



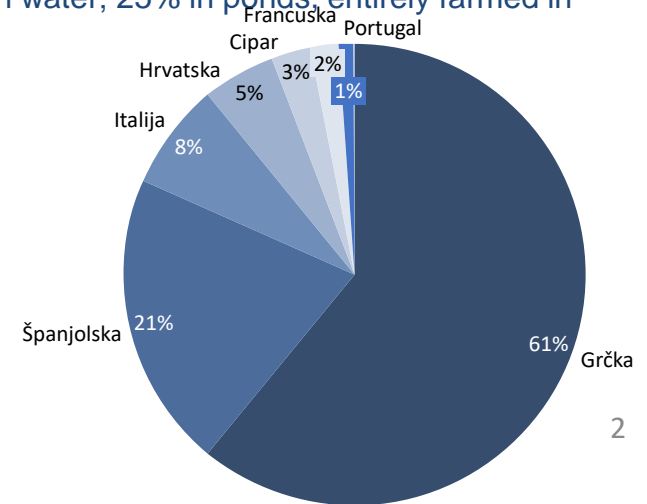
Perspectives in sustainable aquaculture

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CROATIAN AQUACULTURE POSITION



- Aquaculture has recorded a steady growth rate since 2007 (total over 70%)
- 4. in the EU on the production of bass and bream (Greece, Spain, Italy, RH)
- 3. in the EU on the production of tuna
- 72% of fish is farmed in sea and brackish waters and 28% in freshwater.
- The most important aquaculture methods are: 67% in floating cages, entirely farmed in sea and brackish water; 25% in ponds, entirely farmed in freshwater.





“Sustainable development is the management and conservation of the natural resource base and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations” (FAO, 1997).

DIMENSIONS OF SUSTAINABILITY

Sustainability is a complex concept which incorporates both spatial and temporal dimensions of environmental, economic and social parameters.



GROWTH IN AQUACULTURE PRODUCTION

- Increasing operative performance of the industry
- Efficient management of environmental resources
- Improving quality and consumption of fish and standards implementation
- Animal welfare
- Innovation and application of new technologies



CHALLENGES IN CROATIAN AQUACULTURE

Increasing operative performance of the industry

Improvement of fishery techniques, modern fish storage and processing technologies

In period 2014-2020 available 73 mln EUR for aquaculture

Operative program are accepted, measures and criteria defined

Currently 3 measures active

- a. Important investments in production in aquaculture
- b. Placing products on the market
- c. Innovation



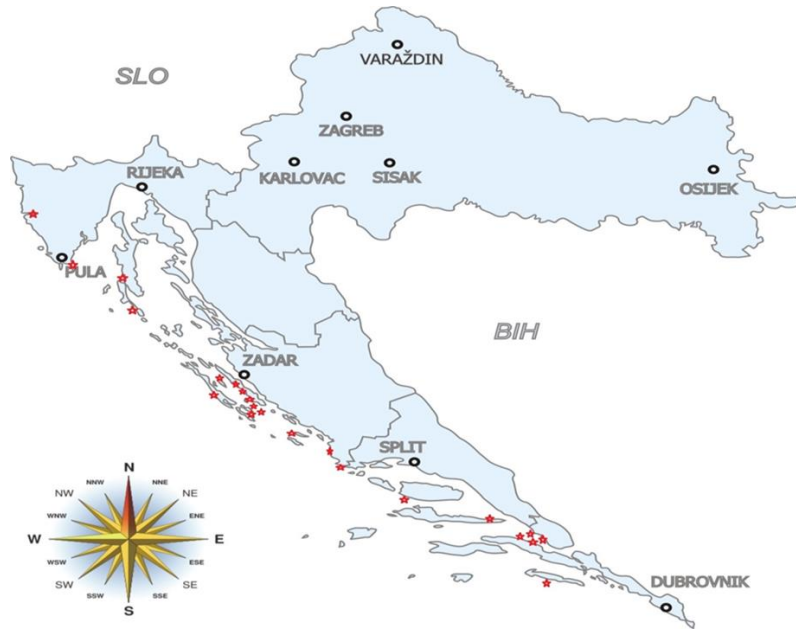


CHALLENGES IN CROATIAN AQUACULTURE

ENVIRONMENT – AQUACULTURE INTERACTIONS

- Minimize the interactions of aquaculture with other activities with better spatial planning through the establishment of allocated zone for aquaculture.
- Minimize environmental impact through better understanding of carrying capacity and implementing monitoring procedures.
- Spatial planning in line with goals of increasing aquaculture production. Simplifying the procedures for new concessions

CHALLENGES IN CROATIAN AQUACULTURE



Integrated Coastal Zone Management

- The largest number of farms for white fish and tuna fish are in Zadar region (central Adriatic).
- AZA (Allocated Zones for Aquaculture)
- Zadar County – AZA defined using Integrated Coastal Zone Management (ICZM)

CHALLENGES IN CROATIAN AQUACULTURE

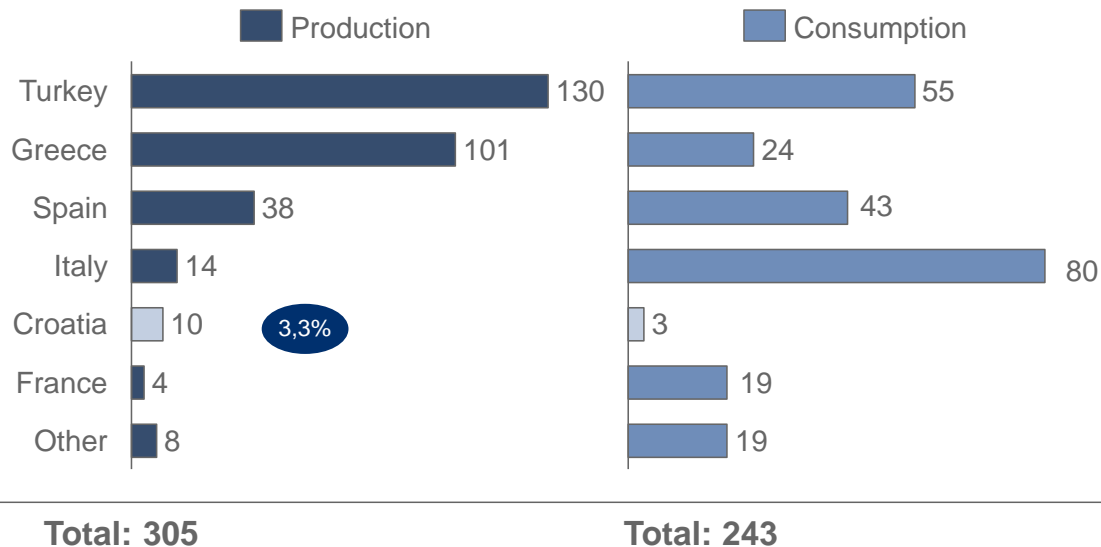
PROVIDING HIGH QUALITY AND SAFE FOOD

- Increase of consumption of aquaculture product, fish consumption among all age groups is lower than the EU average
- Certification and Traceability
- Organic aquaculture



INCREASING CONSUMPTION OF AQUACULTURE PRODUCT

EATIMATION OF PRODUCTION AND CONSUMPTION OF SEA BASS AND SEA BREAM IN EUROPEAN CONTEIES



IZVOR: FEAP report 2016 (MedAqua)

IZVOR: Kontaly monthly seabass and seabream report + procjena Cromaris



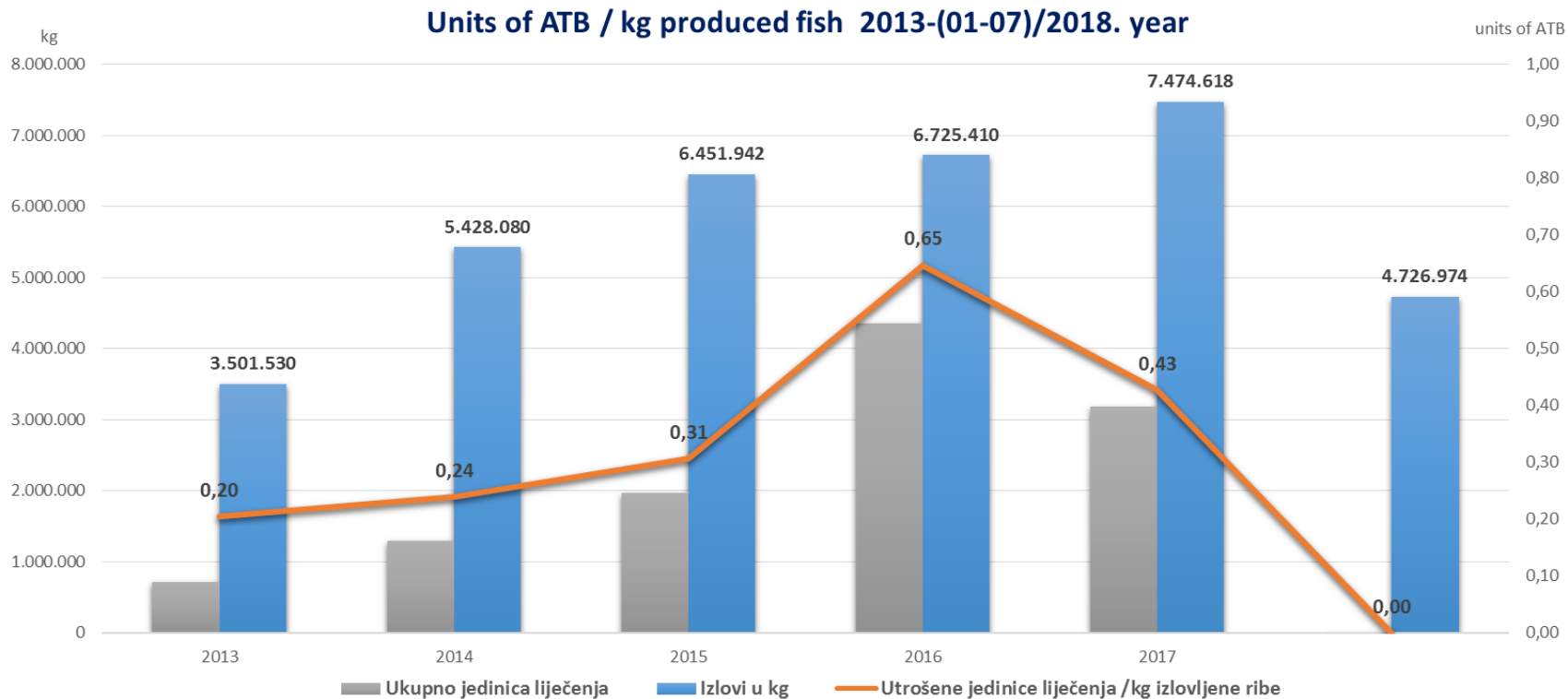
CHALLENGES IN CROATIAN AQUACULTURE

ANIMAL WELFARE

- These factors are grouped as:
abiotic and biotic factors and behavioural interactions, food and feeding, husbandry and management, and the impact of disease and disease control measures.
- Harvest should be well organized to reduce the duration and intensity of stress to an absolute minimum.

Need to select an appropriate method for effective stunning that reliably induces unconsciousness of the fish until killing

CHALLENGES IN CROATIAN AQUACULTURE

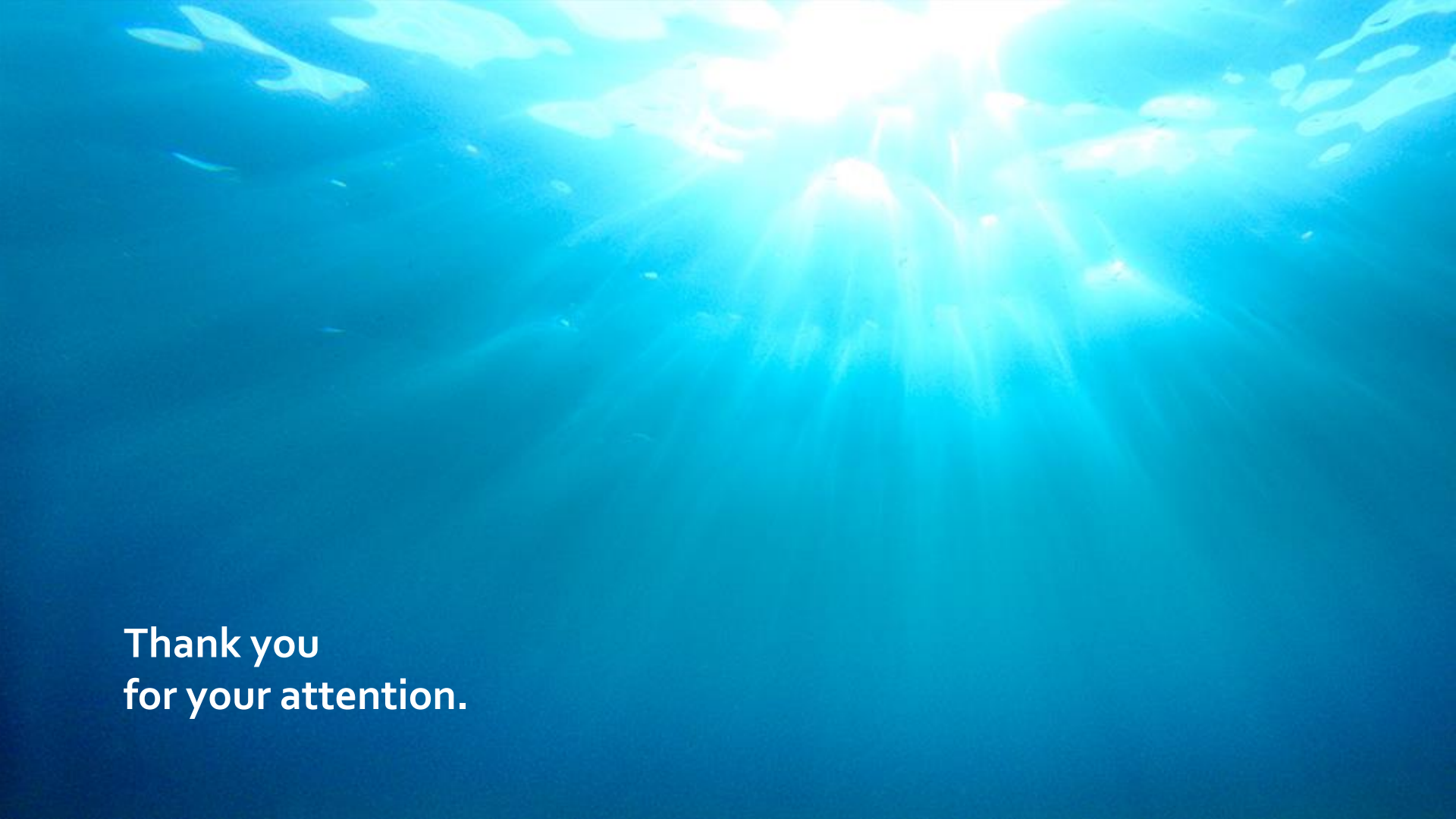


CHALLENGES IN CROATIAN AQUACULTURE

INNOVATION AND APPLICATION OF NEW TECHNOLOGIES

- Scientific research on:
 - a. new models to diversify production
 - b. preventive models for health protection
- Enhanced cooperation and coordination, knowledge and data sharing





Thank you
for your attention.