

EURL for Fish and Crustacean Diseases

WORK PROGRAMME of EURL for

FISH AND

CRUSTACEAN

DISEASES

PERIOD: 2019/2020

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INTRODUCTION

(Regarding relevant regulations and functions)

The research group for Fish and Shellfish Diseases at DTU Aqua has since 1994 been designated as the EU reference laboratory for fish diseases. From July 2018 the functions and duties were expanded to also include crustacean diseases. The following proposal for a two year Work Programme for 2019 and 2020 has been developed for the combined EURL for Fish and Crustacean Diseases, based on the function and duties of the European Union Reference Laboratories given in council directive 2006/88/EC annex VI, PART I.

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Regulation (EU) 625/2017 Art 94(2):

European Union reference laboratories designated in accordance with Article 93(1) shall be responsible for the following tasks insofar as they are included in the reference laboratories' annual or multiannual work programmes that have been established in conformity with the objectives and priorities of the relevant work programmes adopted by the Commission in accordance with Article 36 of Regulation (EU) No 652/2014:

(taking into account Art 147 of (EU) 625/2017)

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TO ENSURE AVAILABILITY AND USE OF HIGH QUALITY METHODS AND TO ENSURE HIGH QUALITY PERFORMANCE BY NRLs.

Please, provided activities related to Regulation (EU) 2017/625:
(Number of Sub-activity boxes can be adjusted by EURL)

- *Art. 94.2.a Providing national reference laboratories with details and guidance on the methods of laboratory analysis, testing or diagnosis, including reference methods.*
- *Art. 94.2.b Providing reference materials to national reference laboratories*
- *Art. 94.2.c Coordinating the application by the national reference laboratories and, if necessary, by other official laboratories of the methods referred to in point (a), in particular, by organising regular inter-laboratory comparative testing or proficiency tests and by ensuring appropriate follow-up of such comparative testing or proficiency tests in accordance, where available, with internationally accepted protocols, and informing the Commission and the Member States of the results and follow-up to the inter-laboratory comparative testing or proficiency tests.*
- *Art. 94.2.l Where relevant for their area of competence, cooperate among themselves and with the Commission, as appropriate, to develop methods of analysis, testing or diagnosis of high standards.*

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Sub-activity 1.1 (*Annual workshop fish diseases*)

Objectives: To ensure knowledge dissemination and sharing between the Member State NRLs on existing and emerging fish diseases and to agree on the future priorities of the EURL, by holding the 23rd and 24th annual workshop of the National Reference Laboratories (NRLs) for fish diseases in 2019 and 2020, respectively.

Description: These workshops are organised as annual event and all Member State NRLs are strongly recommended to participate in them, as it is an important opportunity to be updated on the newest scientific knowledge of fish pathogens, diagnostics, legislation, epidemiology etc. Several talks of high scientific standard will be given and discussions at group and plenum level will be facilitated during the two days of the workshop.

Expected Output: Successful preparation and completion of the 23rd and 24th annual workshop comprising two full days in May 2019 and 2020. Based on previous experience it is expected that 50 participants will attend the workshop including EU Member States, associated countries and invited speakers. From the EURL team six members will attend the workshop full time. A technical and financial report of the workshops will be produced. The technical reports will contain abstracts and minutes from all presentations and discussions and will after acceptance be made publicly available through the EURL website.

Duration: The workshop is to be held ultimo May 2019 and 2020. Preparation in February – April and finalizing of the reports in May – August.

Sub-activity 1.2 (*Annual workshop crustacean diseases*)

Objectives: To ensure knowledge dissemination and sharing between the Member State NRLs on existing and emerging crustacean diseases and to agree on the future priorities of the EURL, by holding the 10th and 11th annual workshops of the National Reference Laboratories (NRLs) for crustacean diseases in 2019 and 2020, respectively.

Description: These workshops will be held back-to-back with the Annual Workshops on Fish Diseases. It is the first time DTU Aqua will host these workshops, since we were designated as the EURL for crustacean diseases in July 2018. We will continue the numbering of the workshop from the earlier EURL for Crustacean Diseases at Cefas, and these workshops will therefore be the 10th and 11th Annual Workshop of the NRLs for Crustacean Diseases. All Member State NRLs are strongly recommended to participate, as it is an important opportunity to be updated on the newest scientific knowledge of crustacean pathogens, diagnostics, legislation, etc. Several talks of high scientific standard will be given and discussions at group and plenum level will be facilitated during the one day workshop.

Expected Output: Successful preparation and completion of the annual workshops comprising one full day in May 2019 and 2020 back-to-back with the Annual Workshops of the NRLs for Fish Diseases. Based on previous experience it is expected that 20 participants will attend the workshop including EU member states, associated countries and invited speakers. From the EURL team 4 members will attend the workshop full time. A technical and financial report of the workshops will be produced. The technical reports will contain abstracts and minutes from all presentations and discussions and will after acceptance be made publicly available through the EURL website.

Duration: The workshop is to be held ultimo May 2019 and 2020. Preparation in February – April and finalizing of the reports in May – August.

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Sub-activity 1.3 (*Scientific working groups*)

Objectives: To ensure that fast and reliable scientific advice on specific topics related to listed and emerging diseases and to legislative issues, is provided by organising expert meetings in order to solve arising challenges in EU.

Description: In case of critical fish or crustacean disease related problems within EU Member States, we will organize specific scientific meetings by collating international experts.

Expected Output: We expect to organise four scientific working groups in 2019 and 2020 with the duration of one to two days each. A working group on 1) susceptible fish species to listed diseases in EU, 2) assessing fish and crustacean diseases for possible listing in EU legislation, 3) crustacean diseases and 4) emerging diseases. The topic of the emerging disease working group will be defined in relation to ad hoc request. From each meeting, a scientific report including recommendations will be delivered to the relevant Member State NRLs and the European Commission and will be available on our website www.eurl-fish.eu.

Duration: Working group 1 and 2 in 2019 and working group 3 in 2020; the timing of working group 4 held will be decided depending on specific need. The meetings will comprise one to two days in Copenhagen and time for organising and reporting.

Sub-activity 1.4 (*Proficiency test fish diseases*)

Objectives: To assess the capabilities of all Member State NRLs to detect pathogens causing fish diseases and to harmonize the procedures used by an inter-laboratory proficiency test.

Description: The EURL is going to prepare Annual Inter-laboratory Proficiency Tests for all Member State NRLs. The tests will include the viral fish pathogens; Viral haemorrhagic septicaemia virus (VHSV), Infectious haematopoietic necrosis virus (IHNV), Epizootic haematopoietic necrosis virus (EHNV), Infectious salmon anemia virus (ISAV) and Koi herpes virus (KHV), and will also address other common viral pathogens in fish farming Infectious pancreatic necrosis virus (IPNV), Spring viraemia of carp virus (SVCV), Salmonid alphavirus (SAV), Ranaviruses, etc. The participation is mandatory for all NRLs in EU. After submission of test results from the NRLs to the EURL, we will collate and analyse information gained from the proficiency test and publish the anonymous data to all participants as a report on a restricted site of our website www.eurl-fish.eu. A non-coded version will be provided to the EU Commission with information on performances and under performances. The results will be presented and discussed at the Annual Workshops in 2019 and 2020. The tests are accredited according to ISO 17043 and are indispensable for maintaining accreditations at the NRLs.

Expected Output: Preparation and shipping the test and subsequently provide a report on the proficiency tests 2019 and 2020. Based on previous experience it is expected that 45 laboratories are participating with a success rate of > 90 percentage for both tests. Underperformances will be addressed by direct communication with the participant. Underperforming laboratories will be considered for mission from the EURL.

Duration: January – December 2019 and 2020. The samples included in the test will be shipped from the EURL in the fall and the final report will be submitted February the following year.

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Sub-activity 1.5 (*Proficiency test crustacean diseases*)

Objectives: To assess the capabilities of all Member State NRLs to detect pathogens causing diseases in crustacean and to harmonize the diagnostic procedures used by inter-laboratory proficiency tests.

Description: The EURL is going to prepare Annual Inter-laboratory Proficiency Tests to all Member State NRLs. The tests will include the viral crustacean pathogens; White Spot Syndrome Virus (WSSV), Taura Syndrome Virus (TSV) and Yellowhead Virus (YHW). The participation is mandatory for all NRLs in EU. After submission of test results from the NRLs to the EURL, we will collate and analyse information gained from the proficiency test and publish the anonymous data to all participants as a report on a restricted site of our website www.eurl-fish.eu. A non-coded version will be provided to the EU Commission with information on performances and under performances. The results will be presented and discussed at the Annual Workshops in 2019 and 2020.

Expected Output: Preparation and shipping the test and subsequently provide a report on the proficiency test 2019 and 2020. It is expected that 24 laboratories are participating with a success rate of > 90 percentage for both tests. Underperformances will be addressed by direct communication with the participant. Underperforming laboratories will be considered for mission from the EURL.

Duration: January – December 2019 and 2020. The samples included in the test will be shipped from the EURL in the fall and the final report will be submitted February the following year.

Sub-activity 1.6 (Diagnostic methods)

Objectives: For the EURL to have diagnostic methods of the highest scientific standards and to be able to provide these methods to all Member State NRLs.

Description: Novel molecular methods are highly sensitive and specific tools for diagnosis and surveillance of a number of listed pathogens. In 2019 and 2020, the EURL will focus on four techniques; 1) PCR for detection of genomic RNA/DNA from pathogens, 2) In-situ Hybridization (ISH) for pathogen localization in paraffin embedded tissue, 3) Next Generation Sequencing for full genome sequencing and 4) Improved cell culture techniques. In 2020 the EURL will establish a repository of reference viral strains for Infectious salmon anemia virus (ISAV) and implement diagnostic qPCR able to discriminate virulent ISA strains HPR Δ and non-pathogenic ISA strains HPRO. With the ISH technology established in 2019, the main pathogens targeted in 2020 will be VHSV and the emerging pathogen PRV-3. Concerning the crustacean diseases White Spot Disease, Taura Syndrome and Yellowhead Disease accreditation according to ISO 17025 will be obtained during 2019. Furthermore, the area of crustacean emerging diseases will be given priority, e.g. the disease Acute Hepatopancreatic Necrosis Disease (AHPND).

Expected Output: Four new diagnostic methods implemented in the two year period. Four diagnostic molecular methods validated according to the recommendations given by the OIE.

Duration: January – December 2019 and 2020.

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Sub-activity 1.7 (*Crustacean tank facilities*)

Objectives: For the EURL to be able to conduct infection trails with crustacean species.

Description: Bio-secured laboratory facilities to rear and infect crustacean with listed and non-listed diseases are a prerequisite for providing Member State NRLs with proficiency tests, confirmatory diagnosis, pathogen characterization etc. The facilities will consist of a clean facility for SPF crustaceans and a bio-secured establishment to conduct infection trials.

Expected Output: A high quality crustacean rearing and infection facility at DTU Aqua.

Duration: January – December 2019.

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TO PROVIDE SCIENTIFIC AND TECHNICAL ASSISTANCE TO NRLs

Please, provided activities related to Regulation (EU) 2017/625:
(Number of Sub-activity boxes can be adjusted by EURL)

- *Art. 94.2.d Coordinating practical arrangements necessary to apply new methods of laboratory analysis, testing or diagnosis, and informing national reference laboratories of advances in this field.*
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- *Art. 94.2.e Conducting training courses for staff from national reference laboratories and, if needed, from other official laboratories, as well as of experts from third countries.*
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- *Art. 94.2.g Providing information on relevant national, Union and international research activities to national reference laboratories.*

Sub-activity 2.1 (Training Courses)

Objectives: To ensure that employees of the Member State NRLs have the highest scientific and excellent skills in diagnosis of fish and crustacean diseases.

Description: The EURL yearly provides two training courses in methods used for diagnosis of fish and crustacean diseases. These courses are primarily offered to participants of the Member State NRLs. The content is mainly based on the opinion of the EURL on what is required in the Member State NRLs. The course contents are also discussed during the annual workshops, where the Member State NRLs are able to provide specific input.

Expected Output: Two training courses of 5 days in 2019 and 2020, with 10-15 participants in each course; more than 90 % of the participants were satisfied with the course based on the 2018 evaluation.

Duration: September – October, 2019 and 2020.

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Sub-activity 2.2 (*Website www.eurl-fish-crustacean.eu*)

Objectives: To provide the Member State NRLs with a fast entrance to information from the EURL.

Description: The EURL are administrating the webpage, www.eurl-fish.eu, by uploading relevant material such as updated lists of NRLs, annual workshop presentations, training course reports, sampling and diagnostic procedures, newest update on legislation, general news from the community, etc. The website has daily visitors from a great number of countries from around the world and are, therefore, a substantial part of disseminating the work of the EURL for fish and crustacean diseases. Due to the inclusion of crustacean diseases in the EURL we will 2019 launch a new and updated website. The new website will in the future be located at www.eurl-fish-crustacean.eu and the old one www.eurl-fish.eu will close. The website will be further developed including a “restricted access area” where reports and information which are specific for targeted stakeholders will be uploaded.

Expected Output: A constantly updated webpage for the Member State NRLs. Establishment of a restricted area and provision of guidelines to all Member States NRLs for access to the restricted area.

Duration: The new website will be up running primo 2019 and maintenance will be from January – December 2019 and 2020.

Sub-activity 2.3 (*EURL Contact Lists*)

Objectives: To ensure that relevant and important information rapidly can get from the EURL directly to the Member State NRLs.

Description: We will aim to have three contact lists. 1) Member State NRLs for fish diseases, 2) Member State NRLs for Crustacean disease and 3) a general list which all interested in the work of the EURL can subscribe to. The EURL use the mailing lists for important notifications i.e. meeting calls, training course calls and other relevant information such as information on upcoming conferences, new research findings and relevant reports and publications, emergency situations etc. Often the notifications will include links to the website or other sites for further and detailed information.

Expected Output: The EURL usually prepare and submit around 10-15 notifications per year via the contact lists to ca. 130 subscribers.

Duration: January – December 2019 and 2020.

Sub-activity 2.4 (*Missions to NRLs for fish diseases*)

Objectives: To ensure a high standard of diagnostic capabilities of all Member State NRLs.

Description: Missions are only planned to Member State NRLs for fish diseases, however, we will be able to conduct missions to NRLs for crustacean diseases if it is found necessary. NRLs chosen for a mission are primarily based on performance in the yearly proficiency test. However, if missions to other countries, both EU Member States but also 3rd countries, will be able to provide important scientific knowledge for the EURL to pass on to Member State NRLs, missions to such countries will be conducted. This will ensure EU Member States to be updated with excellent scientific skills and knowledge.

Expected Output: As the decision for appointing target laboratories for missions is based on performances of the proficiency test- no final decision can be taken at this stage. Two missions per year conducted from the EURL, first draft of the report of each mission provided to the host institution within 1 month from the mission

Duration: April and/or November 2019 and 2020.

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Sub-activity 2.5 (*International conferences and meetings*)

Objectives: To keep the EURL updated on the newest scientific information on emerging and listed exotic and non-exotic fish and crustacean diseases, and to disseminate knowledge and scientific data provided by the EURL.

Description: The EURL staff is able to provide consultancy to Member State NRLs on emerging and listed fish and crustacean diseases, and attending conferences are an important way of the EURL to keep the excellence of this function. Conference participation therefore ensures up-to-date knowledge within the EURL.

Expected Output: The EURL expect to participate in 4 to 6 international conferences e.g. the 19th International Conference on Diseases of Fish and Shellfish, Porto, Portugal 9th-12th September 2019, OIE international conference on aquatic animal health, Santiago, Chile 3-4, April, 2019, The 11th International symposium of virus of lower vertebrates and the 5th Nordic RAS Workshop 7-8 October 2019, Berlin.

Duration: January – December 2019 and 2020.

Sub-activity 2.6 (*Confirmatory diagnosis*)

Objectives: For the EURL to be able to identify and characterize isolates of listed viral fish and crustacean pathogens on request from the Member State NRLs.

Description: Every year the EURL receives strains of pathogens for corroboration of diagnostic results in the EU Member States. Regularly these strains must be characterized properly as an emergency response to avoid unwanted spreading of new pathogens in EU. The EURL describe these strains by serological and genetic characterization, including bioinformatics.

Expected Output: Based on experience from the previous year, the EURL expects to corroborate the diagnosis for five new outbreaks and sequence the isolates yearly

Duration: January – December 2019 and 2020.

Sub-activity 2.7 (*Pathogen characterization*)

Objectives: For the EURL to be able to characterize isolates of listed viral pathogens of aquatic animals as well as emerging pathogen and provide scientific based risk assessment to the scientific community and stakeholders.

Description: The EURL every year contributes to characterize relevant pathogens for aquaculture in Europe as an emergency response to avoid unwanted spreading of new pathogens in EU. The EURL describe these strains by pathogenicity testing in-vivo. The experimental trial contribute to establish reference material to be used as positive controls and standards enabling diagnostic validation of new diagnostic methods.

Expected Output: The EURL expect to characterize two pathogens per year. A report of each single infectious trial included in a risk assessment report and/or published in peer review journals.

Duration: January – December 2019 – 2020.

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TO PROVIDE SCIENTIFIC AND TECHNICAL ASSISTANCE TO THE EUROPEAN COMMISSION AND OTHER ORGANISATIONS

Please, provided activities related to Regulation (EU) 2017/625:
(Number of Sub-activity boxes can be adjusted by EURL)

- *Art. 94.2.f Providing scientific and technical assistance to the Commission within the scope of their mission.*
- *Art. 94.2.h Collaborating within the scope of their mission with laboratories in third countries and with the European Food Safety Authority (EFSA), the European Medicines Agency (EMA) and the European Centre for Disease Prevention and Control (ECDC).*
- *Art. 94.2.i Assisting actively in the diagnosis of outbreaks in Member States of foodborne, zoonotic or animal diseases, or of pests of plants, by carrying out confirmatory diagnosis, characterisation and taxonomic or epizootic studies on pathogen isolates or pest specimens.*

Sub-activity 3.1 (*Diagnostic manuals fish diseases*)

Objectives: To have updated diagnostic manuals for all listed fish diseases available for Member State NRLs on the EURL website.

Description: The diagnostic manual for sampling and detection of listed non-exotic diseases was finally adopted in 2015. However, as the diagnostic procedures for identification and surveillance of the listed diseases is rapidly evolving new procedures will be assessed and validated for inclusion in the first revision of the diagnostic manuals.

Expected Output: Updated sampling and diagnostic manuals for the viral fish diseases viral haemorrhagic septicaemia (VHS), infectious hematopoietic necrosis (IHN), infectious salmon anaemia (ISA), koi herpes virus (KHV) and epizootic haematopoietic necrosis (EHN) on the EURL website.

Duration: January – December 2019 and 2020.

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Sub-activity 3.2 (*Diagnostic manuals crustacean diseases*)

Objectives: To have updated diagnostic manuals for all listed crustacean diseases available for Member State NRLs on the EURL website.

Description: The diagnostic manual for sampling and detection of listed non-exotic diseases was finally adopted in 2015. However, as the diagnostic procedures for identification and surveillance of the listed diseases is rapidly evolving new procedures will be assessed and validated for inclusion in the first revision of the diagnostic manuals.

Expected Output: Updated sampling and diagnostic manuals for the viral crustacean diseases White Spot Disease, Taura Syndrome and Yellowhead Disease on the EURL website.

Duration: January – December 2019 and 2020.

Sub-activity 3.3 (*Survey and diagnosis fish diseases*)

Objectives: As part of our duties given in given in C.D. 2006/88/EC Annex VI, Part I.5 (f) to “collate and forward information on exotic and endemic diseases, that are potentially emerging in Community aquaculture” data on emerging and endemic fish diseases and fish health surveillance in Europe will be collated in order to ensure that the EU Commission, the Member State NRLs and the EU in general are updated on the fish diseases situation in aquaculture and natural fish populations in Europe.

Description: The EURL collect data on emerging and endemic fish disease outbreaks from NRLs in all European countries by submitting a questionnaire and disseminating the information gathered in a report and at the Annual Workshop. The data are collated in a “Survey and diagnosis” report, which is made available for the Commission, Member State NRLs and for approved users on our website. This report includes information on the presence of all the listed non-exotic fish diseases given in Council Directive 2006/88/EC Annex IV Part 2, on emerging diseases, and on all surveillance programmes on fish diseases conducted in EU.

Expected Output: A report on “Surveillance and diagnosis of fish diseases in Europe”. The report will be presented at the annual workshops and uploaded in the restricted area of the website. The report will be accessible for relevant stakeholders including NRLs and EU commission

Duration: January – June 2019 and 2020.

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Sub-activity 3.4 (*Risk assessment for emerging diseases*)

Objectives: For the EURL to have the most updated and highest scientific knowledge of emerging and re-emerging fish and crustacean diseases in Europa.

Description: Due to increased international trade of fish and crustaceans, focus will be given to emerging diseases and rapid response to Member State NRLs and EU in case of outbreaks. An assessment of risk for contracting and spreading specific emerging and re-emerging diseases in EU will be conducted. In collaboration with specialised experts the EURL foresees to work e.g. with the emerging fish pathogens Infectious Salmon Anemia virus (ISAV), Tilapia Lake Virus (TiLV), Salmonid Alphavirus (SAV) and Piscine Myocarditis Virus (PMCV) in Europe to be able to assess their potential listing as exotic or non-exotic diseases in the future.

Expected Output: The EURL will have relevant and updated scientific knowledge on emerging fish diseases in EU and be able to provide immediately consultancy to all Member State NRLs, the European Commission and stakeholders. Scientific knowledge on specific emerging diseases will be disseminated through oral and written presentations in scientific journals (1 publication per year), at annual workshops, conferences (1 oral presentation per conference) etc. The EURL aims to assess diagnostic methods and establish reference material for validating diagnostic methods. Two diseases will be addressed yearly.

Duration: January – December 2019 and 2020.

4

REAGENTS AND REFERENCE COLLECTIONS

Please, provided activities related to Regulation (EU) 2017/625:
(Number of Sub-activity boxes can be adjusted by EURL)

- **Art. 94.2.j** *Coordinating or performing tests for the verification of the quality of reagents and lots of reagents used for the diagnosis of foodborne, zoonotic or animal diseases and pests of plants.*
- **Art. 94.2.k** *Where relevant for their area of competence, establishing and maintaining:*
 - i.** *reference collections of pests of plants and/or reference strains of pathogenic agents;*
 - ii.** *reference collections of materials intended to come into contact with food used to calibrate analytical equipment and provide samples thereof to national reference laboratories;*
 - iii.** *up-to-date lists of available reference substances and reagents and of manufacturers and suppliers of such substances and reagents.*

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Sub-activity 4.1 (*The database www.fishpathogens.eu*)

Objectives: To have an updated database of all serious viral fish pathogens in the EU.

Description: The database www.fishpathogens.eu is a valuable tool for all Member State NRLs for virus characterisation and molecular epidemiology of listed and non-listed fish pathogens. The more isolates included the stronger the tool for the EURL and Member State NRLs. The database code is, however, more than 10 years old, and an urgent update is needed. This update, together with the addition of new tools to handle full genomes, is already in process and will continue during 2019.

Expected Output: During 2019, around 110 full genome sequences of VHSV will be included in the database, as well as around 30 full genomes of IHNV. Both SAV and Betanodavirus databases will be modified to include full genome data, as well with tools to detect/identify reasserting strains in betanodavirus (2020). In addition, collaboration with groups in Norway will be initiated in order to establish a new database of infectious salmon anaemia virus (ISAV) isolates (2019-2020).

Duration: January – December 2019 and 2020.

Sub-activity 4.2 (*Pathogen library*)

Objectives: For the EURL to have an updated library of fish and crustacean pathogens relevant for the EURL and Member State NRLs.

Description: The EURL are going to update and maintain a library of isolates of the viral fish pathogens infectious salmon anaemia virus (ISAV), viral haemorrhagic septicaemia virus (VHSV), infectious hematopoietic necrosis virus (IHNV), koi herpes virus (KHV), enzootic hematopoietic necrosis virus (EHNV) and other relevant putative emerging fish pathogens. Furthermore, the crustacean pathogens White Spot Syndrome Virus (WSSV), Taura Syndrome Virus (TSV) and Yellowhead Virus (YHW) will be included in the library.

Expected Output: The library will be updated yearly, furthermore, infected tissue material originated from the infectious trial conducted within the “Pathogen characterization” sub activity (two tissue libraries per year) will be made available upon request to Member State NRLs as positive control material (expected to ship five panel per year).

Duration: January – December 2019 and 2020.

Sub-activity 4.3 (*Production and supply of reagents*)

Objectives: For the EURL to be able to provide Member State NRLs with diagnostic reagents.

Description: Diagnostic reagents (i.e. polyclonal antibodies raised in rabbit, monoclonal antibodies from stored hybridoma cells or in situ hybridization (ISH) probes) will be produced according to demand from the Member State NRLs.

Expected Output: The EURL expect request of diagnostic reagents from around 15 Member State NRLs yearly. However, we are able to provide more reagents if there is a need from more Member State NRLs.

Duration: January – December 2019 and 2020.

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5

REQUIREMENTS RELATED TO OTHER LEGISLATION

Please specify applicable legislation:
(Number of Sub-activity boxes can be adjusted)

Sub-activity 5.1 (*Scientific advice in relation to aquatic animal health legislation*)

Objectives: For the EU commission and Member States to access scientific based advice on interpretation and implementation of aquatic animal health law.
Description: To harmonize implementation and interpretation of aquatic animal health law across the different Member States.
Expected Output: The EURL expect to receive 10 specific request per year from EU or Member States. First reply within five working days. Final deliver of official reply may change according to the entity of the request.
Duration: January – December 2019 and 2020.

Sub-activity 5.2 (*Listing susceptible species*)

Objectives: For the EU Member States to have an updated list of susceptible species for the listed fish and crustacean diseases.
Description: With implementation of the new Animal Health Law, there is an acute demand for scientifically assessing the fish and crustacean species susceptible to the listed diseases. Therefore, an increased workload for the EURL will be to assess the listing of susceptible fish and crustacean species, e.g. assess susceptibility of cleaner fish (wrasse and lumpfish), sea bass and sea bream to VHS and IHN, etc.
Expected Output: Provide a report with a list of which fish and crustacean species are susceptible to the listed diseases, to be recommended for adaptation in the new legislation.
Duration: January –March 2019.

Sub-activity 5.3 (*Listing diseases for notification*)

Objectives: For the EU commission and Member states to access scientific based advice on criteria for including or excluding infectious diseases in new Aquatic animal health law.
Description: The EURL provides scientific based advice assessing new putative listed diseases for inclusion or exclusion from the EU legislation. Criteria for including a disease are clear knowledge of aetiological agent, possibility to controlling and limiting the spread of the disease, diseases with severe impact on animal welfare and economy on aquaculture production in EU.
Expected Output: The EURL expect to assess two diseases per year, and provide scientific recommendation for including or exclusion them from the legislation.
Duration: Upon request from the Commission in 2019 and 2020.

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| REMARKS |
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| (if necessary) |
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