

Hrvatski veterinarski institut  
1933  
Zagreb

## IMPLEMENTATION OF EU AQUATIC ANIMAL HEALTH LAW IN EU CANDIDATE COUNTRY: THE CASE OF CROATIA

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### MAP OF CROATIA

**Aquaculture – 0.6 % total national production**  
**- 1.15 % total export**

Coastline – over 5800 km  
Territorial waters (sea & inland - 34000 km<sup>2</sup>)

### NATIONAL AQUACULTURE PRODUCTION IN 2011.

Species	Production (kg)
Sea bream & sea bass	5200
Tuna	2312
Mussels	2000
Oysters	70
Salmonids	2489
Cyprinids	3794

### FRESHWATER AQUACULTURE

**Cyprinid farms** – extensive to semiextensive farming (*Cyprinus carpio*, *Ctenopharyngodon idella*, *Aristichthys nobilis*, *Hypophthalmichthys molitrix*, *Esox lucius*, *Sander lucioperca*, *Silurus glanis*)  
Earthen ponds, 500 to 800 kg/ha

**Salmonid farms** – concrete ponds spring water, temp. ≥ 15°C  
*Onchorhynchus mykiss*, *Salmo trutta* m. *fario*, *Salvenilus fontinalis*

### MARICULTURE

Sea bass (*Dicentrarchus labrax*), Sea bream (*Sparus aurata*), Meagre (*Argyrosomus regius*), Sharpnouted sparus (*Diplodus puntazzo*), Dentex (*Dentex dentex*), floating cages different sizes and shapes; cultivation cycle from 15 to 24 months)



### CULTIVATION OF MOLLUSCS



Mediterranean mussel (*Mytilus galloprovincialis*)



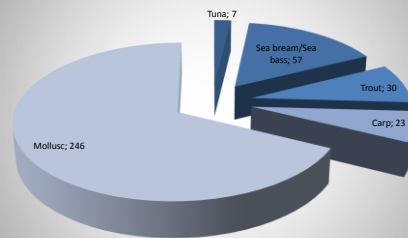
European flat oyster (*Ostrea edulis*)

### TUNA CULTIVATION (FATTENING)



7 farms, 3 still active, decrease of production (from 7000 tons to 2300 in 2011), catching of diff sizes of tuna throughout the Mediterranean according to ICCAT's quota; fattening from 6 to 12 months, fed by fresh or frozen fish

### AQUACULTURE (FISH AND MOLLUSCS FARMS)



## IMPLEMENTATION OF EU AAH LAW

1. Legal framework
2. Authorisation of APBs
3. Risk assessment
4. Surveillance
5. Disease status
6. Antimicrobial resistance

### 1. LEGAL FRAMEWORK

1. Veterinary Act (OG 41/07, 55/11);
2. Order on measures to protect animals from infectious and parasitic diseases and the financing thereof in 2013 (OG 3/13);
3. Ordinance on the notification of animal diseases (OG 62/11, 114/11).
4. Ordinance on animal health requirements for aquaculture animals and products thereof, and on the prevention and control of certain diseases in aquatic animals (OG 42/08, 36/10) which is fully aligned with **Council Directive (EC) No 88/2006** on animal health requirements for aquaculture animals and products thereof, and on the prevention and control of certain diseases in aquatic animals;
5. Ordinance on establishing the sampling plans and diagnostic methods for the detection and confirmation of the presence of the mollusc diseases Bonamiosis (*Bonamia ostreae*) and Marteiliosis (*Marteilia refringens*) (OG 142/08) which is fully aligned with **Commission Decision 2002/878/EC** establishing the sampling plans and diagnostic methods for the detection and confirmation of the presence of the mollusc diseases bonamiosis (*Bonamia ostreae*) and marteiliosis (*Marteilia refringens*).
6. Ordinance on sampling plans and diagnostic methods for the detection and confirmation of certain fish diseases (OG 142/08) which is fully aligned with **Commission Decision 2001/183/EC** laying down the sampling plans and diagnostic methods for the detection and confirmation of certain fish diseases and repealing Decision 92/532/EEC. (Text with EEA relevance);

7. Ordinance on establishing criteria for zoning and official surveillance following suspicion or confirmation of the presence of infectious salmon anemia (ISA) which is fully aligned with **Commission Decision 2003/466/EC** of 13 June 2003 establishing criteria for zoning and official surveillance following suspicion or confirmation of the presence of infectious salmon anemia (ISA).
8. Ordinance regarding conditions for the placing on the market and the import of aquaculture animals and products thereof and laying down a list of vector species (OG 5/10) which is fully aligned with **Commission Regulation (EC) No 1251/2008** of 12 December 2008 implementing Council Directive 2006/88/EC as regards conditions and certification requirements for the placing on the market and the import into the Community of aquaculture animals and products thereof and laying down a list of vector species.
9. Ordinance on approving national measures of certain member states for limiting the impact of certain diseases in aquaculture animals and wild aquatic animals (OG 98/11) which is fully aligned with **Commission Decision 2010/221/EU** of 15 April 2010 approving national measures for limiting the impact of certain diseases in aquaculture animals and wild aquatic animals in accordance with Article 43 of Council Directive 2006/88/EC

10. Ordinance on guidelines for the purpose of the risk-based animal health surveillance schemes (OG 88/10) which is fully aligned with **Commission Decision 2008/896/EC** of 20 November 2008 on guidelines for the purpose of the risk-based animal health surveillance schemes provided for in Council Directive 2006/88/EC.
11. Ordinance on requirements for quarantine of aquaculture animals (OG 58/12) which is fully aligned with **Commission Decision 2008/946** of 12 December 2008 implementing Council Directive 2006/88/EC as regards requirements for quarantine of aquaculture animals

## 2. AUTHORISATION OF APBs

- According to Directive 2006/88
- Recording obligation – traceability, good hygiene practice, animal health surveillance



## 3. RISK ASSESSMENT

- On all fish and mollusc farms, dispatch centres and purification centres
- Uniform approach
- Official controls are carried out accordingly

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## 4. TARGETED SURVEILLANCE PROGRAMMES IN 2010,2011,2012

- Based on the „Order on measures to protect animals from infectious and parasitic diseases and the financing thereof „ issued by ministry of Agriculture, Veterinary Directorate and published yearly in Official Gazette
- Aim of the program is to monitor disease distribution and prevalence on each farm/production area

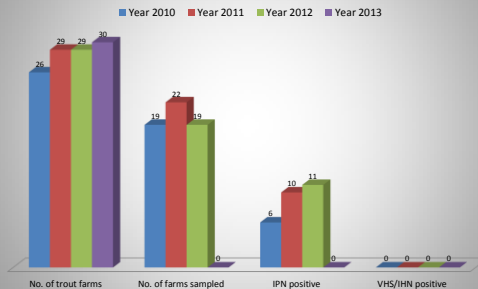
**Salmonid farms** - Viral Hemorrhagic septicemia, Infectious hematopoietic necrosis

**Cyprinid farms** - Koi herpes virus disease

**Molluscs farms/ molluscs production areas** - Infection with *Bonamia ostreae* and infection with *Marteilia refringens*

## 5. DISEASE STATUS 1

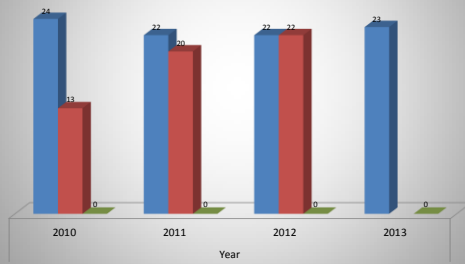
Results of VHS Surveillance programs



## 5. DISEASE STATUS 2

Results of KHV Surveillance programs

■ No. of carp farms ■ No. of farms sampled ■ KHV positive



## 5. DISEASE STATUS 3

No.	Results of mollusc surveillance programs		Martellosis			Bonamiosis			
	Production area	No. of zones	No. of farms	2010	2011	2012	2010	2011	2012
1	Limski zaljev	4	8	neg	pos	neg	neg	neg	n/s
2	Malostonski zaljev	14	166	neg	neg	neg	neg	neg	neg
3	Medulinski zaljev	0	3	neg	pos	n/s	n/a	n/a	neg
4	Modrić-Seline	0	5	neg	neg	neg	n/a	n/a	n/a
5	Novigradsko more	2	4	neg	neg	n/s	n/a	n/a	n/a
6	Pirovački zaljev	0	2	neg	n/s	neg	n/a	n/a	n/a
7	Raški zaljev	0	7	pos	pos	neg	n/a	n/a	n/a
8	Savudrijska vala	0	3	pos	pos	neg	n/a	n/a	n/a
9	Ušće rijeke Krke	6	33	neg	neg	n/s	n/a	n/a	n/a
10	Uvala Budava	0	3	pos	pos	n/s	n/a	n/a	n/a
11	Uvala Sobra na Mljetu	0	1	neg	neg	neg	n/a	n/a	n/a
12	Uvala Stara Povljana	0	2	neg	n/s	neg	neg	neg	neg
13	Vabriga	2	9	neg	pos	neg	n/a	n/a	n/s

### Surveillance programs for aquaculture animal diseases in 2013

1. Program for surveillance of aquatic animals susceptible to Koi herpes virus disease,
2. Program for surveillance of aquatic animals susceptible to VHS/IHN
3. Program for surveillance of aquatic animals susceptible to Infection with *Marteilia refringens*
4. Program for surveillance of aquatic animals susceptible to Infection with *Bonamia ostreae*
5. Program for surveillance of antimicrobial resistance (new)
  - Baseline study on prevalence of *Yersinia ruckeri* and *Flavobacterium psychrophila* and their resistance to more often used antimicrobials in salmonids
  - Baseline study on prevalence of *Listonella anguillarum* and *Tenacibaculum maritimum* and their resistance to more often used antimicrobials in marine cultivated fish (sea bass and sea bream)







THANK YOU FOR YOUR ATTENTION