



**Ministry of Agriculture
Veterinary and Food Safety Directorate**

**Declaration of KHV disease free status
*Croatia***



SCoPAFF, January 2015

Legislative framework

- **Veterinary Act (OG 82/13, 148/13);**
- **Order on measures to protect animals from infectious and parasitic diseases and the financing thereof in 2010 (OG 7/10);**
- **Order on measures to protect animals from infectious and parasitic diseases and the financing thereof in 2011 (OG 1/11);**
- **Order on measures to protect animals from infectious and parasitic diseases and the financing thereof in 2012 (OG 17/12);**
- **Order on measures to protect animals from infectious and parasitic diseases and the financing thereof in 2013 (OG 3/13);**
- **Order on measures to protect animals from infectious and parasitic diseases and the financing thereof in 2014 (OG 160/13);**
- **Ordinance on the notification of animal diseases (OG 135/14).**
- **Ordinance on animal health requirements for aquaculture animals and products thereof, and on the prevention and control of certain diseases in aquatic animals (OG 132/14) 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;**
- **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 of 22 February 2001 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);**
- **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.**

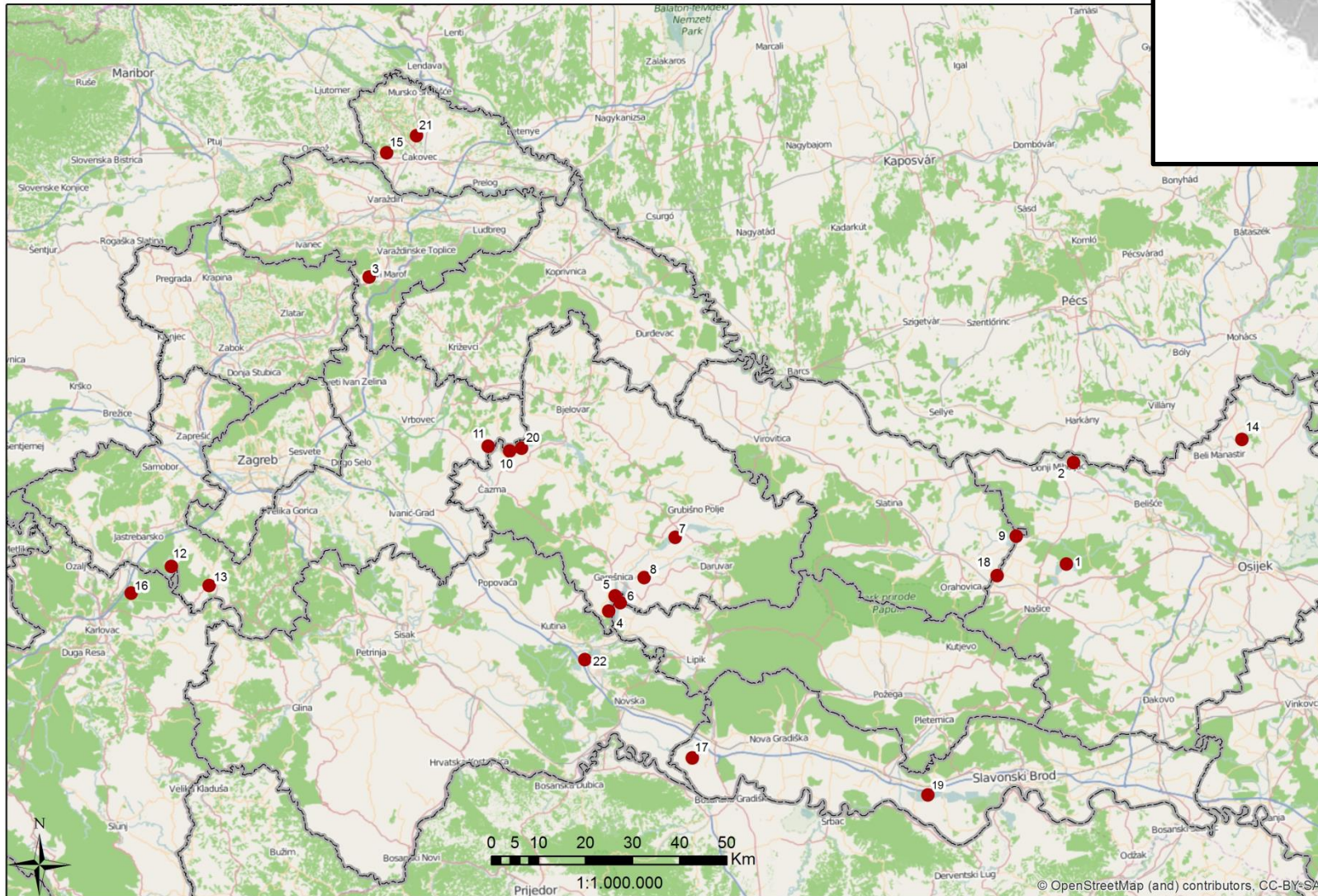
Aquaculture production bussineses

- **22 authorised farms**
- **Authorisation conducted by vet. inspectors, it is site specific**
- **Records of mortalities, movements**
- **Biosecurity plans**

Targeted surveillance

- During 2010., 2011., 2012., 2013. and 2014. targeted surveillance program have been conducted on fish farms with susceptible species to Koi herpes virus disease. Purpose of targeted surveillance programs on KHV is to declare disease free status in Croatia.
- The sampling scheme used is 1 inspection per year, to be carried out after water temperatures of 20°C have been reached. At least 30 fish were sampled during that inspection, according to the methodology described in Chapter 2.3.6 of the 2014 OIE Manual of Diagnostic Tests for Aquatic Animals. This scheme was conducted for at least 2 years on each farm.
- Sampling and clinical inspection of farms is conducted by authorized veterinarians. Official controls are conducted once per year on all farms by veterinary inspectors.

Geographical distribution of carp farms in Croatia



Overview of 5 year targeted surveillance

TABLE 1.

| No. | Farm number | Farm | Number of animals sampled - 2010 | Number of animals sampled - 2011 | Number of animals sampled-2012 | Number of animals sampled - 2013 | Number of animals sampled - 2014 |
|-----|-------------|---------------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------------------------|----------------------------------|
| 1 | 2 HR 0044 | MIAGRO d.o.o. | 30 | 30 | 30 | 30 | 30 |
| 2 | 2 HR 0109 | Ribnjak d.o.o. | 30 | 30 | 30 | 30 | 30 |
| 3 | 2 HR 0138 | POLJOPRIVREDNA ZADRUGA "SLOGA" | 30 | 30 | 30 | 30 | 30 |
| 4 | 2 HR 0145 | RIBA D.D. KANIŠKA IVA | 30 | 30 | 30 | 30 | 30 |
| 5 | 2 HR 0146 | RIBA D.D. KANIŠKA IVA | not sampled | 30 | 30 | 30 | 30 |
| 6 | 2 HR 0151 | Ribnjačarstvo poljana d.d., | 30 | 30 | 30 | 30 | 30 |
| 7 | 2 HR 0152 | Ribnjačarstvo Končanica d.d. | 30 | 30 | 30 | 30 | 30 |
| 8 | 2 HR 0173 | POLJODAR TIM | 30 | 30 | 30 | 30 | 30 |
| 9 | 2 HR 0177 | PP ORAHOVICA | 30 | 30 | 30 | 30 | 30 |
| 10 | 2 HR 0185 | Ribnjak 1961 d.o.o. | not sampled | 30 | 30 | 30 | 30 |
| 11 | 2 HR 0186 | RIBNJAČARSTVO DUBRAVA d.o.o. | 30 | 30 | 30 | 30 | 30 |
| 12 | 2 HR 0191 | IHOR PARK | 30 | 30 | 30 | 30 | 30 |
| 13 | 2 HR 0257 | POKUPJE d.o.o. | 30 | 30 | 30 | 30 | 30 |
| 14 | 2 HR 0262 | MAKLER d.o.o. | not sampled | not sampled | 30 | 5 | 4 |
| 15 | 2 HR 0269 | Damir Kirić, Črečan 82, 42306 Macinec | not sampled | 30 | 30 | 30 | 30 |
| 16 | 2 HR 0270 | RIBNJACI KUPA d.o.o. | 30 | 30 | 30 | 30 | 30 |
| 17 | 2 HR 0297 | RIBNJACI AURORA d.o.o. | not sampled | 30 | 30 | 30 | 30 |
| 18 | 2 HR 0305 | OSILOVAC d.o.o. | not sampled | not sampled | 30 | 30 | 30 |
| 19 | 2 HR 0311 | STARI RIBNJAK D.O.O. | not sampled | 30 | 30 | 30 | 30 |
| 20 | 2 HR 0314 | RIBNJAK ŠTEFANJE d.o.o. | not sampled | 30 | 30 | 30 | 30 |
| 21 | 2 HR 0326 | RIBNJACI d.o.o. | 30 | 30 | 30 | 30 | 30 |
| 22 | 2 HR 0355 | Hrvatske šume doo | not sampled | not sampled | 30 | 30 | 30 |

National reference laboratory

- The national reference laboratory for aquatic animal diseases is the **Croatian Veterinary Institute Zagreb** - Department for Pathology, Laboratory for Fish Pathology and Diagnostics. Laboratory participates in proficiency tests organized by EC Reference laboratory for Mollusc Diseases and EC Reference Laboratory for Viral Fish Diseases. The laboratory carried out all analyses.

Diagnostic methods and laboratory examination

- **Clinical observation** of delivered fish sample and looking for typical symptoms like gill necrosis, sunken eyes, pale patches on the skin, sandpaper-like skin texture. Post mortem examination for adhesions in the body cavity, enlargement of internal organs.
- **Cultivation of virus on CCB cell line.** Gills, anterior kidney and spleen are sampled (5 animals are pooled per sample), homogenized and inoculate on 24 hours cell cultures.
- **PCR** is performed from the tissue material. Gills and anterior kidney are target organs and tissues of two animals are pooled for one sample. PCR protocol is trying to detect TK gene according to Bercovier et al. 2005.

Disease reporting

- The reporting of increased mortality in animals has been in place in Croatia for more than 20 years. The reporting of increased unexplained mortality and/ or suspicion/confirmation of the presence of KHV has been mandatory in Croatia since March 11, 2009.

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Thank you for your attention!