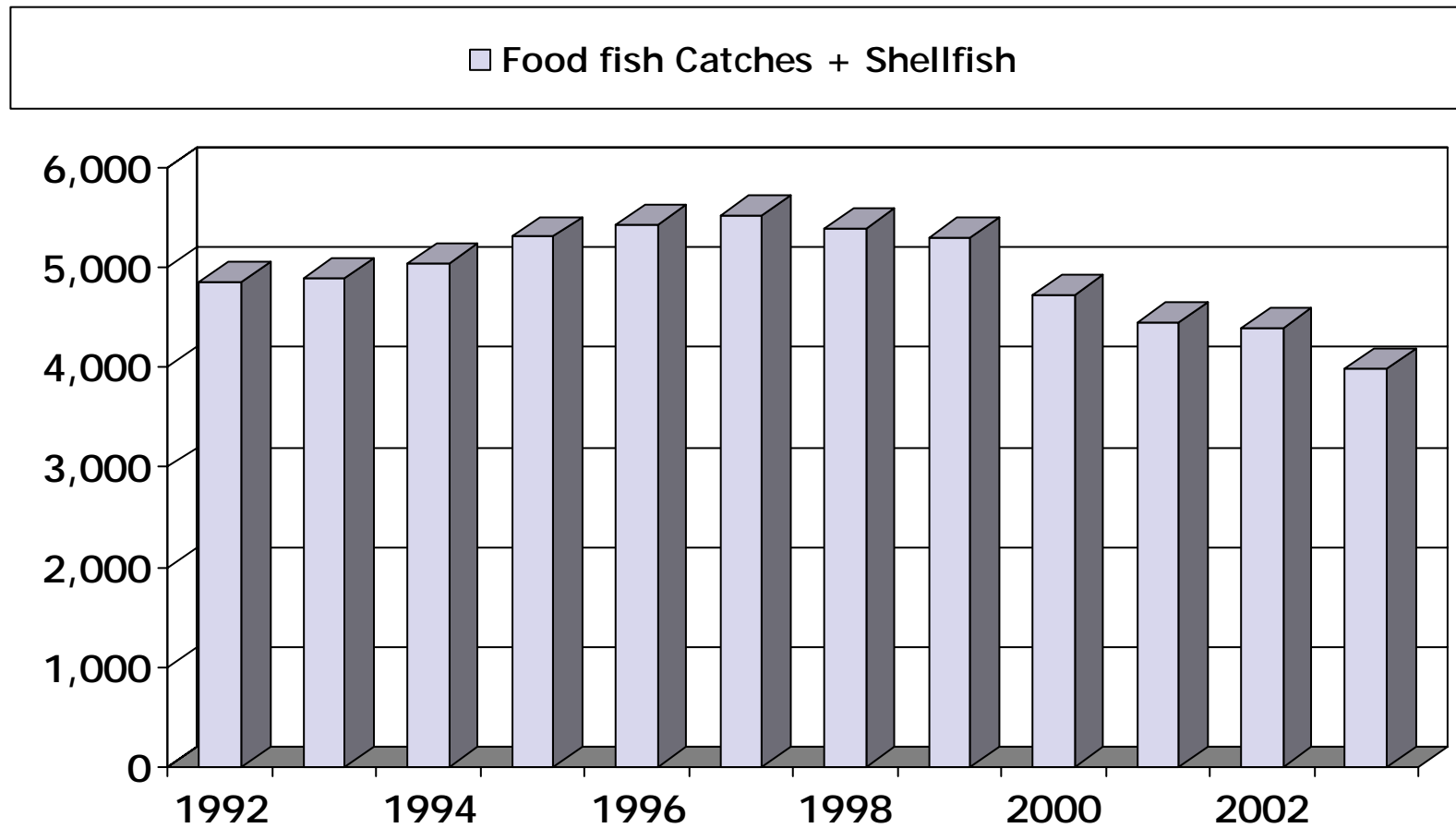


Fisheries and Fish Farming production in the EU



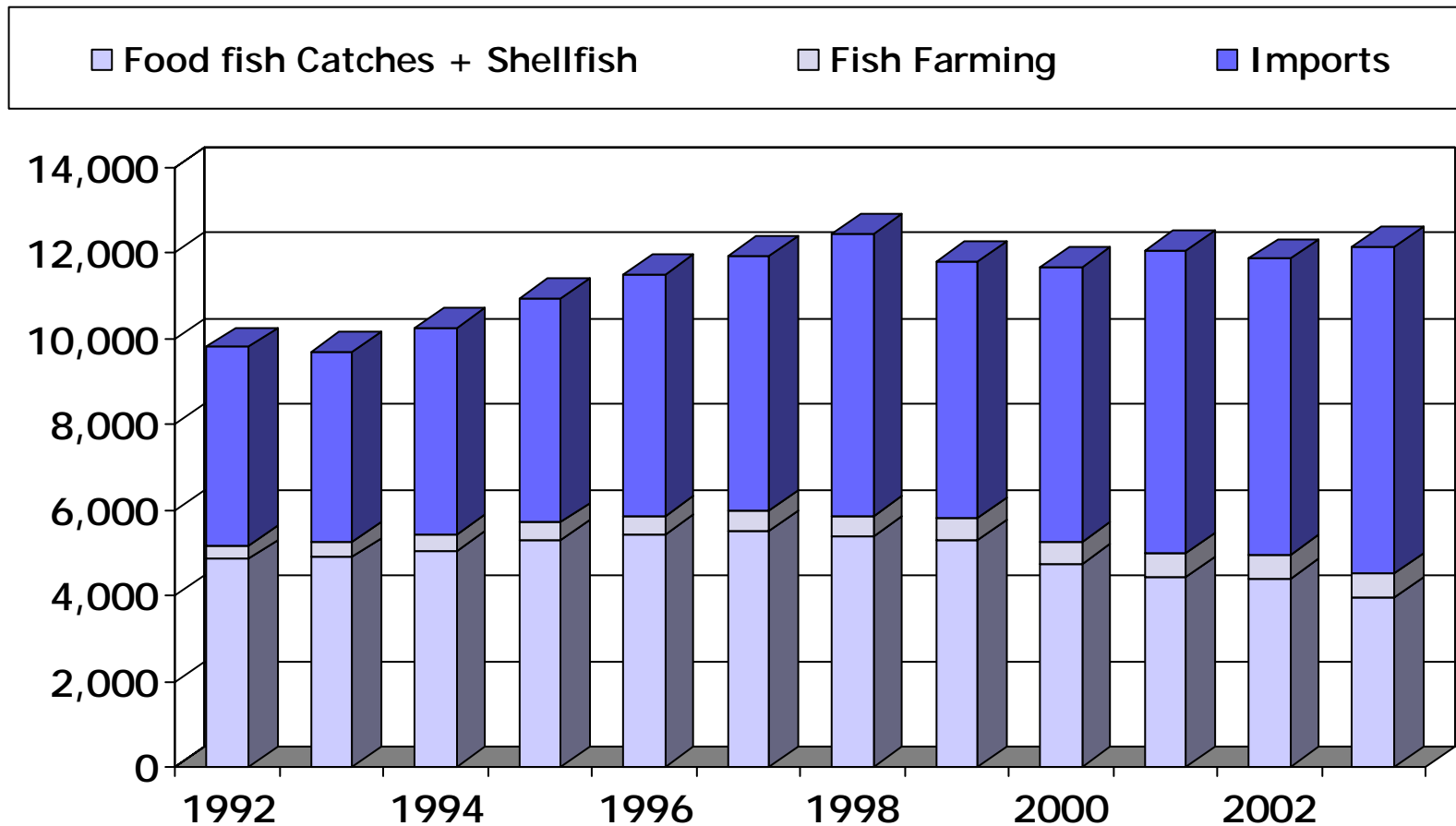


Fisheries and Fish Farming production in the EU





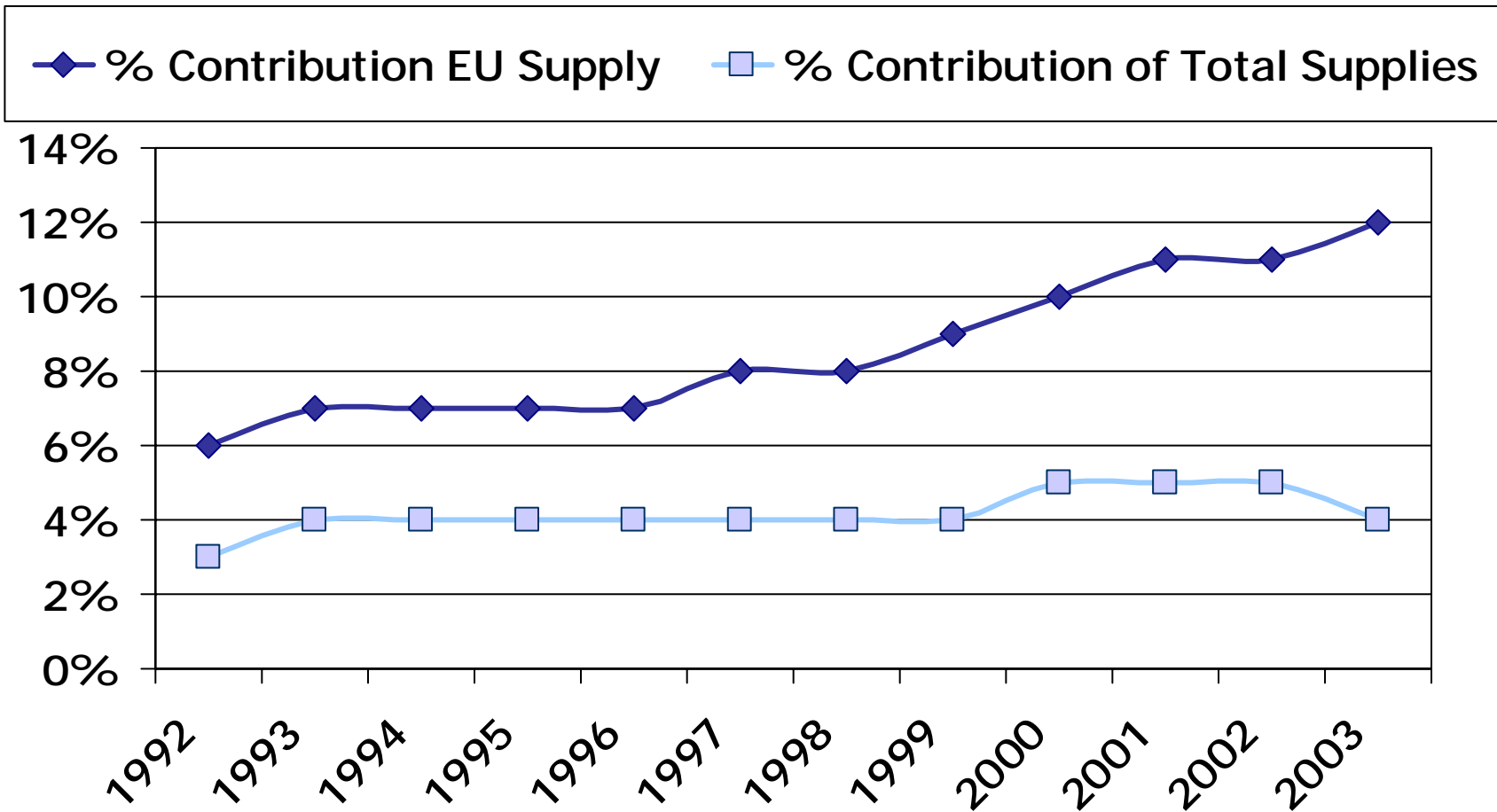
Fisheries and Fish Farming production in the EU



Imports = €8,100 million in 1999

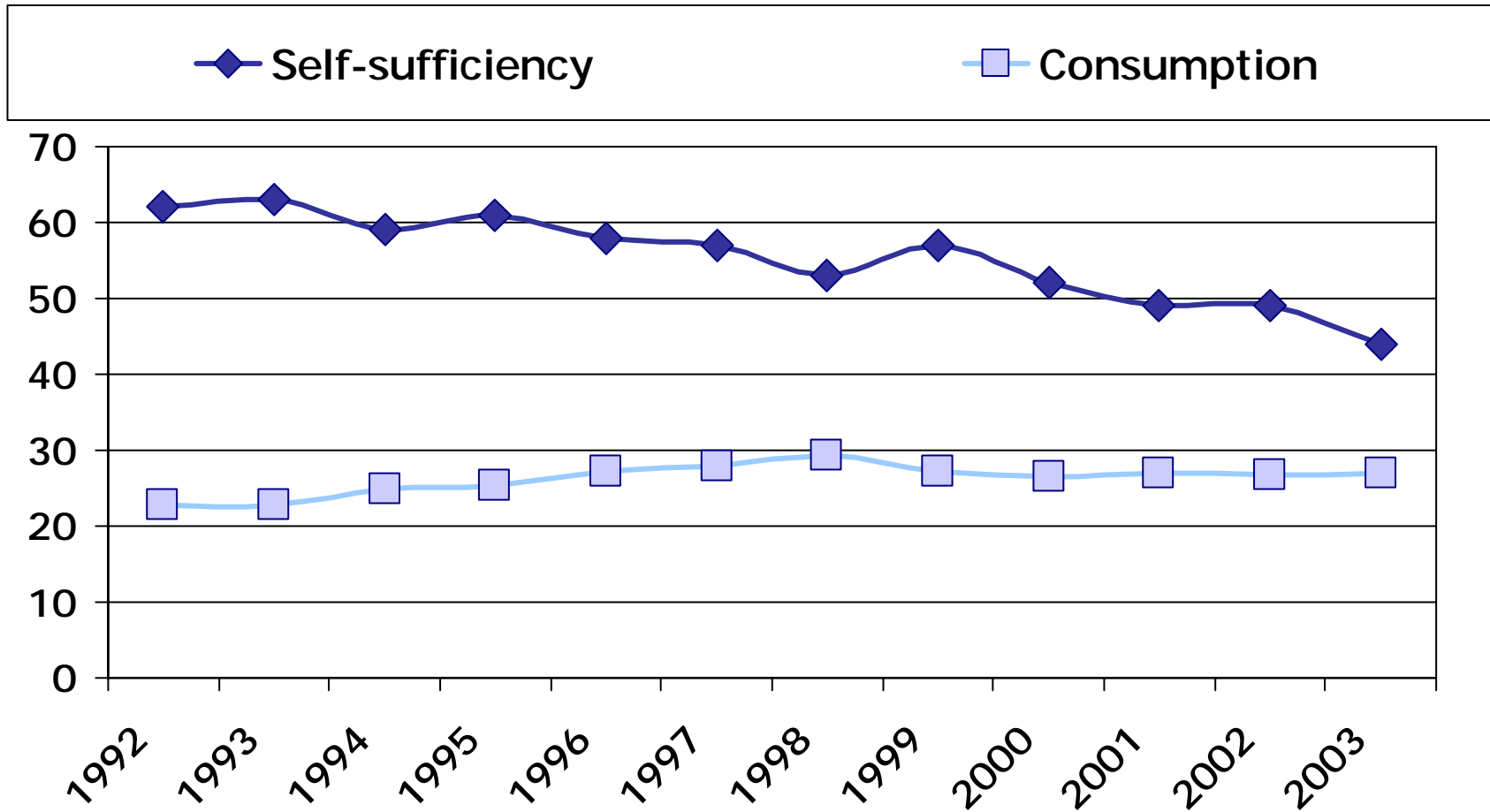


Contribution of EU Fish Farming



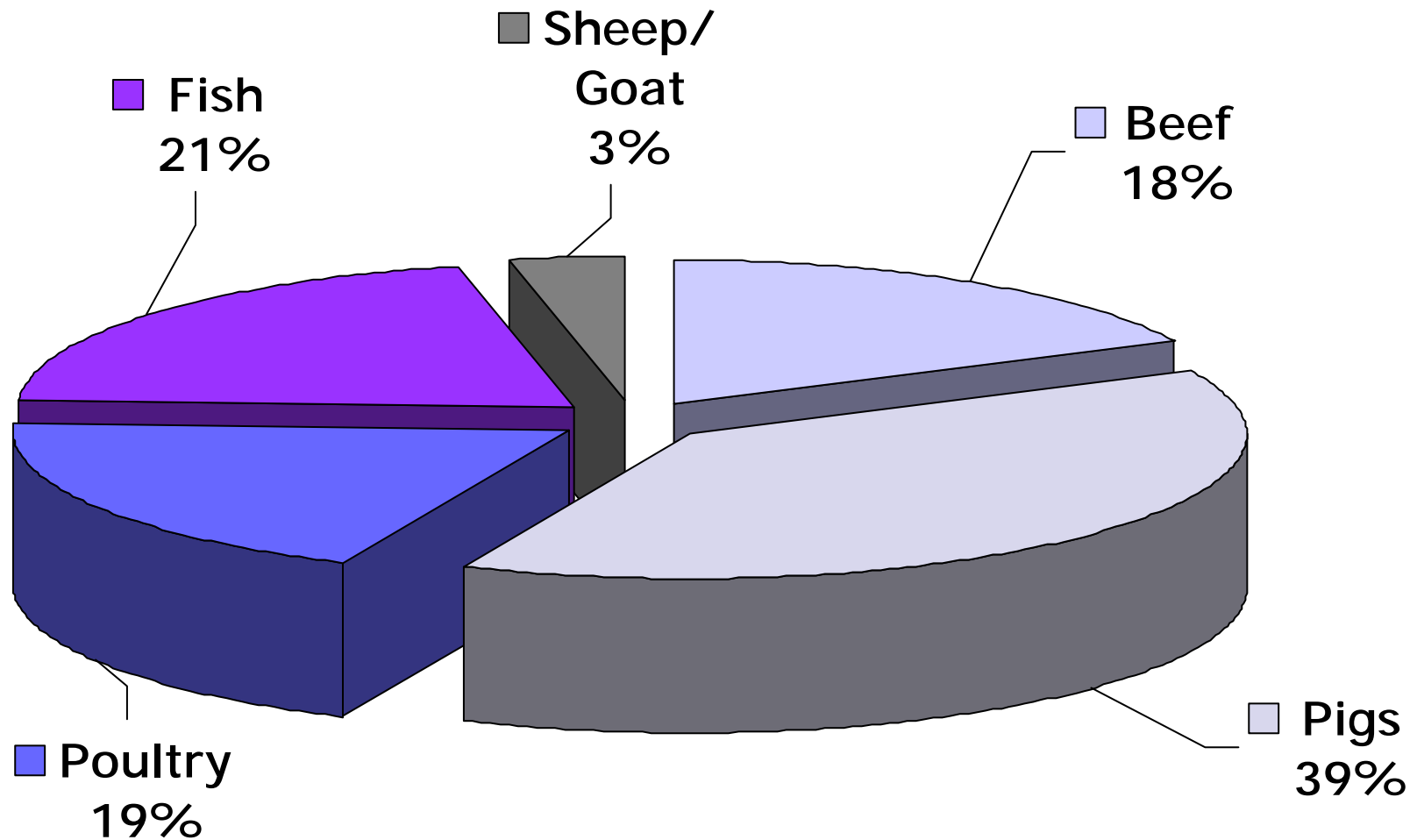


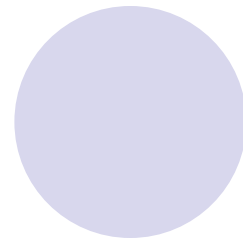
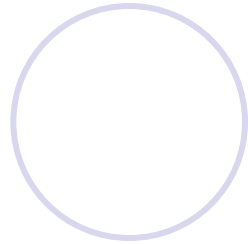
Contribution of EU Fish Farming





Meat consumption in the European Union

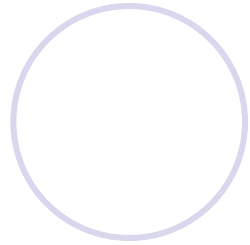




Governance



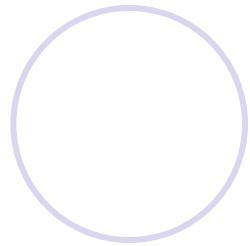
- Common Fisheries Policy
 - Governs Fisheries
 - TACs & Quotas
 - Governs Aquaculture
 - Fish Farming & Shellfish
 - Governs conditions for marketing
- >360 pieces of legislation affect European aquaculture
- Aquaculture sectoral growth affected



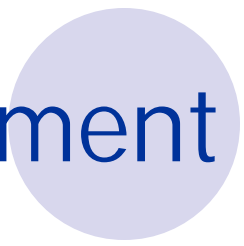
Sectoral Development



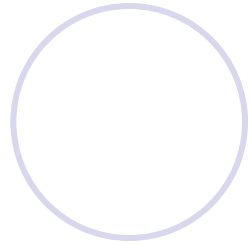
- Primary growth in fish farming
- Strongest development for
 - Salmon
 - Trout
 - Seabass
 - Seabream
- 'Minor' species
 - Turbot, eel, sturgeon, charr...



Sectoral Development

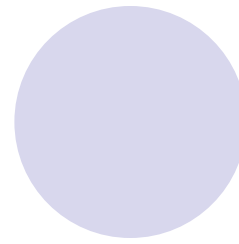
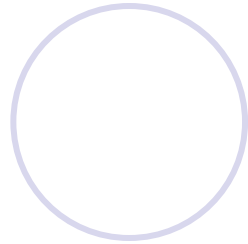


- Growth seen for high value species (low fisheries supplies...)
- Market demand existed
- Growth due to
 - Improved nutrition of stock
 - Improved engineering & husbandry
 - Improved productivity
 - Improved affordability (prices, productivity)



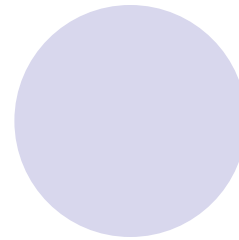
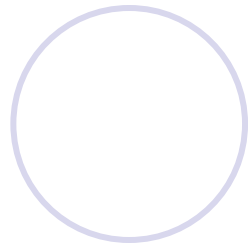
Market Development

- The market for fish exists (27kg/p)
- Dietary and preference changes
 - Convenience & price
- Concentration of sales (Multiples)
 - Quality
 - Safety
 - Traceability
- Purchase decision = value for money



- Farmed products are not as good as 'wild'
- 'Mad' fish
- 'Packed full of dangerous chemicals'
- 'Frankenfish'
- Visual pollution
- 'Farmed and Dangerous'

Increasing 'bolloitics'

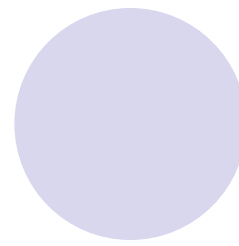
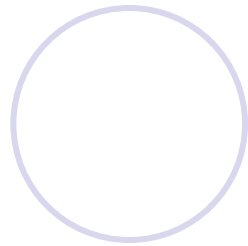


- Legitimate concerns are being addressed
 - Effects of escapes (Biodiversity)
 - Food safety issues (Contaminants)
 - Interactions (Effects of wastes...)
 - Availability/Replacement of fishmeals and oils
- Evident requirement for RTD



Efficiency: feed utilisation

- Wild fish: 5 to 10 kg of wild prey fish to produce 1 kg of live carnivorous fish (cod, hake, plaice, salmon, ...)
- Farmed fish: 2 to 4 kg of wild pelagic fish [under quotas] to produce 1 kg of live farmed carnivorous fish (salmon, trout, bass, bream, turbot...)
- 100 kg of feed mix (protein, carbohydrate, oil) gives as edible meat quantity (Slinde 97):
 - 65 kg salmon or
 - 20 kg chicken or
 - 13 kg pork

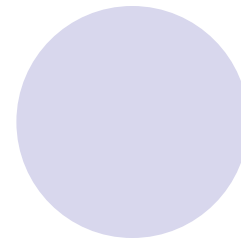
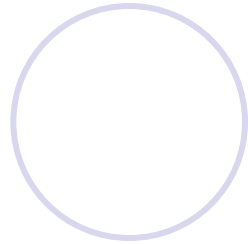


Food safety



● Dioxins and PCBs

- Fish meal, fish oil, fish feeds and fish flesh have limited dioxins levels (Directive 2001/102/EC)
- Control plans are enforced by and fish meal / oil suppliers (IFFO), feed manufacturers, professional organisations, Member States
- Control campaign by DGAL in France 2001 on trout
 - 58 samples
 - Dioxins: 0.17 pg TEQWHO/g live weight (legal limit 4 pg)
 - Dioxin like PCBs: 0.58 pg TEQWHO/g live weight



Food safety



- **GMO ingredients**

- General use of GMO free products in the main feed producing countries

- **Canthaxanthin pigment utilisation**

- Legal limits exclude any health hazard (actual: max 80 ppm in fishfeed)

- Strong trend toward Astaxanthin and natural pigment use



Responsibility & Sustainability

- Identifying challenges are not the only concern
- Clear, coherent development strategies are needed
- Understanding real impacts and identified causes
- Improved, appropriate regulatory frameworks are required
- Agreement on collective actions and responsible measures is required



Effects of Marine Aquaculture on Fisheries in Europe?

- Direct effect is minimal on EU fisheries (stocks)
- Market effects (Price reductions) influenced by
 - Imports
 - Supply chain (Processors, retailers)
 - Consumer demand/preferences
 - Fish farm & Fisheries production (EU and non EU)
 - Competitive products



Effects of Marine Aquaculture on Fisheries in Europe?

- Production of affordable fish is not a crime (Treaty of Rome)
- Growth potential of EU Fish farming is limited by several factors (Climate, geography, sites...)
- Off-shore production provides a solution
 - Panacea at present



Effects of Marine Aquaculture on Fisheries in Europe?

- If adequate stocks are available, fishing will always be more economic than farming
- Economics, market demand and the consumer will decide
- Working together will provide the best platform for the sustainability of both sectors