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Aquaculture Legal Assessment and Revision Tool

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Aquaculture Legal Assessment and Revision Tool

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INTRODUCTION



INTRODUCTION

While the aquaculture sector has seen extraordinary global growth over recent years, it also faces a number of important challenges. Although aquaculture may reduce pressure on wild fish stocks, the fact remains that the sector can also have a range of negative environmental impacts. At the same time, a degraded environment, in particular poor water quality, can adversely affect the health of aquatic animals and plants used in aquaculture and therefore the economic sustainability of the sector.

Moreover, if appropriate biosecurity measures, in the sense of measures to protect aquatic animal health, aquatic plant health and human health, are not in place (or are not implemented), the sector can be subject to devastating disease outbreaks. It follows that the legal framework for aquaculture should support the development of the sector while at the same time promoting its long-term environmental, social and economic sustainability. This requires a balancing act. Overly burdensome legislation may discourage or otherwise hinder investment. At the same time, insufficient regulation may encourage indiscriminate and substandard operations that lead to uncontrollable disease outbreaks, irreparable environmental damage and the economic failure of aquaculture operations with ensuing social costs.

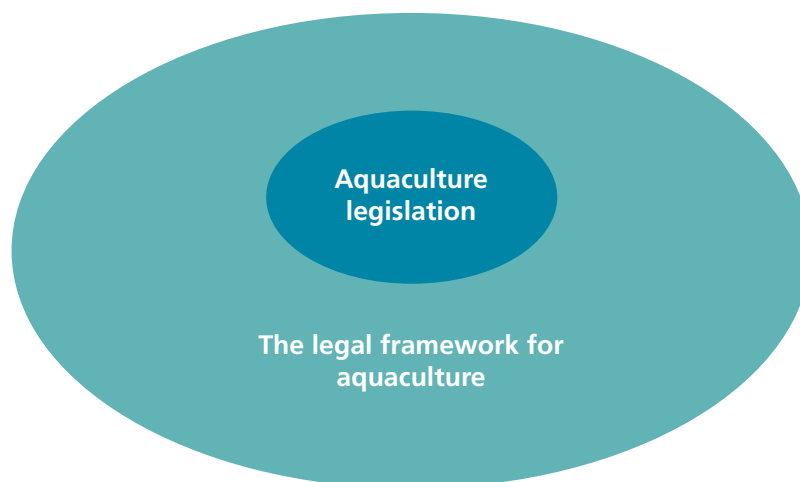
Unlike capture fishing, which is regulated largely if not exclusively on the basis of a fisheries law, the legal framework for aquaculture is invariably diverse and complex. Some aspects of aquaculture are addressed in legislation that has aquaculture as its specific or primary focus, such as a chapter in a fisheries law or a stand-alone aquaculture law (described in this document as 'aquaculture legislation').

Many other aspects of aquaculture are subject to legislation concerned with a wide range of relevant issues including: (a) land tenure laws (land use of one form or another is usually necessary for aquaculture); (b) water tenure legislation (concerning the legal right to abstract and/or use water of appropriate quality for aquaculture); (c) land use planning laws and, in an increasing number of countries, marine spatial planning legislation, that determine where aquaculture can be undertaken; (d) environmental protection legislation; (e) navigation legislation (particularly in the case of mariculture); (f) animal and plant health legislation; (g) biosafety legislation; (h) and legislation on medicines, chemical products and food safety, the latter subject areas often underpinned by aspects of international trade law.

It follows that the legal framework for aquaculture comprises both: (a) aquaculture legislation (in the sense of legislation that is specifically concerned with aquaculture); and (b) this broader range of laws that are relevant to aquaculture, but which do not have aquaculture as their specific focus (see figure 1).¹

¹ In reality the picture is even more complex, given that aquaculture takes place within the framework for the rules of business and commercial activity within the jurisdiction concerned, including the legislation governs how business forms are created and contracts concluded. This overall business law framework is not considered in the ALART though.

Figure 1.
Aquaculture legislation and the legal framework for aquaculture



The situation can be, and often is, further complicated by decentralization policies or programs that devolve decision making and regulatory powers relating to aquaculture to local governments.

Developed under the Norway-funded project GCP/GLO/979/NOR "Improving Biosecurity Governance and Legal Frameworks for Efficient and Sustainable Aquaculture Production", the *Aquaculture Legal Assessment and Revision Tool* (ALART) is intended to establish a methodology: (a) to systematically analyse and assess national legal frameworks for aquaculture in order to identify gaps, weaknesses and issues for revision or reform; and (b) to set out possible approaches in terms of the revision or reform of that framework. The ALART is accompanied by a separate study entitled *Legal frameworks for sustainable aquaculture* which contains further background information on the international normative framework relevant to the sector, reflections on the development of aquaculture legislation at national level and an assessment of the key elements of a legal framework for sustainable aquaculture. More specifically, each numbered question in the ALART is cross-referenced to a numbered paragraph in the study which contains more background about the subject matter of the question.

The ALART, which is attached as Annex A, is intended to be of general application. It can be applied: (a) in developed and developing countries; and (b) in countries where there is extensive aquaculture as well as countries where the sector is in the early stages of development. The ALART also recognizes that different legal rules may apply in a given context depending on the type of aquaculture undertaken (freshwater/marine, fish/seaweed, etc.) or the constitutional arrangements applicable in a given jurisdiction.

As regards the implementation of the ALART, a two-step approach is proposed. The first step is to **scope** the aquaculture sector so that (currently) irrelevant sections of the ALART can be ignored as necessary and section two of this document provides guidance on that.

Step two is to **apply** the ALART and some guidance on this is set out in part three of this guide.

STEP ONE – SCOPING THE AQUACULTURE SECTOR



STEP ONE – SCOPING THE AQUACULTURE SECTOR

A challenge for the implementation of the ALART is the sheer diversity of the aquaculture sector. This diversity manifests itself in a number of different ways.

First there is enormous diversity in terms of the different types of species that are cultivated in aquaculture. These include finfish for food consumption as well as ornamental fish, a range of crustaceans and shell fish (mostly for food consumption) and other aquatic animals in addition to marine and freshwater seaweeds, including macroalgae, used as industrial inputs and for food (including supplements) as well as microalgae used for food products and in the manufacture of biofuels, cosmetics and pharmaceutical products.

Next there is the diversity of the water environments in which aquaculture takes place. These include freshwater, where the majority of food fish production takes place, brackish water (in lagoons and mangroves where salinity levels vary) and sea water.

There is also considerable diversity in terms of the places where aquaculture is undertaken as well as the types of technology used. For example, aquaculture may be undertaken in rice-paddy fields and irrigation ditches as well as ponds and tanks. It may also be undertaken in tanks, “raceways”, public and privately-owned ponds, land based self-contained hydroponic recirculating systems, to pens, fixed structures, tethered cages and rafts in reservoirs, rivers or coastal areas, to floating cages towed far out to sea.

And finally, there is an enormous diversity in terms of the physical scale of aquaculture operations which may range from a single aquaculture pond on a family farm to, say, a large intensive commercial prawn farm laid out over many tens of hectares of land.

A key point to note is that different legal rules may apply depending on such matters as the type of species being cultivated, the place where aquaculture is undertaken, the socioeconomic scale of aquaculture activities and so on.

The first step in using the ALART is to identify the broad categories of aquaculture undertaken in the jurisdiction concerned in line with the following simplified typology.

1) Type of species cultured

As regards the species cultivated it will usually be legally relevant to distinguish between the cultivation of: (a) plant species (seaweed/algae etc.); and (b) animal species (including finfish, molluscs and crustaceans).

2) Place where aquaculture is undertaken

Next it will usually be necessary to distinguish between: (a) freshwater aquaculture; (b) brackish water aquaculture; and (c) marine aquaculture.

These three categories can be further broken down depending on the type of facility used as follows:

- (a) Freshwater aquaculture in: (i) ponds/tanks/raceways; (ii) pens/fixed or floating cages (which may be in a river, reservoir or pond); (iii) places not specifically designed for aquaculture such as paddy fields or irrigation canals; (iv) in indoor facilities; and (v) other. A further distinction can be made between the more usual open systems that discharge wastes/water to the environment and closed or recirculation systems that do not.
- (b) Brackish water aquaculture in: (i) ponds or coastal lagoons; (ii) pens/fixed cages (attached to the river/estuary/lagoon bed); (iii) other fixed structures (such as ropes used for mollusc culture); (v) sea bed culture; and (v) others.
- (c) Marine aquaculture in (i) pens/fixed cages (attached to the sea bed); (ii) floating cages (e.g. for offshore ranching); (iii) other fixed structures (e.g. for mollusc culture); and (iv) sea bed culture; and (v) others.

3) Socioeconomic scale

In terms of the socioeconomic scale of aquaculture activities it is useful to distinguish between: (a) small-scale aquaculture, typically undertaken at the family farm level; (b) aquaculture undertaken by cooperatives (usually grouping together a number of small-scale aquaculture farmers); and (c) commercial aquaculture often undertaken by a company.

While cooperative and commercial aquaculture typically takes place on the basis of an aquaculture licence, particularly in developing countries, due to the disproportionate administrative burden for both the aquaculture administration and the farmers concerned, small-scale aquaculture is typically not subject to a licensing regime (although it may be subject to a registration requirement).

4) Typology

The Simplified Typology is set out in Table 1, below.

A. Type of species cultured					
		A Aquatic animals			
				a	Finfish
				b	Shellfish (crustaceans & molluscs)
				c	Other invertebrates (e.g. polychaete worms, sea cucumber, artemia, etc.)
		P Aquatic plants			
				a	Seaweed (macro algae)
				b	Microalgae
				c	Aquatic plants

Table 1. (cont.)

Table 1. (cont.)					
B.	Place where aquaculture undertaken				
		1	Freshwater		
				a	Ponds/tanks/raceways
				b	Closed/recirculating tanks/ponds
				c	Fixed cages
				d	Paddy fields/irrigation canals
				e	Indoor facilities
				f	Closed/recirculating indoor facilities
		2	Brackish waters		
				a	Ponds/lagoons
				b	Fixed cages
				c	Suspended structures (for mussels, seaweed, etc.)
				d	Other
		3	Marine waters		
				a	Fixed cages
				b	Floating cages
				c	Suspended structures (for mussels, seaweed, etc.)
				d	Sea bed systems
				e	Other
C.	Socioeconomic scale				
		1	Small- scale		
		2	Cooperative		
		3	Commercial		



**STEP TWO –
APPLYING THE
AQUACULTURE LEGAL
ASSESSMENT AND
REVISION TOOL**



STEP TWO – APPLYING THE AQUACULTURE LEGAL ASSESSMENT AND REVISION TOOL

Step two is to apply the ALART.

The ALART is set out in nine sections as follows:

- (1) Policy issues
- (2) Institutional arrangements
- (3) Tenure arrangements
- (4) Planning and approval
- (5) Production – inputs
- (6) Production – facility management
- (7) Post production
- (8) Disease prevention and control
- (9) Inspection and enforcement

It is set out in a question format, with most questions having a 'Yes/No' answer. To apply the ALART is therefore to answer each question (by ticking the relevant Yes/No box) and to move on to the next question. If the answer is a 'Yes', the next question number is indicated. If the answer is 'No', some text is provided for the purpose of analysis. After considering that text, the reader should then move on to the next question. The questions themselves are focussed on the promotion of sustainable aquaculture and primarily of a technical nature.

The reason why analytical text is provided is because the role of the ALART is not just to function as a checklist to identify weaknesses but also to serve as a revision tool. To that end possible 'solutions' to problems, gaps and weaknesses in terms of legislative reforms are also briefly set out in the ALART itself.

These suggestions have been kept brief in order to keep the ALART a reasonable length. In other words, the ALART does not contain a lengthy substantive discussion of each topic.

Instead, as mentioned above, the topic of each question is discussed in more detail in part four of the companion legal study, *Legal frameworks for sustainable aquaculture*. Part four of that study is divided into sections that mirror the sections of the ALART. In some cases, examples from other countries' legislation that may inspire possible legislative approaches.

For example, Question 5 of the ALART asks:

Does the aquaculture legislation set out policy principles or objectives for the sector?

Section 4.1 (5) of the legal study contains a more detailed discussion of this topic and provides examples of how it has been addressed in aquaculture legislation in certain jurisdictions.

Given that in practice the primary users of the ALART will be aquaculture administrations or their advisers, the overall approach is to seek to identify issues that should be addressed in aquaculture legislation, given that an aquaculture administration can most easily support the revision of aquaculture legislation at the practical level.

However, the ALART also seeks to identify weaknesses or deficiencies that either require better implementation of the existing legal framework for aquaculture or the revision of that framework, taking into account the fact that the role of the aquaculture administration may be simply to lobby for such reforms. For example, it would be unrealistic for an aquaculture administration to sponsor a revision of, say, water quality legislation or land tenure legislation topics that may typically be responsibility of a different ministry. However, in cases where such issues could appropriately be addressed in aquaculture legislation, if necessary, then this too is indicated.

There are a number of different options for using the ALART. For example, it could be used to undertake a rapid analysis of the legal framework for aquaculture in a given jurisdiction. In practice, there may be questions that cannot easily be answered with a YES/NO response, and which require further investigation or research. These questions could be marked with a question mark accordingly.

Alternatively, the ALART could be used as an initial scoping exercise not least because of the complexity of the legal framework for aquaculture and the need to identify knowledge gaps and areas for further research. Thereafter the ALART could be used undertake a detailed assessment of aquaculture legislation and the legal framework for aquaculture in order to identify potential gaps, weaknesses and thus issues for possible reform with a particular focus on environmental protection and biosecurity. In order to document such an assessment, the headings of the ALART could, for example, be used to create or inspire the headings of a detailed analytical report.

The reason for using the YES/NO approach then becomes clear: either the relevant legislation addresses the issue appropriately or it does not. In short, as always in the case of analysing legislation a judgment call has to be made.

Key terms used in the ALART are summarized as follows:

Aquaculture administration:	The ministry/department/agency responsible for the aquaculture sector and the implementation of aquaculture legislation.
Aquaculture legislation:	Legislation that contains specific provisions on aquaculture including a stand-alone aquaculture law or fisheries law that contains a chapter/articles/sections concerned with aquaculture and includes subordinate legislation adopted on the basis of such a law.
The legal framework for aquaculture:	The overall legal framework within which aquaculture takes place including land and water tenure legislation, spatial planning legislation, environmental legislation, animal and plant health and production legislation, food safety and quality legislation, biosafety legislation and which includes aquaculture legislation.
Water resources legislation:	A water law or water resources law that specifies how water tenure arrangements (including water rights/water use permits) can be acquired as well as provisions on the protection of water quality.
Land tenure legislation:	A land law or series of land laws that specify how land tenure arrangements (including ownership, use and lease rights) can be acquired as well as the role if any of customary land tenure arrangements.

- Environmental legislation:** An environmental protection law, an environmental impact assessment law, a protected area law.
- Animal health legislation** An animal health law, an animal production law or a biosecurity law.
- Plant health legislation:** A plant health law, a plant protection law or a biosecurity law.
- Veterinary legislation:** A veterinary law or an animal health law.
- Medicines legislation:** A general medicines law or a veterinary medicines law or an animal health law.
- Chemicals/pesticides legislation:** A framework environmental protection law or a specific chemicals law or pesticides law.

**ANNEX –
AQUACULTURE LEGAL
ASSESSMENT AND
REVISION TOOL**



ANNEX – AQUACULTURE LEGAL ASSESSMENT AND REVISION TOOL

1. POLICY ISSUES	
Relevance: all types of aquaculture activity	
✓ the relevant box and then unless otherwise directed, move on to the next question.	
1	Does the aquaculture legislation describe or define aquaculture in a manner that is broad enough to include all relevant types of aquaculture, as well as new techniques/technologies, while at the same time ensuring that the breeding in captivity of aquatic mammals and reptiles is not accidentally included?
	<p>Yes. Go straight to question 2.</p> <p>No. Revise the description or definition of 'aquaculture' in the aquaculture legislation to ensure that the scope is appropriate.</p>
2	Is the term 'aquaculture' used consistently across the legal framework for aquaculture?
	<p>Yes. Go straight to question 3.</p> <p>No. Revise relevant legislation to ensure a consistent usage of the term.</p>
3	Does the aquaculture legislation contain a clear definition of the place or facility where aquaculture is undertaken (referred to in this document as a 'facility') taking into account the nature of aquaculture in the jurisdiction concerned?
	<p>Yes. Go straight to question 4.</p> <p>No. Revise the definition of aquaculture facility to ensure that it is sufficiently broad to include all of the types of place where aquaculture is undertaken.</p>
4	Does the aquaculture legislation recognize that the aquatic animals or aquatic plants used in aquaculture facilities are privately owned by the aquaculture farmer?
	<p>Yes. Go straight to question 5.</p> <p>No. Consider: a) revising the definition of aquaculture to clarify that cultivated aquaculture species are the private property of the aquaculture farmer; b) including a clear statement to this effect; and c) including an offense of unlawful interference/fishing in an aquaculture facility (fishing without the consent of the operator).</p>
5	Does the aquaculture legislation set out policy principles or objectives to guide the development of the sector including with regard to citizen participation and inclusion?
	<p>Yes. Go straight to question 6</p> <p>No. Revise the aquaculture legislation to set out policy principles or objectives to guide the development of the sector including with regard to citizen participation and inclusion.</p>
6	Does the aquaculture legislation require the preparation, adoption and periodic review of a formal aquaculture policy (either as a standalone policy or as part of a broader fisheries and aquaculture policy)?
	<p>Yes. Go straight to question 7.</p> <p>No. Revise the aquaculture legislation to require the preparation and adoption at the appropriate level of a formal aquaculture policy.</p>

1. POLICY ISSUES (cont.)			
7	If there is an aquaculture policy (whether or not required by legislation) does it explicitly refer to:	a)	Yes. Go to question b)
	a) the management of biological risks to the sector in terms of aquatic animal and/or plant health and biosafety?		No. Consider requiring the aquaculture policy to address the management of biological risks to the sector in terms of aquatic animal and plant health and biosafety.
	b) environmental aspects in terms both of the prevention or mitigation of negative environmental impacts caused by aquaculture and environmental threats to aquaculture?	b)	Yes. Go to question c).
			No. Consider requiring the aquaculture policy to explicitly address the environmental aspects of aquaculture.
	c) the administrative burden for investors in the aquaculture sector and the possibility of simplifying/streamlining administrative procedures?	c)	Yes. Go to question d)
			No. Consider requiring the aquaculture policy to explicitly address the issue of the administrative burden for investors in the aquaculture sector and the possibility of simplifying/streamlining administrative procedures.
	d) the identification and promotion of opportunities in the aquaculture sector for women, youth and disadvantaged communities?	d)	Yes. Go to question e).
			No. Consider requiring the aquaculture policy to identify and promote opportunities in the aquaculture sector for women, youth and disadvantaged communities
	e) potential threats to the aquaculture sector from climate change in terms of water availability, the increased risk of floods, droughts and storm surges?	e)	Yes. Go to question 8.
			No. Consider requiring the aquaculture policy to explicitly address the potential threats to the sector as a result of climate change, including in terms of water availability, the increased risk of floods, droughts and storm surges.
8	Does the legislation require the preparation and periodic review of a national aquaculture sector development strategy or plan (not including spatial development) or a series of regional sector development plans?	Yes. Go straight to question 9.	
		No. Revise the aquaculture legislation to require the preparation of national or regional aquaculture sector development strategies or plans.	
9	Does the aquaculture legislation contain specific provisions on the collection, sharing and dissemination of data about the sector?	Yes. Go straight to question 10.	
		No. Revise the aquaculture legislation to specifically address the collection, sharing and dissemination of data about the sector.	

2. INSTITUTIONAL ARRANGEMENTS

Relevance: all types of aquaculture activity

✓ the relevant box and then unless otherwise directed, move on to the next question.

10	Does the aquaculture legislation clearly:	a)	Yes. Go to question b).
	a) identify the minister/ ministry responsible for aquaculture?		No. Revise the aquaculture legislation to clearly identify the minister/ministry responsible for aquaculture.
	b) identify the ministry, department or agency that is primarily responsible for the implementation of the aquaculture legislation (hereafter the 'aquaculture administration')?	b)	Yes. Go to question c).
			No. Revise the aquaculture legislation to clearly identify the aquaculture administration.
	c) confer sufficiently broad regulation-making power upon the minister (or on the government on the proposal of the minister) to address all relevant aspects of aquaculture?	c)	Yes. Go to question d).
			No. Revise the aquaculture legislation to confer sufficiently broad regulation making power upon the relevant minister.
	d) create a mechanism, such as an advisory committee, for the provision of technical advice about aquaculture to the minister?	d)	Yes. Go to question 11.
			No. Revise the aquaculture legislation to provide for the creation of a mechanism, such as an advisory committee, to provide technical advice about aquaculture to the minister.
11	In the case of a federal jurisdiction, does the aquaculture legislation recognize and provide for clear and robust functional linkages between the federal government and states/provinces in terms of their respective responsibilities for the implementation of different elements of the legal framework for aquaculture in terms of coordination, the chain of command and consistency of approach?		Yes. Go straight to question 12.
			No. Revise the aquaculture legislation to clarify linkages between federal and state/provincial levels of government with regard to different aspects of the legal framework for aquaculture.
12	Does the aquaculture legislation recognize the role of local government as regards the implementation of the legal framework for aquaculture?		Yes. Go straight to question 13.
			No. Revise the aquaculture legislation so that it: (a) refers to the role of local government regarding the implementation of the legal framework for aquaculture; and (b) confers specific tasks and reporting requirements on local governments, as appropriate.

2. INSTITUTIONAL ARRANGEMENTS <i>(cont.)</i>		
13	Does the legislation clearly set out the identity of the 'competent authority' for the purposes of aquatic animal health?	Yes. Go straight to question 14.
		No. Revise the relevant legislation to clearly identify the competent authority in terms of aquatic animal health.
14	Does the legislation clearly set out the identity of the 'plant protection organization' for the purposes of aquatic plant health?	Yes. Go straight to question 15.
		No. Revise the relevant legislation to clearly identify the plant protection organization for the purposes of aquatic plant health.
15	Does the aquaculture legislation directly or indirectly refer to the other agencies involved in implementing the legal framework for aquaculture?	Yes. Go straight to question 16.
		No. Revise the aquaculture legislation so that it refers directly or indirectly to the other agencies/involved in implementing the legal framework for aquaculture.
16	Does the aquaculture legislation contain a formal mechanism for information exchange and coordination between the aquaculture administration and other ministries, departments or agencies responsible for the implementation of other elements of the legal framework for aquaculture?	a) Yes. Go straight to question 17.
		No. Revise the aquaculture legislation to create a formal mechanism for information exchange/coordination between the aquaculture administration and other ministries, departments or agencies responsible for the implementation of other elements of the legal framework for aquaculture.

3. TENURE ARRANGEMENTS

Land tenure

Relevance: all types of aquaculture activity

✓ the relevant box and then unless otherwise directed, move on to the next question.

17	Does the relevant land tenure legislation (or other relevant legislation) provide a clear legal basis for the use of public land that is not temporarily or permanently covered with water for aquaculture for a sufficiently long period to enable a return on investment?	Yes. Go straight to question 18.
		No. Consider addressing the grant of leases or concessions for the use of public land that is not temporarily or permanently covered with water for aquaculture purposes in the aquaculture legislation.
18	As regards freshwater aquaculture, does the relevant water resources legislation provide a clear legal basis for the use of public land adjacent to or beneath inland water bodies (rivers, reservoirs, lakes) for aquaculture for a sufficiently long period to enable a return on investment?	Yes. Go straight to question 19.
		No. Revise the relevant water resources legislation to create a clear legal basis for the use for aquaculture of public land adjacent to or under the surface of inland water bodies for a sufficiently long period to enable a return on investment or alternatively make provision for this in the aquaculture legislation.
19	As regards aquaculture using brackish water/marine aquaculture, does the relevant legislation provide a clear legal basis for the use of coastal land and submerged land including the sea bed for a sufficiently long period to enable a return on investment?	Yes. Go straight to question 20.
		No. Revise the aquaculture legislation (or other relevant legislation) to provide for the grant of leases of coastal land and submerged/semi-submerged lands, including the sea bed, for brackish water/marine aquaculture for a sufficiently long period to enable a return on investment.
20	Does the aquaculture legislation require evidence of title or a legal right to use the land relating to the proposed aquaculture facility in the context of an application for an aquaculture licence?	Yes. Go straight to question 21.
		No. Revise the aquaculture legislation to require evidence of title/a legal right to use the land relating to the proposed aquaculture facility in the context of an application for an aquaculture licence.
21	If customary/local law land tenure arrangements are potentially relevant to aquaculture, does the aquaculture legislation recognize the specific features or provisions of customary/local law land tenure in terms of providing evidence of title or a right to use the land relating to the proposed aquaculture facility in connection with an application for an aquaculture licence?	Yes. Go straight to question 22.
		No. Revise the aquaculture legislation to take account of the specific features or provisions of customary/local law land tenure in terms of providing evidence of title or a right to use the land relating to the proposed aquaculture facility in connection with an application for an aquaculture licence.

3. TENURE ARRANGEMENTS *(cont.)*

Water tenure

Relevance: freshwater aquaculture

22	Does the water resources legislation require a water use permit for the abstraction and/or use of freshwater (including groundwater) for aquaculture?	Yes. Go straight to question 23.
		No. Revise the water resources legislation to provide that the abstraction and/or use of water freshwater for aquaculture is to take place on the basis of a water use permit.
23	Does the water resources legislation contain provisions that requires the rights of existing water use permit holders (including permits relating to aquaculture) to be respected when applications for new permits for the use of water resources are determined?	Yes. Go straight to question 24.
		No. Revise the relevant water resources legislation to provide that the rights of existing water use permit holders (including permits relating to aquaculture) must be respected when new permits/decisions on the use of water resources are taken.
24	Select the most appropriate response: a) Water resources legislation in force but the necessary subordinate legislation has yet to be adopted. b) The necessary subordinate legislation is in place but has not yet been implemented. c) Water use permits are routinely issued to aquaculture facilities and other water users in accordance with the water resources legislation but these are not enforced. d) The water resources legislation is fully implemented and enforced.	Answer a) - c): Weak implementation and/or enforcement of water resources legislation are potentially serious challenges to the sustainability of freshwater aquaculture and often arise as a result of insufficient investment/funding. At the overall government level, the solution is to increase budget funding for the implementation of water resources legislation. There is little that an aquaculture administration can do to alter this kind of situation, other than to lobby for increased funding by pointing out the potentially adverse effects on the aquaculture sector in terms of rural incomes, food security etc.
		Answer d): Go to question 25.
25	Does the water resources/ environmental legislation provide for the setting of discharge standards, ambient water quality standards and the issuance of wastewater discharge permits?	Yes. Go straight to question 26.
		No. Poor water quality is a major threat to freshwater aquaculture calling for a major reform of water resources/environmental legislation.

3. TENURE ARRANGEMENTS *(cont.)*

26

Select the most appropriate response:

- a) Water resources/ environmental legislation is in force but the necessary subordinate legislation for the setting of ambient water quality standards, wastewater discharge standards and wastewater discharge permits has yet to be adopted.
- b) The necessary subordinate legislation for the setting of ambient water quality standards, wastewater discharge standards and the issuance of wastewater discharge permits has been adopted but has not yet been implemented.
- c) Water resources/ environmental legislation is implemented with discharge standards established and applied, wastewater discharge permits issued and enforced but due to a lack of enforcement, ambient water quality standards are not achieved
- d) Water resources/ environmental legislation is fully implemented with discharge standards established and applied, wastewater discharge permits issued and enforced, and ambient water quality standards achieved.

Answers a) - c): In these scenarios, the necessary legislation is in place, but the lack of enforcement poses a significant threat to freshwater aquaculture. At the overall government level, the solution is to increase the budget funding and to enhance capacity for the implementation and enforcement of water quality legislation to secure compliance with ambient water quality standards. In terms of aquaculture legislation, go to question 29.

Answer d) Go to question 27.

4. PLANNING AND APPROVAL

Land use planning

Relevance: all types of aquaculture except towed cages at sea

✓ the relevant box and then unless otherwise directed, move on to the next question.

27	Is aquaculture subject to land use planning legislation?	Yes. Go straight to question 28.
		No. The implication is that the spatial planning aspects of new aquaculture development will need to be addressed within the aquaculture law.
28	Do spatial development plans identify areas in which aquaculture can/cannot take place?	Yes. Go straight to question 29.
		No. The implication is that if a development consent is necessary for aquaculture this will be determined on a case-by-case basis, leading to unpredictability and risk in terms of potential investments. If spatial development plans do not identify areas in which aquaculture can/cannot take place the need for specific aquaculture spatial planning in accordance with aquaculture legislation becomes more important (see question 47).
29	Select the most appropriate response: a) a development consent is necessary for the development of aquaculture facilities; b) of all scales; c) only in the case of large-scale commercial aquaculture facilities.	a) The implication is that the socioeconomic impacts of aquaculture siting decisions will be addressed under the land use planning legislation. Go to question 30.
		b) If small-scale aquaculture is exempt from the need for development consent, there is a risk of adverse socioeconomic impacts on other sector. Consider including provisions on spatial planning in the aquaculture legislation (see question 48).
30	Does the aquaculture legislation cross-refer to the land use planning legislation?	Yes. Go straight to question 31.
		No. Revise the aquaculture legislation to: (a) cross-refer to the prior need for development consent (if necessary) before applications for aquaculture licences are considered; (b) coordinate decision making with the relevant land use planning authorities; or (c) provide for the establishment of a 'one-stop shop' for the joint determination of applications for planning consent and aquaculture licences (see further question 53).

4. PLANNING AND APPROVAL *(cont.)*

Marine legislation – marine spatial planning, navigation, fisheries

Relevance: aquaculture marine/brackish waters

31	Has legislation for marine spatial planning (MSP) legislation been adopted?	Yes: The implication is that competing claims over marine space, including claims by the aquaculture sector, will be determined during the MSP process. Go to question 32.
		No. Consider revising aquaculture legislation to ensure that other relevant claims for marine space are included in aquaculture spatial development plans and/or considered in the context of applications for aquaculture leases/licences.
32	Do the marine spatial plans identify zones where aquaculture may/may not be undertaken?	Yes: The implication is that spatial development plans for aquaculture can cross-refer or be based on MSPs and the aquaculture legislation should reflect this. Go to question 33.
		No. If not already provided for, consider revising the aquaculture legislation to provide for aquaculture spatial development plans that identify suitable places for aquaculture as well as areas in which aquaculture should not be authorized.
33	Does the aquaculture legislation cross-refer to the marine spatial planning legislation?	Yes. Go straight to question 34.
		No. Revise the aquaculture legislation to cross-refer to the marine spatial planning legislation
34	In the case of aquaculture in marine waters, is it necessary to obtain approval from the relevant authority under navigation legislation?	Yes: If not already provided for, consider revising the aquaculture legislation to cross-refer to the navigation legislation. Go to question 35.
		No. Consider revising the aquaculture legislation to require consultation by the aquaculture administration with the navigation authority in connection with the determination of licence applications for new aquaculture facilities in marine waters.

Floods, droughts and storm surges

Relevance: freshwater and brackish water aquaculture

35	Does the water resources legislation provide for the adoption of river basin management plans that identify wetlands or flood prone areas in which aquaculture can or cannot take place?	Yes: If not already provided for, ensure that aquaculture legislation requires decision makers to take such provisions into account in determining applications for aquaculture licences. Go to question 36.
		No. Revise the aquaculture legislation to provide for consideration of flood risk in aquaculture development spatial plans.

4. PLANNING AND APPROVAL (cont.)		
36	Does the water resources legislation recognize aquaculture as an agriculture activity/ important food source that should benefit from a high priority in terms of the suspension of supply in the case of a drought?	Yes. Go straight to question 37.
		No. This issue cannot be addressed in aquaculture legislation but should be reflected in terms of the priorities for water use set out in water resources legislation or in relevant river basin management plans in cases where they set out priorities.
37	Does the relevant legislation (such as legislation on land use planning, water resources management, coastal zone management legislation or specific legislation on flooding or climate change) identify areas at particular risk of flooding and other extreme weather events that may not be suitable for aquaculture?	Yes. If not already provided for, ensure that the aquaculture legislation requires decision makers to take such provisions into account in determining applications for aquaculture licences and the formulation of aquaculture spatial development plans. Go to question 38.
		No. Revise the aquaculture legislation to require aquaculture spatial development plans to identify areas at particular risk of flooding and other extreme weather events that are not suitable for aquaculture development.
Coastal zone management planning Relevance: brackish and marine water aquaculture		
38	Is there coastal zone management legislation in place that addresses the question of land use and/or identifies areas in which aquaculture may or may not take place?	Yes: If not already provided for, ensure that the aquaculture legislation cross-refers to such provisions and requires them to be taken into account in the determination of applications for aquaculture licences and/pr leases in the coastal zone. Go to question 39.
		No. Revise the aquaculture legislation to require consideration of vulnerable habitats and other uses of land within the coastal zone in aquaculture spatial development plans.
Environmental legislation: environmental impact assessment (EIA)/strategic environmental assessment (SEA), protected species, protected areas Relevance: all types of aquaculture		
39	Is the development of a new aquaculture facility potentially subject to EIA?	Yes. Go straight to question 44.
		No. The implication is that consideration the environmental impacts of new aquaculture developments will need to be addressed entirely on the basis of aquaculture legislation.

4. PLANNING AND APPROVAL (cont.)			
40	Select the most appropriate response.	a)	Yes. Go to question b).
	The EIA legislation requires an EIA for:		No. The implication is that consideration of the environmental impacts of new aquaculture developments will need to be addressed entirely on the basis of aquaculture legislation. Consider revising the aquaculture legislation to specifically require the relevant decision maker to have regard to the potential negative environmental impacts of aquaculture in terms of planning and licensing.
	a) all aquaculture development;	b)	Yes. Go straight to question 41.
	b) large scale/commercial aquaculture facilities (however so defined).		No. As small-scale aquaculture will not be subject to EIA, consider revising the aquaculture legislation to specifically require the relevant decision maker to have regard to the potential negative environmental impacts of small-scale aquaculture in terms of planning and licensing, taking account the fact that small-scale aquaculture may be also be exempt from licensing requirements.
41	Does the EIA lead to the issuance of an environmental permit by the environment agency/ ministry?		Yes: If environmental management mitigation measures will be addressed in the environmental permit consider the need for coordination/ information exchange mechanisms between the environment agency/ministry and the aquaculture administration. Go to question 42.
			No. Measures to prevent/mitigate environmental harm will derive largely or entirely from the aquaculture legislation meaning that it will be appropriate to review that legislation accordingly including in terms of requiring the person determining aquaculture licence applications to have regard to the need to include appropriate conditions in the aquaculture licence in order to ensure the protection of the environment.
42	Does the aquaculture legislation refer to the need for an EIA and the outcome of the EIA process?		Yes. Go straight to question 43.
			No. To ensure a coherent approach to the licensing process, consider revising the aquaculture legislation to specifically cross-refer to the requirements of the EIA legislation.

4. PLANNING AND APPROVAL (cont.)			
43	Is there provision in legislation for the SEA of plans and programs and if so, would aquaculture spatial development plans be subject to SEA?		Yes: The implication is that the environmental impacts of an aquaculture spatial development plans should be addressed in accordance with the SEA legislation. Go to question 44.
			No. In the absence of SEA legislation, consider revising the aquaculture legislation to require the environmental impacts of proposed aquaculture spatial development plans to be addressed, along with appropriate mitigation measures, in the plan itself.
44	Does the relevant environmental/ water resources legislation require discharge/ environmental permits for: a) land-based aquaculture facilities that discharge wastewater/effluent to freshwater bodies? b) water based aquaculture facilities in freshwater bodies and at sea?	a)	Yes. Go to question b).
			No. In this case the aquaculture legislation will likely be the only means of regulating the discharge of wastewater from land-based aquaculture facilities. Revise the aquaculture legislation to regulate the discharge from aquaculture facilities of wastewater/effluent to freshwater bodies including as regards: (a) the number /concentration of animals within the aquaculture facilities; (b) the quantities of feed used; (c) water quality and wastewater/effluent discharge monitoring; (d) the size of licensed facilities; (e) spatial planning; and (f) the concentration of licensed facilities in a given area.
		b)	Yes. Go straight to question 45.
			No. In this case the aquaculture legislation will be the only means of regulating the discharge of wastewater from water-based aquaculture facilities. Revise the aquaculture as necessary to enable the impact of wastewater/effluent to freshwater bodies including as regards: (a) the concentration of animals; (b) quantities of feed used; (c) water quality and wastewater/effluent discharge monitoring; (d) the size of licensed facilities; (e) the concentration of licensed facilities.
45	Select the most appropriate response: Within specified categories of protected area (PA): a) aquaculture is totally prohibited;	a)	Yes: Consider revising the aquaculture legislation to cross-refer to the relevant PA legislation.
			No. Go to question b)

4. PLANNING AND APPROVAL (cont.)		
	<p>b) certain types of aquaculture may be undertaken without a specific authorization from the PA authority; or</p> <p>c) aquaculture may be undertaken on the basis of a specific authorization issued by the relevant PA authority</p>	<p>b) Yes: Revise the aquaculture legislation to ensure that the necessary consultation mechanisms between the aquaculture administration and the relevant PA authority are in place so as to ensure that aquaculture facilities are constructed and operated in accordance with the requirements of the relevant PA.</p> <p>No. Go to question c)</p> <p>c) Yes: Revise the aquaculture legislation to provide that an aquaculture licence may only be issued if the PA authority has authorized the proposed facility.</p> <p>No. Go to question 46.</p>
46	<p>Apart from any EIA requirement is there any legal mechanism in place for assessing the potential negative impacts of aquaculture siting decisions on:</p> <p>a) endangered or migratory species?</p> <p>b) habitats that are critical to the survival of endangered or migratory species?</p>	<p>a) Yes. Go to question b).</p> <p>No. Revise the aquaculture legislation to require that potential impacts on migratory species are to be taken into consideration and mitigated if necessary, in the context of applications for aquaculture licences.</p> <p>b) Yes. Go straight to question 47.</p> <p>No. Revise the aquaculture legislation to provide that potential negative impacts on habitats that are critical to the survival of endangered species must be taken into consideration and mitigated, if necessary, in the determination of applications for aquaculture licences.</p>
Aquaculture legislation Relevance: all types of aquaculture activity		
Planning		
47	<p>Does the aquaculture legislation provide for the adoption and periodic review of national or sub-national (regional) aquaculture spatial development plans that identify areas that are appropriate for aquaculture?</p>	<p>Yes. Go straight to question 48.</p> <p>No. Revise the aquaculture legislation to require the preparation and periodic review of aquaculture spatial development plans that identify appropriate areas for aquaculture development as well as areas in which aquaculture should not be permitted.</p>

4. PLANNING AND APPROVAL (cont.)				
48	Do aquaculture spatial development plans provide:	a) or the zoning of aquaculture activities for the purpose of managing biological threats to aquatic animal health?	a)	Yes. Go to question b)
				No. Revise the aquaculture legislation to require aquaculture spatial development plans to set limits on site numbers based on environmental carrying capacity
		b) for the establishment of limits on the number of licensed aquaculture facilities based on environmental carrying capacity?	b)	Yes. Go to question c)
				No. Revise the aquaculture legislation to require aquaculture spatial development plans to set limits on the number of licensed aquaculture facilities based on the carrying capacity of the environment.
		c) for the setting of concentration limits (by reference to the size of the facilities and the number of aquatic animals that it contains) for individual facilities?	c)	Yes. Go to question d)
				No. Revise the aquaculture legislation to require aquaculture spatial development plans to set total concentration limits, by reference to the size of the facility and the number of aquatic animals that it contains, for individual facilities.
		d) for measures to mitigate or prevent adverse environmental impacts from aquaculture facilities?	d)	Yes. Go straight to question 49.
				No. Revise the aquaculture legislation to require aquaculture spatial development plans including measures to mitigate or prevent adverse environmental impacts from aquaculture facilities.
49	Are aquaculture spatial development plans required to address potential impacts from aquaculture on other area-based management tools such as fisheries management plans?		Yes. Go straight to question 50.	
			No. Revise the aquaculture legislation to require other area-based management tools, such as fisheries management plans, to be taken into account during the preparation and periodic review of aquaculture spatial development plans.	
Authorization/approval				
50	Does the aquaculture legislation provide that:	a) a licence is required for the development/operation of all aquaculture facilities?	a)	Yes. Go straight to question 51.
			b) a licence is required only for the development/operation of a large-scale aquaculture facilities and/or for hatcheries?	b)

4. PLANNING AND APPROVAL (cont.)		
51	Does the aquaculture legislation provide for the issuing of specific licences for experimental/test aquaculture?	Yes. Go straight to question 52.
		No. Revise the aquaculture legislation to provide for the issue of specific licences for experimental/test aquaculture.
52	Does the aquaculture legislation refer to other approval requirements (such as requirements for development consent, EIA, environmental permits, etc)?	Yes. Go straight to question 53.
		No. Revise the aquaculture legislation to specifically refer to other approval requirements.
53	Does the aquaculture legislation contain provisions to simplify the administrative procedure of applying for an aquaculture licence such as a 'single-window'/'one-stop-shop' approach?	Yes. Go straight to question 54.
		No. Revise the aquaculture legislation to promote administrative simplification such as through a single-window/one-stop-shop approach.
54	With regard to licence applications, does the aquaculture legislation:	a) Yes. Go to question b)
	a) create a mechanism for stakeholders to comment on such applications?	No. Revise the aquaculture legislation to provide a mechanism or stakeholders to comment on applications.
	b) specify a requirement for minimum competences/technical capacities on the part of the applicant or persons employed by the applicant?	b) Yes. Go to question c). No. Revise the aquaculture legislation to specify a requirement for minimum competences/technical capacities on the part of the applicant or persons employed by the applicant.
	c) require the decision maker only to issue a licence if s/he is satisfied that the proposed facility will not lead to an unacceptable risk of spreading diseases to nearby aquaculture facilities or wild stocks?	c) Yes. Go straight to question 55. No. Revise the aquaculture legislation to require the decision maker only to issue a licence if s/he is satisfied that the proposed facility will not lead to an unacceptable risk of spreading diseases to nearby aquaculture facilities or wild stocks.
55	In terms of covering the administrative or other costs of the aquaculture administration:	a) Yes. Go to question b).
	a) is an application fee payable on every application for a new licence?	No. Revise the aquaculture legislation to require the payment of an application fee payable on every application for a new licence.
	b) If an aquaculture licence is issued, is an annual fee payable during the validity of the licence?	b) Yes. Go straight to question 56.
		No. Revise the aquaculture legislation to require the payment of an annual fee during the validity of each aquaculture licence.

4. PLANNING AND APPROVAL (cont.)			
56	<p>Select the most appropriate response.</p> <p>The duration of licences is:</p> <p>a) up to five years</p> <p>b) up to 10 years</p> <p>c) up to 20 years</p> <p>d) more than 20 years</p>	a)	This period may be too short to enable a return on investment. Consider revising the aquaculture legislation to provide for a longer licence validity period.
		b)	This is a reasonable licence period that balances legal certainty with flexibility for the aquaculture administration
		c)	A licence period of much greater than 10 years may be excessive given the need to align the licensing regime with planning and environmental requirements. Revise the aquaculture legislation to provide for a maximum licence validity period of no more than 15 years or to provide for a periodic review of licences (say, every 5 years).
		d)	Such a licence period may be excessive. Consider revising the aquaculture legislation to provide for a maximum licence validity period of no more than 15 years or to provide for a periodic review (say, every 5 years).
57	<p>Does the aquaculture legislation provide for:</p> <p>a) the extension of aquaculture licences?</p> <p>b) the transfer of aquaculture licences to suitably qualified third parties, on the approval of the minister/aquaculture administration?</p>	a)	Yes. Go to question b).
			No. Revise the aquaculture legislation to provide for the extension of aquaculture licences, subject to a track record of compliance with licence conditions.
		b)	Yes. Go straight to question 58.
			No. Revise the aquaculture legislation to permit the transfer of aquaculture licences to suitably qualified third parties on the approval of the minister/aquaculture administration.
58	<p>Does the aquaculture legislation:</p> <p>a) provide that aquaculture licences are subject to general and special conditions;</p> <p>b) require ongoing compliance with other approvals relating to the aquaculture facility?</p>	a)	Yes. Go to question b).
			No. Revise the aquaculture legislation to provide that aquaculture licences are subject to general and specific conditions.
		b)	Yes. Go to question c).
			No. Revise the aquaculture legislation to provide for the inclusion of conditions in aquaculture licences that require ongoing compliance with other approvals relating to the aquaculture facility.

4. PLANNING AND APPROVAL (cont.)		
	<p>c) require the filing of a periodic return relating to the operation of the aquaculture facility?</p>	<p>c) Yes. Go straight to question 59.</p> <p>No. Revise the aquaculture legislation to provide for the inclusion of conditions in aquaculture licences that require the filing of a periodic return relating to the operation of the aquaculture facility concerned.</p>
59	Does the aquaculture legislation provide for the amendment or, as appropriate, the revocation of aquaculture licences and specify the grounds on which this may take place?	<p>Yes. Go straight to question 60.</p> <p>No. Revise the aquaculture legislation to provide for the amendment or, as appropriate, the revocation of aquaculture licences and specify the grounds upon on which this may take place.</p>
60	Does the aquaculture legislation provide for:	<p>a) Yes. Go to question b).</p> <p>No. Revise the aquaculture legislation to provide for the establishment and maintenance of a register of aquaculture licences (and leases if issued by the aquaculture administration).</p>
	a) the establishment and maintenance of a register of aquaculture licences (and leases if issued by the aquaculture administration)?	
	b) public access to such registers?	<p>Yes. Go to question c).</p> <p>No. Revise the aquaculture legislation to provide for public access to such registers.</p>
	c) internet access to such registers?	<p>Yes. Go straight to question 61.</p> <p>No. Revise the aquaculture legislation to provide for internet access to such registers.</p>
61	If aquaculture licences are not universally required for aquaculture facilities do any of the following mechanisms apply to exempt categories:	<p>a) Yes. Go straight to question 62.</p> <p>b) Yes. Go straight to question 62.</p> <p>c) Yes: Revise the aquaculture legislation to provide for mandatory registration of aquaculture facilities with the local government and/or aquaculture administration or to require compulsory membership in an aquaculture cooperative/ association.</p>
	a) registration?	
	b) compulsory membership in an aquaculture cooperative/ association?	
	c) no regulation at all?	

4. PLANNING AND APPROVAL (cont.)			
62	<p>In cases where there is a requirement to register an aquaculture facility are there clear legal/administrative mechanisms to ensure:</p> <p>a) that the relevant registers are periodically updated?</p> <p>b) that in cases where registration takes place at local government level, there is an effective mechanism to transmit the information to the aquaculture administration?</p> <p>c) that information contained in registers or necessary for registers flows to one or more central and accessible points?</p>	a)	<p>Yes. Go to question b).</p> <p>Revise the aquaculture legislation to require that the relevant registers are periodically updated.</p>
		b)	<p>Yes. Go to question c).</p> <p>No. Revise the aquaculture legislation to ensure that legal/administrative mechanisms are in place for the transmission of register information to the aquaculture administration from local governments.</p>
		c)	<p>Yes. Go straight to question 63.</p> <p>Revise the aquaculture legislation to provide for mechanisms that ensure information contained in registers or necessary for registers flows to one or more central and accessible points.</p>
63	<p>Does the aquaculture legislation:</p> <p>a) confer a unique licence number on each licensed aquaculture facility?</p> <p>b) confer a unique licensed number on each licensed aquaculture cooperative/ association?</p> <p>c) confer a unique registration number on each registered aquaculture facility/farmer?</p> <p>d) provide for the protection of personal data by reference to the applicable data protection legislation?</p>	a)	<p>Yes. Go to question b).</p> <p>No. Revise the aquaculture legislation to confer a unique licence number on each licensed aquaculture facility.</p>
		b)	<p>Yes. Go to question c)</p> <p>No. Revise the aquaculture legislation to confer a unique licence number on each licensed each licensed cooperative/ association.</p>
		c)	<p>Yes. Go to question d).</p> <p>No. Revise the aquaculture legislation to confer a unique registration number on each registered aquaculture facility/farmer.</p>
		d)	<p>Yes: Go to straight question 64.</p> <p>No. Revise the aquaculture legislation to provide for the protection of personal data in accordance with the applicable data protection legislation.</p>
64	<p>Does the aquaculture legislation, either directly or through the possibility of a licence condition, require:</p> <p>a) site clean-up/ restoration at the end of the licence/lease term?</p>	a)	<p>Yes. Go to question b)</p> <p>No. Revise the aquaculture legislation to require, either directly or through the possibility of a licence condition a requirement for site clean-up/ restoration at the end of the licence/lease term.</p>

4. PLANNING AND APPROVAL *(cont.)*

	b) the provision of a bond to guarantee site clean-up/restoration at the end of the licence/lease term?	b)	Yes. Go to question c).
			No. Revise the aquaculture legislation to the provision of a bond to guarantee site clean-up/restoration at the end of the licence/lease term.
	c) payment into a financial mechanism (e.g., insurance or an industry agreement to collect derelict gear) for the decommissioning of abandoned farms?	c)	Yes. Go straight to question 65.
			Revise the aquaculture legislation to require, either directly or through the possibility of a licence condition, payment by each licence holder into a financial mechanism (e.g., insurance or an industry agreement to collect derelict gear) for the decommissioning of abandoned farms.
Appeals			
65	Does the relevant legislation provide for an appeal or review in the event that an application for an aquaculture licence is rejected or in connection with the variation or revocation of an aquaculture licence?		Yes. Go straight to question 66.
			No. Revise the aquaculture legislation to provide for an appeal or review in the event that an application for an aquaculture licence is rejected or in connection with the variation or revocation of an aquaculture licence.

5. PRODUCTION – INPUTS

Aquatic animals

Relevance: aquaculture involving aquatic animals

Import of aquatic animals

✓ **the relevant box and then unless otherwise directed, move on to the next question.**

66	Is there legislation in place that regulates the import of live aquatic animals for aquaculture?		Yes. Go straight to question 67.
			No. Revise/adopt relevant legislation to regulate the import of live aquatic animals for aquaculture.
67	Is the scope of the legislation sufficiently broad to include: a) aquatic animals not cultivated for food such as aquarium fish? b) aquatic animals at all life stages (seed, fry, spat, genetic material etc)?	a)	Yes. Go to question b)
			No. If aquarium fish are farmed in the jurisdiction concerned, revise the relevant animal health legislation to include them within its scope.
		b)	Yes. Go straight to question 68.
			No. Revise the relevant animal health legislation so that it applies to aquatic animals at all life stages.
68	Is a permit required for the import of live aquatic animals?		Yes. Go straight to question 69
			No. Revise the relevant legislation to require a permit for the import of live aquatic animals for aquaculture.
69	Does the relevant legislation require: a) a valid international health certificate issued by the competent veterinary authority of the exporting country to accompany every consignment of imported aquatic animals for aquaculture? b) Import-permitting decisions to be undertaken on the basis of a risk assessment procedure or in accordance with relevant international standards?	a)	Yes. Go to question b).
			No. Revise the relevant legislation to require all imports of live aquatic animals to take place only on the basis of a valid international health certificate issued by the competent authority of the exporting country.
		b)	Yes. Go straight to question 70.
			No. Revise the relevant legislation to require import permitting decisions to be undertaken on the basis of a risk assessment procedure or in accordance with relevant international standards.

5. PRODUCTION – INPUTS (cont.)

70	Does the relevant legislation establish specific permitting requirements for the import of:	a) live aquatic animals of alien (non-indigenous) species?	a)	Yes. Go to question b)
				No. Revise the relevant legislation to establish specific permitting requirements for the import/placing on the market/farming of alien (non-indigenous) species.
		b) the import of live aquatic animals of endangered species subject to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)?	b)	Yes. Go to question c).
				No. Revise the relevant legislation to establish specific permitting requirements for the import/export of endangered species subject to CITES.
		c) genetically modified aquatic animals?	c)	Yes. Go straight to question 71.
				No. Revise the relevant legislation to establish specific permitting requirements import/placing on the market/farming of genetically modified aquatic animals.
71	Does the relevant legislation:	a) provide for documentary inspection of imported live aquatic animals at the border?	a)	Yes. Go to question b).
				No. Revise the relevant legislation to provide for documentary inspection of imported live aquatic animals at the border.
		b) clearly identify the competent body for the purpose of undertaking a technical inspection and authorising the import of live aquatic animals?	b)	Yes. Go to question c).
				No. Revise the relevant legislation to clearly identify the competent authority for the purpose of undertaking a technical inspection and authorising the import of live aquatic animals
		c) clearly identify the competent authority(/ies) for the purpose of inspecting and authorising the import of live aquatic animals that are subject to CITES or which are genetically modified?	c)	Yes. Go to question d).
				No. Revise the relevant legislation to clearly identify the competent authority(/ies) for the purpose of inspecting and authorising the import of aquatic animals that are subject to CITES or which are genetically modified
		d) provide for the quarantine of imported live aquatic animals?	d)	Yes. Go to question e).
				No. Revise the relevant legislation to clearly provide for the quarantine of imported live aquatic animals.
		e) set out other requirements such as treatment and/or certification of imported aquatic animals?	e)	Yes. Go straight to question 72.
				No. Revise the relevant legislation to provide for the treatment and/or certification of imported aquatic animals.

5. PRODUCTION – INPUTS (cont.)

Breeding, gathering bloodstock/aquatic animals for aquaculture

72	Does the relevant legislation:		a)	Yes. Go to question b).
				No. Revise the aquaculture legislation to regulate breeding in aquaculture facilities.
	a) regulate breeding in aquaculture facilities?		b)	Yes. Go straight to question 73.
				No. Revise the aquaculture legislation/ fisheries legislation to regulate the gathering of bloodstock/fishing of aquatic animals for use in aquaculture.

Movement, placing on the market and introduction of aquatic animals

73	With regard to the movement of live aquatic animals (at all stages of life) within the jurisdiction concerned, does the relevant legislation require the prior authorization of movement across different zones, compartments or regions based on an assessment of the presence or absence of disease/ disease risk?		a)	Yes. Go straight to question 74.
				No. Revise the relevant legislation to require the prior authorization of the movement of live aquatic animals across different zones, compartments or regions based on an assessment of the presence of absence of diseases/disease risk.
74	Does the relevant legislation require each aquaculture licence holder to maintain records of:		a)	Yes. Go to question b).
				No. Revise the relevant legislation to require each aquaculture licence holder to maintain records of the movements of live aquatic animals into/out of the aquaculture facility.
	a) movements of live aquatic animals into/out of the aquaculture facility?		b)	Yes. Go straight to question 75.
				No. Revise the relevant legislation to require each aquaculture licence holder to maintain records of the mortality of aquatic animals in each movement.
b) the mortality of aquatic animals in each movement?		a)	Yes. Go to question b).	
			No. Revise the relevant legislation to provide for licensing the transport of live aquatic animals.	
75	Does the relevant legislation regulate the movement of live aquatic animals in terms of:		b)	Yes. Go to question c).
				No. Revise the relevant legislation to specify standards for aquatic animal health requirements during transport.

5. PRODUCTION – INPUTS (cont.)		
	<p>c) requiring the transporter to maintain a record of animal mortality during transport?</p> <p>d) water exchange during transport and the eventual safe disposal of such water?</p> <p>e) quarantine on arrival?</p>	<p>c) Yes. Go to question d).</p> <p>No. Revise the relevant legislation to require each transporter to maintain a record of animal mortality during transport</p> <p>d) Yes. Go to question e).</p> <p>No. Revise the relevant legislation to regulate water exchange during transport and the eventual safe disposal of such water.</p> <p>e) Yes. Go straight to question 76.</p> <p>No. Revise the relevant legislation to provide for quarantine on arrival.</p>
76	Does the relevant legislation require prior authorization for the placing on the market of imported/non-indigenous live aquatic animals?	<p>Yes. Go straight to question 77.</p> <p>No. Revise the relevant legislation to require prior authorization for the placing on the market of imported/non-indigenous live aquatic animals</p>
77	Does the relevant legislation regulate the introduction into an aquaculture facility of non-native species in order ensure that these do not pose an unacceptable risk to:	<p>Yes. Go to question b).</p> <p>No. Revise the relevant legislation to regulate the introduction of non-native species into an aquaculture facility in order to ensure that such an introduction will not pose an unacceptable risk to biodiversity.</p> <p>Yes. Go straight to question 78.</p> <p>No. Revise the relevant legislation to regulate the introduction of non-native species into an aquaculture facility in order to ensure that such an introduction will not pose an unacceptable risk to aquatic animal health.</p>
<p>Aquatic Plants Relevance: aquaculture involving aquatic plants</p>		
Import		
78	Is there plant health/biosecurity legislation in place that:	<p>Yes. Go to question b).</p> <p>No. Revise the relevant plant health/biosecurity legislation so that it applies to aquacultured plant and plant products.</p> <p>Yes. Go straight to question 79.</p> <p>No. Revise the relevant legislation so that it applies to the import of aquatic plants and plant products.</p>
	<p>a) clearly applies to aquatic plants used in aquaculture?</p> <p>b) regulates the import of aquatic plants and plant products?</p>	

5. PRODUCTION – INPUTS (cont.)		
79	If the plant protection organization (the entity responsible for the regulation of the import of aquatic plants and plant products), is separate to the aquaculture administration, are there clear legal mechanisms in place to ensure coordination and information exchange?	Yes. Go straight to question 80.
		No. Revise the relevant legislation to clearly set out the respective responsibilities of the plant protection authority and the aquaculture administration and to set out clear legal mechanisms in place to ensure coordination and information exchange.
80	Does the relevant legislation regulate the import of: a) alien (non-indigenous) aquatic plants? b) genetically modified aquaculture plants? c) plants and products of plant origin that may harbour biological risks?	a) Yes. Go to question b)
		No. Revise the relevant legislation to require the plant protection organization to regulate the import of alien (non-indigenous) aquatic plants.
		b) Yes. Go to question c).
		No. Revise the relevant legislation to require the plant protection organization to regulate the import of genetically modified aquatic plants.
		c) Yes. Go straight to question 81.
81	Does the relevant legislation: a) require imported aquatic plants to be accompanied by a valid plant health certificate? b) require non-discriminatory quarantine measures for the quarantine of imported aquatic plants, plant products and other regulated articles? c) regulate the import of aquatic plants, plant products and other regulated articles including through the adoption of phytosanitary measures including as regards inspection, prohibition on importation, and treatment?	a) Yes. Go to question b).
		No. Revise the relevant legislation to require imported aquatic plants to be accompanied by a valid plant health certificate.
		b) Yes. Go to question c).
		No. Revise the relevant legislation to require non-discriminatory quarantine measures for the quarantine of imported aquaculture plants and plant products and other regulated articles.
81	c) regulate the import of aquatic plants, plant products and other regulated articles including through the adoption of phytosanitary measures including as regards inspection, prohibition on importation, and treatment?	c) Yes. Go to question d).
		No. Revise the relevant legislation to regulate the import of aquatic plants and plant products and other regulated articles including through the adoption of phytosanitary measures that include inspection, the prohibition of importation, and treatment.

5. PRODUCTION – INPUTS (cont.)			
	d) regulate the importation of aquatic plants, plant products and other regulated articles on the basis of a pest risk analysis?		d) Yes. Go to question e).
	e) confer the necessary powers upon the plant protection organization to refuse entry or detain, or require the treatment or destruction of diseased aquatic plants or plant products?		No. Revise the relevant legislation to confer the necessary powers upon the plant protection organization to regulate the import of aquatic plants, plant products and other regulated articles on the basis of a pest risk analysis.
		e)	Yes. Go straight to question 82.
			No. Revise the relevant legislation to confer the necessary powers upon the plant protection organization to refuse entry or detain or require the treatment or destruction of diseased aquatic plants or plant products.
Placing on the market, transport and introduction			
82	Does the relevant legislation:	a)	Yes. Go to question b).
	a) regulate the placing on the market of aquatic plants for use in aquaculture?		No. Revise the relevant legislation to regulate the placing on the market of aquatic plants.
	b) regulate the transport of aquatic plants for use in aquaculture including through area-based restrictions based on the identification of pest free areas and rules on safe water disposal?	b)	Yes. Go straight to question 83.
			No. Revise the relevant legislation to regulate the transport of aquatic plants for use in aquaculture including through area-based restrictions based on the identification of pest-free areas and rules on safe water disposal.
83	Does the relevant legislation regulate the introduction and use in aquaculture of alien aquatic plants:	a)	Yes. Go to question b).
	a) in general;		No. Revise the relevant legislation to regulate the introduction and use in aquaculture of alien aquatic plants.
	b) on land-based facilities that are completely separated from the aquatic environment	b)	Yes. Go straight to question 84.
			No. Revise the relevant legislation to create a simplified regime to regulate the introduction and use in aquaculture of alien aquatic plants on land-based facilities that are completely separated from the aquatic environment.

5. PRODUCTION – INPUTS (cont.)

Aquatic animal feed

Relevant to: The culture of aquatic animals other than shellfish

84	Does the scope of feed legislation clearly extend to aquaculture feed and feed additives?		Yes. Go straight to question 85.
			No. Revise the feed legislation or the aquaculture legislation to address the issue of aquaculture feed and feed additives.
85	Is there a clear/well established coordination mechanism between the body responsible for the implementation of the feed legislation and the aquaculture administration?		Yes. Go straight to question 86.
			No. Revise the relevant legislation to clearly identify a coordination mechanism between the body responsible for the implementation of the feed legislation and the aquaculture administration.
86	Does the relevant legislation create a legal basis for preventing, restricting or otherwise controlling, on a non-discriminatory basis, the import of aquatic animal feeds and feed ingredients that: a) contain additives, in order to ensure that such additives have been subject to a recognized risk assessment? b) have been manufactured with fishmeal or fish oil harvested from endangered species?	a)	Yes. Go to question b).
			No. Revise the relevant legislation to create a legal basis for preventing, restricting or otherwise controlling, on a non-discriminatory basis, the import of fish feeds that contain additives, in order to ensure that such additives have been subject to a recognized risk assessment.
		b)	Yes. Go straight to question 87.
			No. Revise the relevant legislation to create a legal basis for preventing, restricting or otherwise controlling, on a non-discriminatory basis, the import of fish feeds manufactured with fishmeal or fish oil harvested from endangered species.
87	Does the relevant legislation regulate: a) the manufacture of fish feed including as regards procedures, techniques and the quality and types of content used? b) the placing on the market and/or use of fish feed? c) the packaging/re-packaging and labelling of fish feed?	a)	Yes. Go to question b).
			No. Revise the relevant legislation to create a legal basis to regulate the manufacture of fish feed including as regards procedures, techniques and the quality and types of content used.
		b)	Yes. Go to question c).
			Revise the relevant legislation to create a legal basis to regulate the placing on the market and/or use of fish feed.
		c)	Yes. Go straight to question 88.
	No. Revise the relevant legislation to create a legal basis to regulate the packaging/re-packaging and labelling of fish feed.		

5. PRODUCTION – INPUTS (cont.)			
88	Does the relevant legislation prohibit or restrict the placing on the market and/or use of feed containing	a)	Yes. Go to question b)
	a) fish species that may have a food use?		No. Revise the relevant legislation to prohibit or restrict the placing on the market and/or use of feed containing fish species that may have a food use.
	b) endangered fish species including species that are protected under national or international law or which are subject to CITES?	b)	Yes. Go to question c)
			No. Revise the relevant legislation to prohibit or restrict the placing on the market and/or use of feed containing endangered fish species including species that are protected under national or international law or which are subject to CITES.
	c) fish that do not come from managed fisheries?	c)	Yes. Go straight to question 89.
			No. Revise the relevant legislation to prohibit or restrict the placing on the market and/or use of feed containing fish that do not come from managed fisheries.
89	Does the relevant legislation provide that the import, placing on the market, sale and use of medicinal feed, meaning feed that contains antimicrobial growth enhancers or other antimicrobial/medicinal products, is to be regulated as a medicinal product?		Yes. Go straight to question 90.
			No. Revise the relevant legislation so as to provide that medicated feed is regulated as a medicinal product.
Medicines Relevance: Aquatic animal culture			
90	Is there a clear legal basis for regulating the use of medicines and medicinal products in aquaculture, including fish oral drugs, external antimicrobials, anti-parasitic compounds and medicated feed?		Yes. Go straight to question 91.
			No. Revise the relevant legislation on medicines and medicinal products, to make explicit that it applies to medicines used in the treatment of aquatic animals including fish oral drugs, external antimicrobials, anti-parasitic compounds and medicated feed for use in aquaculture.
91	Does the relevant legislation identify which agency is responsible for the approval of medicines and medicinal products for aquatic animals used in aquaculture?		Yes. Go straight to question 92.
			No. Revise the relevant legislation to clearly identify which agency is responsible for the approval of medicines and medicinal products for aquatic animals used in aquaculture.

5. PRODUCTION – INPUTS (cont.)			
92	If the agency responsible for the approval of medicines and medicinal products for aquatic animals used in aquaculture is separate to the aquaculture administration, does the legislation provide for a clear legal mechanism for coordination/information exchange?		Yes. Go straight to question 93.
			No. Revise the relevant legislation to establish a clear legal mechanism for coordination/information exchange between the agency responsible for the approval of medicines and medicinal products for aquatic animals used in aquaculture and the aquaculture administration.
Import and placing on the market			
93	With regard to medicines and medicinal products for aquatic animals used in aquaculture, does the relevant legislation require prior approval for: a) imports? b) placing on the market including as regards labelling requirements? c) use in aquaculture?	a)	Yes. Go to question b).
			No. Revise the relevant legislation to require prior approval for the import of medicines and medicinal products for aquatic animals used in aquaculture.
		b)	Yes. Go to question c).
			No. Revise the relevant legislation to require prior approval for the placing on the market of medicines and medicinal products for aquatic animals used in aquaculture including as regards labelling requirements.
		c)	Yes. Go straight to question 94.
			No. Revise the relevant legislation to require prior approval for the use in aquaculture of medicines and medicinal products.
Prescription and use of medicines			
94	Does the relevant legislation provide that the sale of medicines and medicinal products for application to aquatic animals used in aquaculture may take place only in accordance with a prescription issued by a duly qualified veterinarian?		Yes. Go straight to question 95.
			No. Revise the relevant legislation to provide that the sale of medicines and medicinal products for application to aquatic animals used in aquaculture may take place only in accordance with a prescription issued by a duly qualified veterinarian.

5. PRODUCTION – INPUTS (cont.)

95	<p>With regard to the use/application of medicines and medicinal products to aquatic animals used in aquaculture, does the relevant legislation:</p> <p>a) require the use/application of medicines/medicinal products to take place only under the supervision of a duly qualified and accredited veterinarian or support worker?</p> <p>b) specify how such medicines and medicinal products are to be stored?</p> <p>c) specify how such medicines and medicinal products are to be used/applied?</p> <p>d) prohibit or restrict the use of antimicrobials for growth promotion?</p> <p>e) confer power on the competent authority to restrict the use of antimicrobials for prevention (<i>profilaxis</i>) and control and are these terms properly defined in legislation?</p> <p>f) specify labelling and expiry requirements?</p>		a)	Yes. Go to question b).
				No. Revise the relevant legislation to require the use/application of medicines and medicinal products for aquatic animals used in aquaculture to take place only under the supervision of a duly qualified and accredited veterinarian or support worker.
			b)	Yes. Go to question c).
				No. Revise the relevant legislation to specify how medicines and medicinal products for aquatic animals used in aquaculture are to be stored.
			c)	Yes. Go to question d).
				No. Revise the relevant legislation to specify how medicines and medicinal products for aquatic animals used in aquaculture are to be used/applied.
			d)	Yes. Go to question e).
				No. Revise the relevant legislation to prohibit or restrict the use of antimicrobials to promote the growth of aquatic animals used in aquaculture.
			e)	Yes. Go to question f).
				No. Revise the relevant legislation to confer power upon the competent authority to restrict the use antimicrobials for prevention (<i>profilaxis</i>) and control and to ensure that these terms are properly defined
			f)	Yes. Go straight to question 96.
				No. Revise the relevant legislation to specify labelling and expiry requirements.

5. PRODUCTION – INPUTS (cont.)

96	With regard to the use of medicines/medicinal products in aquaculture, does the relevant legislation require:	a)	Yes. Go to question b).	
			No. Revise the relevant legislation to require the reporting of adverse reactions and/or lack of effectiveness.	
		a) the reporting of adverse reactions and/or lack of effectiveness?	b)	Yes. Go to question c).
		b) the establishment of a surveillance system for antimicrobial resistance from the use of medicines for aquatic animals?		No. Revise the relevant legislation to require the establishment of a surveillance system for antimicrobial resistance from the use of medicines for aquatic animals.
		c) the provision of information to veterinarians so as to ensure prudent use of antimicrobials?	c)	Yes. Go to question d).
				No. Revise the relevant legislation to the provision of information to veterinarians so as to ensure prudent use of antimicrobials.
		d) veterinarians to periodically report to the competent authority the prescriptions they have issued for antimicrobials for aquatic animals?	d)	Yes. Go to question e).
				No. Revise the relevant legislation to required veterinarians to periodically report to the competent authority the prescriptions they have issued for antimicrobials for aquatic animals.
		e) the reporting of negative impacts of medicine use on wild stocks?	e)	Yes. Go straight to question 98.
				No. Revise the relevant legislation to require the reporting of negative impacts of medicine/medicinal product use on wild stocks.
97	Does the relevant legislation set out rules for the safe and environmentally sound disposal of unused medicines prescribed for aquatic animals?		Yes. Go straight to question 98.	
			No. Revise the relevant legislation and set out rules for the safe and environmentally sound disposal of unused medicines prescribed for aquatic animals	
Chemicals/pesticides Relevance: all aquaculture activities				
98	Does the relevant legislation restrict or ban the import of hazardous chemicals/chemical products including biocides banned or restricted by the Rotterdam Convention on Prior Informed Consent (PIC), the Stockholm Convention on Persistent Organic Pollutants (POPs) or classed as "extremely hazardous" or "highly hazardous" by the World Health Organization (WHO)?		Yes. Go straight to question 99.	
			No. Revise the relevant legislation to restrict or ban the import of hazardous chemicals/chemical products including biocides banned or restricted by the Rotterdam Convention on PIC, the Stockholm Convention POPs or classed as "extremely hazardous" or "highly hazardous" by the WHO.	

5. PRODUCTION – INPUTS (cont.)				
99	Is there legislation in place that regulates:		a)	Yes. Go to question b).
	a) the placing on the market of chemicals/chemical products for use in aquaculture?			No. Revise the relevant legislation to regulate the placing on the market of chemicals/chemical products for use in aquaculture
	b) the use of chemicals/chemical products in aquaculture.		b)	Yes. Go straight to question 100.
				No. Revise the relevant legislation to regulate the use of chemicals/chemical products in aquaculture.
100	Regarding the use of chemicals/chemical products in aquaculture, does the relevant legislation:		a)	Yes. Go to question b).
	a) regulate storage and usage?			No. Revise the relevant legislation to regulate the storage and usage of chemicals/chemical products for use in aquaculture.
	b) specify labelling requirements?		b)	Yes. Go to question c)
	c) require awareness raising/training for aquaculture workers?			No. Revise the relevant legislation to specify labelling requirements for chemicals/chemical products for use in aquaculture.
			c)	Yes. Go straight to question 101.
				No. Revise the relevant legislation to require awareness raising/training for aquaculture workers involved in the use of chemicals/pesticides.

6. PRODUCTION – FACILITY MANAGEMENT

General

Relevance: All types of aquaculture

		✓ the relevant box and then unless otherwise directed, move on to the next question.
101	Does the relevant legislation provide for the adoption by the minister responsible for aquaculture/the aquaculture administration, in consultation with the aquaculture industry, of one or more codes of practice or non-binding standards for the aquaculture sector or parts of the aquaculture sector?	Yes. Go straight to question 102.
		No. Revise the aquaculture legislation to provide for the adoption by the minister/aquaculture administration of one or more codes of practice or non-binding standards for the aquaculture sector or parts of the aquaculture sector.
102	Does the relevant legislation require every licensed aquaculture facility to have its own site management plan?	Yes: Go question 103.
		No. Revise the aquaculture legislation to require every licensed aquaculture facility to have its own site management plan.
103	Does the relevant legislation address:	a) Yes. Go to question b).
	a) a) the employment status and rights of men and women employed in aquaculture facilities?	No. Revise the relevant legislation to address the employment status and rights of men and women employed in aquaculture facilities.
	b) a) social security rights of men and women employed in aquaculture facilities?	b) Yes. Go to question c).
	c) c) trafficked and child labour in aquaculture facilities?	No. Revise the relevant legislation to address the social security rights of persons employed in aquaculture facilities.
	d) d) worker safety in aquaculture facilities?	c) Yes. Go to question d).
		d) Yes. Go straight to question 104.
	No. Revise the relevant legislation to address the use of trafficked and child labour in aquaculture facilities.	
	No. Revise the relevant legislation to ensure that worker safety in aquaculture facilities is addressed.	
104	Does the aquaculture legislation require every aquaculture licence holder to hold relevant technical qualifications relating to aquaculture or to employ on a full-time basis staff who do?	Yes. Go straight to question 105.
		No. Revise the aquaculture legislation to require every aquaculture licence holder to hold relevant technical qualifications relating to aquaculture or to employ on a full-time basis staff who do.
105	Does the aquaculture legislation address the use of vessels in aquaculture?	Yes. Go straight to question 106.
		No. Revise the aquaculture legislation to provide for the regulation of vessels used in aquaculture.

6. PRODUCTION – FACILITY MANAGEMENT (cont.)			
106	Does the aquaculture legislation require the periodic recording of aquaculture production levels, losses, sales and overall financial performance etc. by each licence holder?		Yes. Go straight to question 107
			No. Revise the aquaculture legislation to make provision for periodic reporting on aquaculture production levels, losses, sales and overall financial performance by each licence holder.
Environmental impacts of aquaculture production			
107	Does the aquaculture legislation provide for the periodic submission by aquaculture licence holders of reports concerning environmental impacts arising from the operation of the facility?		Yes. Go straight to question 108.
			No. Revise the aquaculture legislation to provide for the periodic submission by aquaculture licence holders of reports concerning environmental impacts arising from the operation of the facility.
Escapes			
108	In order to prevent escapes from aquaculture facilities, does the aquaculture legislation: a) provide for the setting of specific rules on containment through the use of effective screens/barriers? b) require regular inspections to verify the structural integrity of each facility and require such inspections to be recorded? c) require the use of equipment and materials that comply with relevant technical standards?	a)	Yes. Go to question b)
			No. Revise the aquaculture legislation to provide for the setting of specific rules on containment.
		b)	Yes. Go to question c)
			No. Revise the aquaculture legislation to require regular inspections to verify the structural integrity of each facility and require such inspections to be recorded
		c)	Yes. Go straight to question 109.
			No. Revise the aquaculture legislation to require the use of equipment and materials that comply with relevant technical standards.
109	Does the aquaculture legislation provide that in the event of an escape from an aquaculture facility the licence holder/ aquaculture farmer must: a) take measures to recover escaped aquatic animals? b) record details of any such escapes? c) notify the aquaculture administration?	a)	Yes. Go to question a).
			No. Revise the aquaculture legislation to require the licence holder/aquaculture farmer to take measures to recover escaped aquatic animals.
		b)	Yes. Go to question c).
			No. Revise the aquaculture legislation to require the licence holder/ aquaculture farmer to record details of any such escapes.
		c)	Yes. Go straight to question 110.
			No. Revise the aquaculture legislation to require the licence holder/ aquaculture farmer to notify the aquaculture administration.

6. PRODUCTION – FACILITY MANAGEMENT *(cont.)*

Protected animals and protected predators

110	Does the relevant environmental/wildlife legislation require, as far as practical, the use of only non-lethal management measures to exclude, deter or remove endangered predator species and to require specific authorization from the environment agency for the use of lethal measures in cases where the use of non-lethal measures is not practical?		Yes. Go straight to question 111.
			No. Revise the aquaculture legislation to require, as far as practical, the use of only non-lethal management measures to exclude, deter or remove endangered predator species and to require specific authorization from the environment agency for the use of lethal measures in cases where the use of non-lethal measures is not practical.

Lost gear/equipment

111	Does the aquaculture legislation require: a) the recovery of gear/equipment (including nets) lost from an aquaculture facility? b) the marking of major items of gear/equipment (including nets) with the licence/registration number of the facility concerned?	a)	Yes. Go to question b).
			No. Revise the aquaculture legislation to impose a legal duty upon licence holders/aquaculture farmers to take all reasonable measures to recover lost gear/equipment (including nets).
		b)	Yes. Go straight to question 112.
			No. Revise the aquaculture legislation to impose a legal duty upon licence holders/aquaculture farmers to mark gear/equipment (including nets) with the licence/registration number of the facility.

Animal and plant health management

112	Does the relevant legislation: a) regulate the vaccination of aquatic animals against specified diseases? b) make provision for the mandatory vaccination of aquatic animals against specified diseases?	a)	Yes. Go to question b).
			No. Revise the relevant legislation to confer the necessary powers upon the competent authority to regulate the vaccination of aquatic animals against specified diseases.
		b)	Yes. Go straight to question 113.
			No. Revise the relevant legislation to confer the necessary powers upon the competent authority for the purposes of aquatic animal health to require the mandatory vaccination of aquatic animals against specified diseases.
113	Does the relevant legislation require aquaculture licence holders/aquaculture farmers to: a) maintain a stock register?	a)	Yes: go to question b)
			No. Revise the aquaculture legislation to require each licence holder/aquaculture farmer to maintain a stock register.

6. PRODUCTION – FACILITY MANAGEMENT *(cont.)*

	b) to periodically test for pathogens?	b)	Yes. Go to question c).
	c) record the results of pathogen testing?		No. Revise the relevant legislation to require the aquaculture licence holder/aquaculture farmer to periodically test for pathogens.
	d) maintain daily inspection records of the animals or plants being cultured?	c)	Yes. Go to question d).
	e) record the name, reasons for use, dates, amounts and withdrawal times of all veterinary medicines and chemicals used within the aquaculture facility?		No. Revise the aquaculture legislation to require the aquaculture licence holder/aquaculture farmer to record the results of pathogen testing.
	f) to report all mortality events with daily mortality above the average to the veterinarian or competent authority or aquaculture administration?	d)	Yes. Go to question e).
			No. Revise the aquaculture legislation to require the aquaculture licence holder/aquaculture farmer to maintain daily inspection records of the animals or plants being cultured.
		e)	Yes. Go to question f).
			No. Revise the aquaculture legislation to require the aquaculture licence holder/aquaculture farmer to record the name, reasons for use, dates, amounts and withdrawal times of all veterinary medicines and chemicals used within the aquaculture facility.
		f)	Yes. Go straight to question 114.
			No. Revise the aquaculture legislation to require the aquaculture licence holder/aquaculture farmer to report all mortality events with daily mortality above the average to the veterinarian or competent authority or aquaculture administration.
114	Does the relevant legislation provide for the adoption of:	a)	Yes. Go to question b).
	a) minimum hygiene standards for aquatic animals?		No. Revise the aquaculture legislation to provide for the adoption of minimum hygiene standards for aquatic animals.
	b) minimum welfare standards for aquatic animals?	b)	Yes. Go straight to question 115.
			No. Revise the aquaculture legislation to provide for the adoption of minimum welfare standards for aquatic animals.

6. PRODUCTION – FACILITY MANAGEMENT *(cont.)*

115	Does the relevant legislation provide for the establishment of standards for:		a)	Yes: Got to question b).
				No. Revise the aquaculture legislation to provide for the establishment of standards for the stunning and killing of aquatic animals.
			b)	Yes. Go straight to question 116.
				No. Revise the aquaculture legislation to provide for the establishment of standards for the destruction of aquatic animals for the purpose of disease control.

7. DISEASE PREVENTION AND CONTROL

Planning, surveillance and preparation

Relevance: all types of aquaculture

✓ the relevant box and then unless otherwise directed, move on to the next question.

116	Does the relevant legislation require the preparation of contingency plans: a) by the competent authority relating to aquatic animal disease outbreaks and the achievement of disease-free status? b) by the competent authority relating to aquatic plant disease outbreaks and the achievement of disease-free status?		a)	Yes. Go to question b.
				No. Revise the relevant legislation to require the preparation of contingency plans by the competent authority relating to aquatic animal disease outbreaks and the achievement of disease-free status.
			b)	Yes. Go straight to question 117.
				No. Revise the relevant legislation to require the preparation of contingency plans by the plant protection authority relating to aquatic plant disease outbreaks and the achievement of disease-free status.
117	Does the relevant legislation require: a) the competent authority to undertake risk-based animal health surveillance of aquaculture facilities, involving periodical inspections, visits, audits, and where appropriate, sampling, as appropriate for the type of production? b) the plant protection organization/aquaculture administration to undertake risk-based plant health surveillance of aquaculture facilities, involving periodical inspections, visits, audits, and where appropriate, sampling, as appropriate for the type of production?		a)	Yes. Go to question b).
				No. Revise the aquaculture legislation to require the competent authority to apply a risk-based animal health surveillance scheme for all relevant aquaculture facilities, involving periodical inspections, visits, audits, and where appropriate, sampling, as appropriate for the type of production.
			b)	Yes. Go straight to question 118.
				No. Revise the aquaculture legislation to require the plant protection organization/aquaculture administration to apply a risk-based plant health surveillance scheme for all relevant aquaculture facilities, involving periodical inspections, visits, audits, and where appropriate, sampling, as appropriate for the type of production.

7. DISEASE PREVENTION AND CONTROL (cont.)		
118	<p>Does the relevant legislation provide for the designation of appropriately qualified laboratories (including accredited, official and reference laboratories) to undertake examinations, to confirm the presence or absence of diseases and/or to undertake diagnostic procedures relating to:</p> <p>a) aquatic animal health? b) aquatic plant health?</p>	<p>a) Yes. Go to question b).</p> <p>No. Revise the relevant legislation to enable the designation of appropriately qualified laboratories to undertake examinations, to confirm the presence or absence of diseases and/or to undertake diagnostic services relating to aquatic animal health.</p> <p>b) Yes. Go straight to question 119.</p> <p>No. Revise the relevant legislation to enable the designation of appropriately qualified laboratories to undertake examinations, to confirm the presence or absence of diseases and/or to undertake diagnostic services relating to aquatic animal health.</p>
119	<p>In cases where they are separate entities or entities that depend on separate ministers, does the legislation set out a mechanism for information exchange, coordination and collaboration between the competent authority/plant protection authority and the aquaculture administration with regard to aquatic animal/aquatic plant diseases?</p>	<p>Yes. Go straight to question 120.</p> <p>No. Revise the relevant legislation to set out a mechanism for information exchange, coordination and collaboration between the competent authority/plant protection authority and the aquaculture administration with regard to aquatic animal diseases.</p>
120	<p>Does the relevant legislation confer the necessary powers on the competent authority to establish zones or compartments for the purpose of managing or mitigating the impacts of outbreaks of notifiable aquatic animal diseases and for controlling the import/export and movement of aquatic animal species?</p>	<p>Yes. Go straight to question 121.</p> <p>No. Revise the relevant legislation to confer the necessary powers on the competent authority to establish zones or compartments for the purpose of managing or mitigating the impacts of outbreaks of notifiable aquatic animal diseases and for controlling the import/export and movement of aquatic animal species.</p>
121	<p>Does the relevant legislation require:</p> <p>a) a) the competent authority to maintain a list of notifiable aquatic animal diseases? b) b) the plant protection organization/aquaculture administration to maintain a list of notifiable aquatic plant diseases?</p>	<p>Yes. Go to question b).</p> <p>No. Revise the relevant legislation to require the competent authority to maintain a list of notifiable aquatic animal diseases.</p> <p>Yes. Go straight to question 122.</p> <p>No. Revise the relevant legislation to require the plant protection organization/aquaculture administration to maintain a list of notifiable aquatic animal diseases.</p>

7. DISEASE PREVENTION AND CONTROL (cont.)

122	<p>Does the relevant legislation require the competent authority to notify the World Organisation for Animal Health (OIE) of:</p> <p>a) the first occurrence of a listed disease within the jurisdiction concerned?</p> <p>b) the recurrence of a listed disease following the earlier filling of final report declaring that a previous outbreak had ended?</p> <p>c) the first occurrence of a new strain of pathogenic agent of a listed disease?</p> <p>d) a sudden and unexpected change in the distribution or increase in incidence or virulence of, or morbidity or mortality caused by the pathogenic agent of a listed disease?</p> <p>e) the occurrence of a listed disease in a new host species?</p>	a)	Yes. Go to question b).
			No. Revise the relevant legislation to require the competent authority to notify OIE of the first occurrence of a listed disease within the jurisdiction concerned.
		b)	Yes. Go to question c).
			No. Revise the relevant legislation to require the competent authority to notify OIE of the recurrence of a listed disease following the earlier filling of final report declaring that a previous outbreak had ended.
		c)	Yes. Go to question d).
			No. Revise the relevant legislation to require the competent authority to notify OIE of the first occurrence of a new strain of pathogenic agent of a listed disease.
		d)	Yes. Go to question e).
			No. Revise the relevant legislation to require the competent authority to notify OIE of a sudden and unexpected change in the distribution or increase in incidence or virulence of, or morbidity or mortality caused by the pathogenic agent of a listed disease.
		e)	Yes. Go straight to question 123.
	No. Revise the relevant legislation to require the competent authority to notify OIE of the occurrence of a listed disease in a new host species		
123	<p>Does the relevant legislation provide for a declaration by the competent authority of the outbreak of a notifiable disease relating to:</p> <p>a) aquatic animals?</p> <p>b) aquatic plants?</p>	a)	Yes. Go to question b).
			No. Revise the relevant legislation to provide for a declaration by the competent authority of the outbreak of a notifiable disease relating to aquatic animals.
		b)	Yes. Go straight to question 124.
	No. Revise the relevant legislation to provide for a declaration by the competent authority of the outbreak of a notifiable disease relating to aquatic plants.		

7. DISEASE PREVENTION AND CONTROL (cont.)			
124	<p>Does the relevant legislation require the mandatory reporting by farmers, plant/aquatic animal health management professionals and diagnostic laboratories of:</p> <p>a) notifiable diseases detected in aquatic animals?</p> <p>b) new/unknown diseases and/or abnormal morbidity levels detected in aquatic animals?</p> <p>c) notifiable or new/unknown diseases detected in aquatic plants?</p>	a)	<p>Yes. Go to question b).</p> <p>No. Revise the relevant legislation to require the mandatory reporting by aquaculture farmers, aquatic animal health management professionals, and diagnostic laboratories to the competent authority of notifiable diseases detected in aquatic animals.</p>
		b)	<p>Yes. Go to question c).</p> <p>No. Revise the relevant legislation to require the mandatory reporting by aquaculture farmers, aquatic animal health management professionals, and diagnostic laboratories to the competent authority of new/unknown diseases and/or abnormal morbidity levels detected in aquatic animals.</p>
		c)	<p>Yes. Go straight to question 125.</p> <p>No. Revise the relevant legislation to require the mandatory reporting by aquaculture farmers, plant health management professionals and diagnostic laboratories to the plant protection authority of notifiable or new/unknown diseases detected in aquatic plants.</p>
Response measures			
125	<p>Does the relevant legislation confer the necessary powers upon:</p> <p>a) the competent authority to order treatment or other corrective action with regard to diseased aquatic animals?</p> <p>b) the plant protection authority to order treatment or other corrective action with regard to diseased aquatic plants?</p>	a)	<p>Yes. Go to question b).</p> <p>No. Revise the relevant legislation to confer the necessary powers upon the competent authority to order treatment or other corrective action with regard to diseased aquatic animals.</p>
		b)	<p>Yes. Go straight to question 126.</p> <p>No. Revise the relevant legislation to confer the necessary powers upon the plant protection authority to order treatment or other corrective action with regard to diseased aquatic plants.</p>
126	<p>Does the relevant legislation require the competent authority:</p> <p>a) to monitor the impact of diseases in aquatic animals used in aquaculture on wild aquatic animals?</p>	a)	<p>Yes. Go to question b).</p> <p>Revise the relevant legislation to require the competent authority to monitor the impact of disease in aquatic animals used in aquaculture on wild aquatic animals.</p>

7. DISEASE PREVENTION AND CONTROL (cont.)

	b) to take measures to reduce and, as far as possible, to prevent the further spreading of such diseases in wild aquatic animals?	b)	Yes. Go straight to question 127.
			Revise the relevant legislation to require the competent authority to take measures to reduce, and as far as possible, to prevent the further spreading of diseases in wild aquatic animals.
127	Does the relevant legislation confer the necessary powers on the competent authority, plant protection authority and/or the aquaculture administration:	a)	Yes. Go to question b)
	a) to prohibit the movement of aquatic animals between zones, compartments or other defined areas to prevent the spread of disease?		No. Revise the relevant legislation to confer the necessary powers on the competent authority and/or the aquaculture administration to prohibit the movement of aquatic animals between zones, compartments or other defined areas.
	b) to prohibit the movement of aquatic plants between different geographical areas to prevent the spread of disease?	b)	Yes. Go to question c)
	c) to order, in the case of a land-based aquaculture facility, an immediate halt to the discharge of wastewater from the facility?		No. Revise the relevant legislation to confer the necessary powers on the plant protection authority and/or the aquaculture administration to prohibit the movement of aquatic plants between geographical areas to prevent the spread of disease.
	d) to prohibit the harvesting and sale of diseased aquatic animals or aquatic plants?	c)	Yes. Go to question d)
	e) to order the destruction of diseased aquatic animals or aquatic plants?		No. Revise the relevant legislation to confer the necessary powers on the competent authority, plant protection authority and/or the aquaculture administration to order, in the case of a land-based aquaculture facility, an immediate halt to the discharge of wastewater from the facility.
	f) to suspend all imports of species of the type that is subject to a declaration concerning an outbreak of a notifiable disease?	d)	Yes. Go to question e)
	g) to suspend all exports of aquatic animal or aquatic plant species of the type that is subject to a declaration concerning an outbreak of a notifiable disease?		No. Revise the relevant legislation to confer the necessary powers on the competent authority, plant protection authority and/or the aquaculture administration to prohibit the harvesting and sale of diseased aquatic animals or aquatic plants.
		e)	Yes. Go to question f)
			No. Revise the relevant legislation to confer the necessary powers on the competent authority, plant protection authority and/or the aquaculture administration to order the destruction of diseased aquatic animals or aquatic plants.

7. DISEASE PREVENTION AND CONTROL (cont.)										
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">f)</td> <td>Yes. Go to question g)</td> </tr> <tr> <td></td> <td>No. Revise the relevant legislation to confer the necessary powers on the competent authority, plant protection authority and/ or the aquaculture administration to suspend all imports of aquatic animal or aquatic plant species of the type that is subject to a declaration concerning an outbreak of a notifiable disease.</td> </tr> <tr> <td style="text-align: center;">g)</td> <td>Yes. Go straight to question 128.</td> </tr> <tr> <td></td> <td>No. Revise the relevant legislation to confer the necessary powers on the competent authority, plant protection authority and/ or the aquaculture administration to suspend all exports of aquatic animal or aquatic plant species of the type that is subject to a declaration concerning an outbreak of a notifiable disease.</td> </tr> </table>	f)	Yes. Go to question g)		No. Revise the relevant legislation to confer the necessary powers on the competent authority, plant protection authority and/ or the aquaculture administration to suspend all imports of aquatic animal or aquatic plant species of the type that is subject to a declaration concerning an outbreak of a notifiable disease.	g)	Yes. Go straight to question 128.		No. Revise the relevant legislation to confer the necessary powers on the competent authority, plant protection authority and/ or the aquaculture administration to suspend all exports of aquatic animal or aquatic plant species of the type that is subject to a declaration concerning an outbreak of a notifiable disease.
f)	Yes. Go to question g)									
	No. Revise the relevant legislation to confer the necessary powers on the competent authority, plant protection authority and/ or the aquaculture administration to suspend all imports of aquatic animal or aquatic plant species of the type that is subject to a declaration concerning an outbreak of a notifiable disease.									
g)	Yes. Go straight to question 128.									
	No. Revise the relevant legislation to confer the necessary powers on the competent authority, plant protection authority and/ or the aquaculture administration to suspend all exports of aquatic animal or aquatic plant species of the type that is subject to a declaration concerning an outbreak of a notifiable disease.									
128	<p>Does the relevant legislation provide that:</p> <p>a) the expenses of destruction are to be paid by the aquaculture farmer?</p> <p>b) compensation is to be paid to the farmer for destroyed animals/plants?</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">a)</td> <td>Yes. Go to question b).</td> </tr> <tr> <td></td> <td>No. Revise the relevant legislation to provide for the establishment of a compensation mechanism in order to encourage reporting.</td> </tr> <tr> <td style="text-align: center;">b)</td> <td>Yes. Go straight to question 129.</td> </tr> <tr> <td></td> <td>No. Consider, if appropriate, revising the relevant legislation to require farmers to contribute to a mandatory compensation fund to encourage compliance with animal health/plant health requirements.</td> </tr> </table>	a)	Yes. Go to question b).		No. Revise the relevant legislation to provide for the establishment of a compensation mechanism in order to encourage reporting.	b)	Yes. Go straight to question 129.		No. Consider, if appropriate, revising the relevant legislation to require farmers to contribute to a mandatory compensation fund to encourage compliance with animal health/plant health requirements.
a)	Yes. Go to question b).									
	No. Revise the relevant legislation to provide for the establishment of a compensation mechanism in order to encourage reporting.									
b)	Yes. Go straight to question 129.									
	No. Consider, if appropriate, revising the relevant legislation to require farmers to contribute to a mandatory compensation fund to encourage compliance with animal health/plant health requirements.									
129	<p>Does the relevant legislation confer powers upon the competent authority, plant protection authority or aquaculture administration to order:</p> <p>a) the temporary closure of an aquaculture facility?</p> <p>b) the treatment of an aquaculture facility?</p> <p>c) the fallowing of an aquaculture facility for a defined period?</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">a)</td> <td>Yes. Go to question b)</td> </tr> <tr> <td></td> <td>No. Revise the relevant legislation to confer powers upon the competent authority, plant protection authority and/or aquaculture administration to order the temporary closure of an aquaculture facility.</td> </tr> <tr> <td style="text-align: center;">b)</td> <td>Yes. Go to question c)</td> </tr> <tr> <td></td> <td>No. Revise the relevant legislation to confer powers upon the competent authority, plant protection authority and/or aquaculture administration to order the treatment of an aquaculture facility.</td> </tr> </table>	a)	Yes. Go to question b)		No. Revise the relevant legislation to confer powers upon the competent authority, plant protection authority and/or aquaculture administration to order the temporary closure of an aquaculture facility.	b)	Yes. Go to question c)		No. Revise the relevant legislation to confer powers upon the competent authority, plant protection authority and/or aquaculture administration to order the treatment of an aquaculture facility.
a)	Yes. Go to question b)									
	No. Revise the relevant legislation to confer powers upon the competent authority, plant protection authority and/or aquaculture administration to order the temporary closure of an aquaculture facility.									
b)	Yes. Go to question c)									
	No. Revise the relevant legislation to confer powers upon the competent authority, plant protection authority and/or aquaculture administration to order the treatment of an aquaculture facility.									

7. DISEASE PREVENTION AND CONTROL *(cont.)*

		c)	Yes. Go straight to question 130.
			No. Revise the relevant legislation to confer powers upon the competent authority, plant protection authority and/or aquaculture administration to order the following of an aquaculture facility for a defined period.
130	Does the relevant legislation confer the necessary legal powers upon the competent authority to: a) declare infected zones, compartments or other areas free of a notifiable disease and set out relevant criteria for such a declaration? b) declare zones, compartments or other areas with low prevalence of a disease and set out relevant criteria for such a declaration? c) declare buffer zones and set out relevant criteria for such a declaration?	a)	Yes. Go to question b).
			No. Revise the relevant legislation to confer the necessary legal powers upon the competent authority to declare infected zones, compartments or other areas free of a notifiable disease and to set out relevant criteria for such a declaration.
		b)	Yes. Go to question c).
			Revise the relevant legislation to confer the necessary legal powers upon the competent authority to declare zones, compartments or other areas with low prevalence of a disease and set out relevant criteria for such a declaration.
		c)	Yes. Go straight to question 131.
			No. Revise the relevant legislation to confer the necessary legal powers upon the competent authority to declare buffer zones and set out relevant criteria for such a declaration.

8. POST-PRODUCTION

Food safety and traceability

Relevance: aquaculture production for food and consumer products

✓ the relevant box and then unless otherwise directed, move on to the next question.

131	<p>In order to ensure the rights of consumers to safe and wholesome aquaculture products, does the aquaculture law or other relevant legislation provide for the adoption of subordinate legislation concerning:</p> <p>a) standards for aquaculture facilities, processing establishments, cold rooms, ice plants, fish transportation vehicles and service boats?</p> <p>b) binding standards for the transport, handling and storage of aquaculture products applicable to producers and dealers in such products?</p> <p>c) the preparation and implementation by processing establishments of quality management programmes and checks?</p> <p>d) the mandatory use of quality management monitoring programmes and the application of Hazard Analysis and Critical Control Point (HACCP)?</p> <p>e) the mandatory microbiological, chemical and physical analysis of aquaculture products before they are released for human consumption?</p>	a)	Yes. Go to question b).
			No. Revise the relevant legislation to enable the adoption of subordinate legislation concerning standards for aquaculture facilities, processing establishments, cold rooms, ice plants, fish transportation vehicles and service boats (and adopt such subordinate legislation as necessary).
		b)	Yes. Go to question c)
			No. Revise the relevant legislation to enable the adoption of subordinate legislation concerning binding standards for the transport, handling and storage of aquaculture products applicable to producers and dealers in such products (and adopt such subordinate legislation as necessary).
		c)	Yes. Go to question d)
			No. Revise the relevant legislation to enable the adoption of subordinate legislation concerning the preparation and implementation of by processing establishments quality management programmes and checks (and adopt such subordinate legislation as necessary).
		d)	Yes. Go to question e)
			No. Revise the relevant legislation to enable the adoption of subordinate legislation concerning the mandatory use of quality management monitoring programmes and the application of HACCP (and adopt such subordinate legislation as necessary).
		e)	Yes. Go to question f)
			No. Revise the relevant legislation to enable the adoption of subordinate legislation concerning the mandatory microbiological, chemical and physical analysis of aquaculture products before they are released for human consumption (and adopt such subordinate legislation as necessary).

8. POST-PRODUCTION (cont.)			
	f) the certification of the quality of aquaculture products through the issuance of a sanitary certificate before they are placed on the market?	f)	Yes. Go to question g)
	g) establishing a traceability system for aquaculture products at any stage to/ from the aquaculture facility?		No. Revise the relevant legislation to enable the adoption of subordinate legislation concerning the certification of the quality of aquaculture products through the issuance of a sanitary certificate before they are placed on the market (and adopt such subordinate legislation as necessary).
	h) the labelling of aquaculture products placed on the market?		Yes. Go to question h)
			No. Revise the relevant legislation to enable the adoption of subordinate legislation establishing a traceability system for aquaculture products at any stage to/from the aquaculture facility (and adopt such subordinate legislation as necessary).
			Yes. Go straight to question 132.
			No. Revise the relevant legislation to enable the adoption of subordinate legislation concerning the labelling of aquaculture products placed on the market (and adopt such subordinate legislation as necessary).
132	Does the relevant legislation require the monitoring of residues of chemicals and veterinary medicinal products within aquaculture products?		Yes. Go straight to question 133.
			No. Revise the relevant legislation to require the monitoring of residues of chemicals and veterinary medicinal products within aquaculture products.
Export of live aquatic animals			
133	Does the relevant legislation (directly or through the adoption of subordinate legislation):	a)	Yes. Go to question b).
	a) provide for the issuance of aquatic animal health certificates?		No. Revise the relevant legislation to provide (directly or through the adoption of subordinate legislation) for the issuance of aquatic animal health certificates.
	b) require each consignment of aquatic animals and aquatic animal products for export to be accompanied by a valid animal health certificate?	b)	Yes. Go to question c).
			No. Revise the relevant legislation to require (directly or through provisions contained in subordinate legislation) each consignment of aquatic animals and aquatic animal products for export to be accompanied by a valid animal health certificate.

8. POST-PRODUCTION (cont.)

	c) require each consignment of aquatic animals that is to be moved within the jurisdiction concerned to be accompanied by a valid animal health certificate		c)	Yes. Go to question d).
	d) set out the procedures for the issuance of aquatic animal health certificates?		d)	Yes. Go to question e).
	e) describe minimum contents of aquatic animal health certificates or a procedure for determining this?		e)	Yes. Go straight to question 134.
				No. Revise the relevant legislation to provide (directly or through the adoption of subordinate legislation) to require each consignment of aquatic animals that is moved within the jurisdiction to be accompanied by a valid animal health certificate.
				No. Revise the relevant legislation set out (directly or through the adoption of subordinate legislation) procedures for the issuance of aquatic animal health certificates.
				No. Revise the relevant legislation to describe (directly or through the adoption of subordinate legislation) the minimum contents of aquatic animal health certificates or a procedure for determining this.
Export of aquatic plants				
134	Does the relevant legislation (directly or through the adoption of subordinate legislation):		a)	Yes. Go to question b).
	a) provide for the issuance of phytosanitary certificates for aquatic plants, plant products and other related articles?		b)	Yes. Go to question c).
	b) require each consignment of aquatic plants, plant products and other related articles to be accompanied with a phytosanitary certificate issued in accordance with international standards?		c)	Yes. Go to question d).
	c) set out the procedures for the issuance of such phytosanitary certificates?			Revise the relevant legislation to set out (directly or through the adoption of subordinate legislation) the procedures for the issuance of such phytosanitary certificates.
				No. Revise the relevant legislation to provide (directly or through the adoption of subordinate legislation) for the issuance of phytosanitary certificates for aquatic plants, plant products and other related articles.
				No. Revise the relevant legislation to require (directly or through the adoption of subordinate legislation) each consignment of aquatic plants, plant products and other related articles to be accompanied with a phytosanitary certificate issued in accordance with international standards.

8. POST-PRODUCTION *(cont.)*

	d) describe the minimum contents of such phytosanitary certificates or a procedure for determining this?		d) Yes. Go straight to question 135. Revise the relevant legislation to describe (directly or through the adoption of subordinate legislation) the minimum contents of such phytosanitary certificates or a procedure for determining this
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9. INSPECTION AND ENFORCEMENT

Inspection

Relevance: all types of aquaculture

		✓ the relevant box and then unless otherwise directed, move on to the next question.	
135	<p>Does the relevant legislation provide for the appointment of inspectors with powers to routinely inspect aquaculture facilities and related places for the purpose of verifying compliance with:</p> <p>a) aquaculture legislation?</p> <p>b) animal/plant health legislation or medicines legislation?</p> <p>c) environmental legislation?</p>	a)	Yes. Go to question b).
			No. Revise the aquaculture legislation to provide for the appointment of inspectors with powers to routinely inspect aquaculture facilities for the purpose of verifying compliance with that legislation.
		b)	Yes. Go to question c).
			No. Revise the relevant legislation to provide for the appointment of inspectors with powers to routinely inspect aquaculture facilities for the purpose of verifying compliance with animal/plant health legislation, medicines legislation.
		c)	Yes. Go straight to question 136.
			No. Revise the relevant legislation to provide for the appointment of inspectors with powers to routinely inspect aquaculture facilities for the purpose of verifying compliance with environmental legislation.
136	<p>Does the relevant legislation:</p> <p>a) require every inspector to produce, on demand and in the course of exercising inspection and/or enforcement powers, evidence of his/her appointment?</p> <p>b) specify that no action may be brought against an inspector in respect of actions or omissions made in good faith during the course of inspection or enforcement?</p>	a)	Yes. Go to question b)
			Revise the aquaculture legislation to require every inspector to produce, on demand and in the course of exercising inspection and/or enforcement powers, evidence of his/her appointment.
		b)	Yes. Go straight to question 137.
			Revise the aquaculture legislation to specify that no action may be brought against an inspector in respect of actions or omissions in good faith during the course of inspection or enforcement.
137	<p>Does the aquaculture legislation confer appropriate powers upon inspectors:</p> <p>a) to enter, without a warrant, any licensed or registered aquaculture facility for the purpose of inspection/enforcement?</p>	a)	Yes. Go to question b).
			No. Revise the aquaculture legislation to confer power upon inspectors to enter, without a warrant, any licensed or registered aquaculture facility for the purpose of inspection/enforcement.

9. INSPECTION AND ENFORCEMENT *(cont.)*

b) to enter, without a warrant, private premises (not used as dwelling places) for the purposes of inspection/enforcement?	a)	Yes. Go to question b).
		No. Revise the aquaculture legislation to confer power upon inspectors to enter, without a warrant, any licensed or registered aquaculture facility for the purpose of inspection/enforcement.
	c)	Yes. Go to question c).
		No. Revise the aquaculture legislation to confer power upon inspectors to enter, without a warrant, private premises (not used as dwelling places) for the purposes of inspection/enforcement.
	d)	Yes. Go to question d).
		No. Revise the aquaculture legislation to confer power upon inspectors to order a vessel or a vehicle to stop in order to permit boarding and inspection.
	e)	Yes. Go to question e).
		No. Revise the aquaculture legislation to confer power upon inspectors to take samples of aquatic animals, aquatic plants, food, chemicals and medicines from within an aquaculture facility.
	f)	Yes. Go to question f).
		No. Revise the aquaculture legislation to confer power upon inspectors to require the production of documents and records.
	g)	Yes. Go straight to question g)
		No. Revise the aquaculture legislation to confer power upon inspectors to take pictures and to make copies of documents.
	g)	Yes. Go straight to question 138.
		No. Revise the aquaculture legislation to confer power upon inspectors to undertake interviews and to require that answers be provided to questions.

9. INSPECTION AND ENFORCEMENT *(cont.)*

Enforcement

138	Does the aquaculture legislation confer appropriate powers upon an inspector/the aquaculture administration to serve an enforcement notice upon the operator of an aquaculture facility to require the operator to take corrective action to remedy breaches of aquaculture legislation, animal/plant health legislation or environmental legislation?		Yes. Go straight to question 139.
			No. Revise the aquaculture legislation to confer appropriate powers upon an inspector to serve an enforcement notice upon the operator of an aquaculture facility to require the operator to take corrective action to remedy breaches of aquaculture legislation, animal/plant health legislation or environmental legislation.
139	Does the aquaculture legislation confer appropriate powers upon an inspector: a) to seize and hold evidence of an offence? b) to arrest any person whom the inspector has reasonable grounds to believe has committed an offence? c) to order the cessation of any aquaculture activity which the authorized officer has reasonable grounds to believe has been undertaken in contravention of the relevant legislation? d) to dispose of seized aquatic animals/plants by sale, in which case a receipt is to be provided, or by destruction? e) depending on the rules of the jurisdiction concerned, to make sworn statements with evidentiary value? f) to provide certificate evidence, as appropriate in the jurisdiction concerned?	a)	Yes. Go to question b).
			No. Revise the aquaculture legislation to confer appropriate powers upon an inspector to seize and hold evidence of an offence.
		b)	Yes. Go to question c).
			No. Revise the aquaculture legislation to confer appropriate powers upon an inspector to arrest any person whom the inspector has reasonable grounds to believe has committed an offence.
		c)	Yes. Go to question d).
			No. Revise the aquaculture legislation to confer appropriate powers upon an inspector to order the cessation of any aquaculture activity which the inspector has reasonable grounds to believe has been undertaken in contravention of the relevant legislation.
		d)	Yes. Go to question e).
			No. Revise the aquaculture legislation to confer appropriate powers upon an inspector to dispose of seized aquatic animals/plants by sale, in which case a receipt is to be provided, or by destruction.
		e)	Yes. Go to question f).
			No. Revise the aquaculture legislation to confer appropriate powers upon an inspector, depending on the rules of the jurisdiction concerned, to make sworn statements with evidentiary value.
		f)	Yes. Go straight to question 140.
			No. Revise the aquaculture legislation to confer appropriate powers upon an inspector to provide certificate evidence.

9. INSPECTION AND ENFORCEMENT <i>(cont.)</i>		
140	Does the relevant legislation create clear and relevant offenses capable of effective prosecution and/or sanction on the basis of administrative procedures relating to breaches of the legal framework for aquaculture?	Yes. Go straight to question 141.
		No. Revise the aquaculture legislation to create clear offenses capable of effective prosecution and/or sanction on the basis of administrative procedures relating to breaches of the legal framework for aquaculture.
141	Does the aquaculture legislation provide for corporate liability for offences?	Yes. Go straight to question 142.
		No. Revise the aquaculture legislation to provide for corporate liability for offences.
142	Does the relevant legislation set out sanctions for non-compliance with the elements of the legal framework for aquaculture set at a sufficiently onerous level to promote compliance?	Yes: End of the ALART.
		No. Revise the aquaculture legislation to set out sanctions for non-compliance with the elements of the legal framework for aquaculture set at a sufficiently onerous level to promote compliance.

Aquaculture Legal Assessment and Revision Tool

Clear and robust national legal frameworks are necessary for sustainable aquaculture as they ensure that roles, relationships and interactions of stakeholders are defined, rights are protected and the responsibilities of the regulator and the regulated are discharged, ensuring that they and other relevant persons are held accountable for their actions (or inactions). Sound legal frameworks for sustainable aquaculture are essential for blue food systems transformation and enable blue economies strategies and priorities to be realized.

The Aquaculture Legal Assessment and Revision Tool (ALART) sets out a methodology: (a) to systematically analyse and assess national legal frameworks for aquaculture in order to identify gaps, weaknesses and issues for revision or reform; and (b) to set out possible approaches in terms of the revision or reform of that framework. The ALART is accompanied by a separate study, “Legal Frameworks for Sustainable Aquaculture”, which acts as a background or resource document.

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