Annex 21. Item 7.3. – Chapter 4.7. 'Fallowing in Aquaculture'

SECTION 4

DISEASE PREVENTION AND CONTROL

CHAPTER 4.7.

FALLOWING IN AQUACULTURE

Article 4.7.1.

Introduction

~~Gaps in *aquaculture* production at the same location are commonly recognised to be of value in resting or restoring the local environment. As part of this strategy, *fallowing* can break re-*infection* cycles by removing loci of a *disease* from a farm. Consequently, *fallowing*~~ *Fallowing* is a routine ~~carried out as a regular~~ *disease* management measure in *aquaculture*, either as a best practice especially prior to the introduction of new populations of *aquatic animals* into a previously stocked used site, as part of a *biosecurity plan* in accordance with Chapter 4.1., or on the instructions of the *Competent Authority*, following an outbreak of a *disease* which is subject to emergency management measures as described in Chapter 4.Y.

Article 4.7.2.

Considerations for fallowing

Fallowing is used to provide a temporal break in *pathogenic agent* transmission cycles between susceptible populations of *aquatic animals*. It should be implemented with consideration given to:

1) the objective of *fallowing* such as preventing transmission between sequential production cycles, suppression of *pathogenic agent infection* pressure, or to eradicate a *pathogenic agent* from an *aquaculture establishment*;

2) the sources of *infection* at the production site such as farmed or wild populations of *susceptible aquatic animals*, *vectors*, fomites or *pathogenic agents* in the environment (e.g. water or sediment);

3) whether the *pathogenic agent* is obligate or facultative;

4) for obligate *pathogenic agents*, the period that they may remain viable in the environment;

5) the need for spatial coordination to synchronously fallow epidemiologically connected *aquaculture establishments*;

6) when the infective period is not known, the farm may be fallowed for a period, the length of which should be based on a *risk assessment*.

Article 4.7.3.

Voluntary fallowing

In order to promote improved health in *aquaculture*, the *Aquatic Animal Health Service* in a country may encourage the voluntary use of *fallowing* as a part of the *biosecurity plan* set out in Chapter 4.1. as a *biosecurity* measure for an individual *aquaculture establishment* or as a common *biosecurity* measure among all

aquaculture establishments that are considered epidemiologically linked in a given area. ~~a routine management strategy for many *diseases*. Account should be taken of~~ When encouraging aquaculture operators to fallow their establishments, the *Competent Authority* should emphasise the likely beneficial effects of *fallowing* in proportion to the economic costs involved.

The *Aquatic Animal Health Service* should also ~~consider such factors as~~ take into account the level of *risk* a particular *disease* poses to ~~the~~ local ~~and national~~ *aquaculture* operations, ~~previous knowledge of the severity of a *disease(s)*~~, the infective period of the *disease* in question, ~~and distribution of the *pathogenic agent(s)*~~, as well as the relevant socioeconomic conditions ~~,and~~ when assessing the potential benefits ~~pertaining~~ to ~~the general~~ aquatic resources in the area. ~~When the infective period is not known, the farm may be fallowed for a period, the length of which should be based on a *risk assessment*.~~

Article 4.7.4.

Compulsory fallowing

Compulsory *fallowing* may be required in accordance with the instructions of the *Competent Authority* following an outbreak of an important *disease* which has been subject to the measures described in Chapters 4.X. and 4.Y. ~~However, where an official *stamping-out policy* is being carried out for a *disease* of concern, the *Aquatic Animal Health Service* should~~ The *Competent Authority* may require that an infected *aquaculture establishment*, and ~~all~~ other relevant *aquaculture establishments* in an officially declared ~~established~~ *infected zone*, are ~~be~~ subjected to a required period of *fallowing*~~, if necessary synchronised~~. This *fallowing* will be carried out for a period of time which is prescribed by the *Competent Authority*, following *risk assessment*. A period of synchronous *fallowing* may be required in relevant establishments in the *infected zone* should this be indicated by the *risk assessment*.

Article 4.7.5~~2~~.

Legal powers

In the cases referred to in Article 4.7.1. where *fallowing* is ~~may be~~ a compulsory measure, prescribed by the *Competent Authority*, ~~for instance in the establishment or restoration of a *disease free zone*, countries should establish~~ a legal framework must be in place to: ~~for the implementation of *fallowing* procedures in *aquaculture establishments*. Legal provisions could include:~~

Norway	**Category** (editorial): **Proposed amended text** (or precise suggested deletion): Norway suggests the following editorial change: In the cases referred to in Article 4.7.~~1~~ 4. where *fallowing* is ~~may be~~ a compulsory measure, prescribed by the *Competent Authority*, ~~for instance in the establishment or restoration of a *disease free zone*, countries should establish~~ a legal framework must be in place to: ~~for the implementation of *fallowing* procedures in *aquaculture establishments*. Legal provisions could include:~~ **Rationale:** Article 4.7.4 seems to be the appropriate Article to refer to. **Supporting evidence:** Not relevant.

1) define ~~defining~~ the ~~*disease*~~ circumstances when *fallowing* or synchronised *fallowing* is required;

2) define ~~defining~~ mechanisms based on *risk assessment* where individual disease-specific measures may be determined, including when *fallowing* should commence ~~*disinfection*~~ and the length of the *fallowing* period prior to the re-introduction of *susceptible species*.~~;~~

~~3) following permission by the *Competent Authority* to restock with *susceptible species*, defining a period of *surveillance* and *diagnostic* to verify freedom from the specified *disease*.~~

Article 4.7.6~~3~~.

Technical parameters for the implementation of a compulsory ~~statutory~~ fallowing plan

Taking into account the categories of *aquaculture* production systems referred to in Article 4.1.5., *fallowing* of an a*quaculture establishmen*t ~~*Fallowing* of a farm~~ should take paragraph 5 of Article 4.X.7. into account and start immediately after:

1) destruction of and biosecure disposal:

   a) ~~removal~~ of all *susceptible species* of *aquatic animals* for the *disease* of concern; and

   b~~2~~) ~~removal~~ of all species of *aquaculture* animals which are capable of acting as *vectors* of the *disease* of concern; and

   c~~3~~) ~~if appropriate, removal~~ of other species, if indicated by *risk assessment*; ~~and~~

2~~4~~) removal of water in which infected stocks have been held, where feasible; and

3~~5~~) appropriate *disinfection* measures have been completed on equipment and other contaminated materials in accordance with Article 4.7.4., under supervision of the *Aquatic Animal Health Services*. ~~equipment and other materials contaminated or otherwise capable of harbouring *infection* have either been removed or subjected to *disinfection* to standards approved by the *Aquatic Animal Health Service*.~~

The length of the compulsory ~~statutory~~ *fallowing* period should be based on scientific evidence of the likelihood of free ~~a~~ *pathogenic agent* remaining infective ~~outside its aquaculture host(s)~~ in the local environment, at a level likely to cause an unacceptable risk of re-*infection* of the *aquaculture establishment*. Account should be taken of the extent of the *disease outbreak*, local distribution of *susceptible species* and possible *vectors* ~~availability of alternative hosts~~, the survival and infectivity characteristics of the *pathogenic agent* and the local climatological, geographical and hydrographical factors. In addition, the level of *risk* to the local *aquaculture* industry and wider aquatic resources should be taken into consideration ~~may be included~~. A scientifically based *risk assessment* approach should be used to determine the length of the *fallowing* period.

Article 4.7.7~~4~~.

~~Instructions for disinfection~~ Disinfection prior to fallowing

Competent Authorities ~~Countries~~ establishing *fallowing* procedures should develop a detailed set of instructions for *disinfection* of *aquaculture establishments* prior to *fallowing*~~,~~ where appropriate for the type of production system and circumstances. This should be completed in accordance with Chapter 4.4. and for compulsory *fallowing* Chapters 4.X. and 4.Y. ~~For this purpose, the instructions set out in Chapter 4.4. of the *Aquatic Code* and in Chapter 1.1.3. of the *Aquatic Manual* should be used as guidelines,~~ taking into account current scientific knowledge on the efficacy of the treatments for the *pathogenic agent* of concern.

Article 4.7.8~~5~~.

Restocking after fallowing

An ~~No~~ *aquaculture establishment* that has been subject to~~under~~ compulsory *fallowing* should not be restocked until the compulsory *fallowing* period has been completed and permission from the *Competent Authority* has been received.

When restocking, care should be taken not to use stocks of *aquatic animals* that could ~~would~~ compromise the objectives of the *fallowing* procedure. To increase confidence in the effectiveness of the *fallowing* procedures, all farms subjected to compulsory *fallowing* should have a period of ~~high level~~ official *surveillance* after *susceptible species* have been restocked. The duration and intensity of the *surveillance* should be appropriate for the *disease* in question ~~of concern~~ and subject to the requirements set out in Chapter 1.4., and to the relevant disease-specific chapter in cases of *listed diseases* ~~local conditions~~.