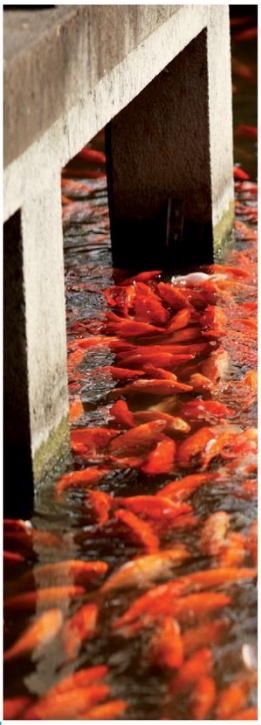
PVS Pathway

PVS Evaluation Report: Aquatic

TURKEY

Human, Physical and Financial Resources | Technical Authority and Capability | Interaction with Interested Parties | Access to Markets





April
2016

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WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

OIE PVS EVALUATION

REPORT OF THE

AQUATIC ANIMAL HEALTH SERVICES

OF

TURKEY

(4-14 April 2016)

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List of acronyms, abbreviations and/or special terms

AAH	Aquatic Animal Health
AAHC	OIE Aquatic Animal Health Code
AAHP	Aquatic Animal Health Professional
AAHS	Aquatic Animal Health Service(s)
AI	Avian Influenza
BIP	Border Inspection Post
CA	Competent Authority
CRA	Consumer Rights Association
CUAP	Central Union of Aquaculture Producers
CVO	Chief Veterinary Officer
DG	Director General
EAEVE	European Association of Establishments for Veterinary Education
EU	European Union
FMD	Foot and Mouth Disease
FTE	Full Time Equivalent
GDFC	General Directorate of Food and Control
HAB	Harmful Algae Bloom
HACCP	Hazard Analysis and Critical Control Point
ILAC	International Laboratory Accreditation Cooperation
IRA	Import Risk Analysis
KHV	Koi herpesvirus disease
LIMS	Laboratory Information Management System
MFAL	Ministry of Food, Agriculture and Livestock
NGO's	Non Governmental Organisations
NRMP	National Residue Monitoring Programmme
OIE	World Organisation for Animal Health
OIE-PVS	OIE Performance of Veterinary Services Evaluation Tool
QA	Quality Assurance
QMS	Quality Management System
SDP	Standard Diagnostic Procedure
SPS	Sanitary and Phyto-Sanitary
TAHC	OIE Terrestrial Animal Health Code
TB	Bovine Tuberculosis
TURKAK	Turkish Laboratory Accreditation Institution
TVMA	Turkish Veterinary Medical Association
VCRI	Veterinary Control and Research Institute (Bornova)
VS	Veterinary Service(s)

Acknowledgements

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The team would also like to thank Dr Emrecan Ozeler for assistance in translation in English.

PART I: EXECUTIVE SUMMARY

I.1 Introduction

At the request of the Government of Turkey, the Director General of the OIE appointed an independent OIE PVS team consisting of Dr. Piergiuseppe Facelli (Team Leader), Drs. Hichem Bouzghaia and Geoff Grossel (Technical experts) to undertake an evaluation of the Aquatic Animal Health Services (AAHS) of Turkey. The evaluation was carried out on April 4-14, 2016.

The AAHS of Turkey are part of the General Directorate for Food Control (GDFC) of the Ministry of Food, Agriculture and Livestock (MFAL) that provides terrestrial animal veterinary services. Accordingly the evaluation took into account relevant standards in the OIE Aquatic Animal Health Code (the Aquatic Code) and those in the OIE Terrestrial Animal Health Code (the Terrestrial Code), using the OIE PVS Aquatic Tool (2013) to guide the procedures. Relevant Aquatic and Terrestrial Code references for each critical competency appear in Appendix 1.

This report identifies the strengths and weaknesses of the AAHS of Turkey as compared to the OIE standards and contains recommendations for actions to improve performance.

The evaluation began with meetings with the Deputy Undersecretary and Chief Veterinary Officer / OIE Delegate and with senior GDFC and General Directorate for Fisheries and Aquaculture (GDFA) staff at the MFAL headquarters, Ankara.

After the opening meetings, the Team visited public and private sector sites and institutions in several cities and rural areas of Turkey and discussed relevant matters with government and provincial officials, veterinary university, public and private sector veterinarians, aquaculture producers, traders, consumers, representatives of the food processing industry and other interested parties.

The mission concluded in Ankara with a closing meeting involving GDFC and other MFAL officials at which the overall findings of the evaluation were discussed.

I.2 Key findings of the evaluation

The importance of aquatic animal health to the agro industry economy of Turkey is evident by the MFAL target to reach an aquaculture production volume of 500,000 tons (235,000 tons in 2014) with a value of around $1 billion ($0.676 billion in 2014) by 2023.

This target calls for continuous upgrading of GDFC's skills and efficacies to meet production and export standards and provide appropriate and professional health management capable of meeting the needs of rapidly expanding production.

OIE PVS team evaluated current capacity of GDFC and requirements of the AAHS to scale-up and be capable of meeting projected aquaculture growth. Time constraints restricted visitation focus to the main coastal production areas where most of the growth is projected to occur.

These economic and trade considerations underline the need to strengthen the Aquatic Animal Health Services of Turkey as documented in this report.

I.2.A Human, physical and financial resources

The GDFC has satisfactory structure and organisation for implementing core operational AAHS. Financial, human and physical resources were found to be adequate to meet the AAHS operations, especially for provision of university qualified veterinarians and AAHP's from a well-structured education system. Structure and chain of command is clear and accounts for technical independence between aquaculture production and regulatory control of AAHS.

At Central, Provincial and District level there is good understanding among staff of their mission of core operational duties.

The MFAL plans to double aquaculture production to 500,000 tonnes by 2023.While organisational structure, roles and responsibilities are well organised, there is no dedicated branch (i.e. task force or similar group) at the Central level for AAHS planning, leadership and direction, especially for the development of a national strategic plan.

There are some veterinary faculties that offer units in aquaculture for veterinarians with plans to expand establishment of aquaculture specialty curricula across all Turkish veterinary faculties, based on expanding industry needs and student preference, but veterinary faculties have in general weak curricula regarding the AAH sector.

Continuing education on AAH is currently insufficient even though there is high level of awareness regarding the need for development of it.

There is a clear chain of command from the Central to the field level allowing for the implementation of all AAH programmes.

AAHS at the operational level would benefit from instructions confirming a clear distinction between the roles and responsibilities of veterinarians and AAHP's, especially within the private production sector. AAHS would also benefit by strengthening Day 1 competencies for veterinarians working in AAHS through improved university level curricula, specialist training for AAH and an improved continual education programme.

Funded emergency response arrangements are in place.

I.2.B Technical authority and capability

National reference laboratories and the AAHS laboratory network throughout Turkey are appropriately accredited to meet international standards.

Quarantine and border security organisational structure and operations adequately meet international standards.

GDFC has good capacity to conduct passive and targeted surveillance activities and has the physical and human resources capable to actively perform actions to prevent, control or eradicate OIE listed diseases.

GDFC has the authority and capability to approve, inspect and regulate all establishments related to food and animal feed safety. There is a comprehensive National Residue Management Plan (updated on a yearly basis) and good capability to control veterinary medicines and biologicals for use in aquaculture.

GDFC has good traceability programmes in place for all aquatic animal and aquatic animal health products.

There is a lack of support from the Bornova reference laboratory toward the animal health laboratory network for performing standard diagnostic procedures for aquatic animal disease.

GDFC has not identified diseases of economic or environmental concern to either themselves or their trading partners that require Import Risk Analysis (IRA).

Passive and active surveillance resources are not well planned or being used to their full potential capacity.

The national list of notifiable aquatic animal diseases was aligned with diseases listed by the OIE and EU and was last updated in 2007. The OIE list has since been updated and the national list is no longer aligned with the OIE listed diseases. There is no policy framework (listing criteria) or procedure for reviewing and updating the national list with exotic and endemic diseases of environmental or economic concern, including emerging diseases.

Emergency response programmes (including compensatory funding) are in place for terrestrial but not for aquatic animal diseases.

There is a need to prioritise the development of biosecurity plans (for all types of facilities including hatcheries, feed mills, grow-out, processors) and plans/manuals for disease identification, destruction, disposal and decontamination.

There is no formal policy framework or procedures for consultation and evaluation of the need for new veterinary medicines and veterinary biologicals, including the controls required for the prudent use of all new (and existing) registered medicines.

HACCP procedures are not properly applied in all premises supplying the domestic market.

There is a basic legislation for the welfare of farmed fish, but this is not compliant with all the OIE standards.

I.2.C Interaction with interested parties

GDFC consultative and communication activities are regularly performed, especially with regard to amendment to legislation and draft legislation. The GDFC website is publicly available and it is easy to access news, data and legislation, but it doesn't contain complete information on activities and outcomes.

GDFC structure includes OIE focal points and CODEX focal point, but participation in meetings with international standard setting bodies, mainly in Codex Alimentarius activities related to fishery products, is not assured on a regular basis.

GDFC has the authority to delegate disease control and investigation activities if the need arises. Current delegation is only for import/export food safety analysis to private laboratories.

There is a Turkish Veterinary Medical Association (TVMA) widely spread throughout Turkey and all private veterinarians must hold membership in order to exercise their profession, but it is not a true Veterinary Statutory Body because it has no authority to regulate professionals and para-professionals in the AAH sector.

TVMA is not totally independent in its decisions according to its status because its objective is also as a Union of veterinarians.

Producers and other interested parties are not trained to participate in any aquatic animal health programmes including surveillance for early detection of pathogens of concern.

I.2.D Access to markets

GDFC has a comprehensive formal structure and process in place for drafting, amending, external reviewing, implementation and enforcement of legislation.

GDFC (Central, Provincial and District level) has the power to take legal action and initiate prosecution in instances of non-compliance.

GDFC participates in international harmonisation activities and actively pursues the development, implementation and maintenance of sanitary agreements with importing countries.

There is no structured policy development framework specifically for creating disease-free zones or compartments.

The health certification system seems to be functional and adequate, but it should be audited on a regular basis in order to maintain national and international confidence.

Regulations are not regularly reviewed and updated as evidenced by the out-dated national list of notifiable aquatic animal diseases.

Table 1: Summary results of the Aquatic PVS evaluation

	Result
I. HUMAN, PHYSICAL AND FINANCIAL RESOURCES	
I-1.A. Staffing: Veterinary or aquatic animal health professionals	3
I-1.B. Staffing: Aquatic animal health professional and other technical personnel	3
I-2.A. Professional competencies of veterinary or aquatic animal health professionals	3
I-2.B. Competencies of aquatic animal health professional and other technical personnel	3
I-3. Continuing education	2
I-4. Technical independence	4
I-5. Stability of structures and sustainability of policies	4
I-6.A. Internal coordination (chain of command)	4
I-6.B. External coordination	3
I-7. Physical resources	4
I-8. Operational funding	3
I-9. Emergency funding	4
I-10. Capital investment	4
I-11. Management of resources and operations	3
II. TECHNICAL AUTHORITY AND CAPABILITY	
II-1.A. Access to laboratory diagnosis	4
II-1.B. Suitability of national laboratory infrastructures	4
II-2. Laboratory quality assurance	3
II-3. Risk analysis	2
II-4. Quarantine and border security	4
II-5.A. Passive epidemiological surveillance	2
II-5.B. Active epidemiological surveillance	2
II-6. Emergency response	2
II-7. Disease prevention, control and eradication	2
II-8.A. Regulation, authorisation and inspection of establishments	3
II-8.B. Inspection of collection, slaughter, processing and distribution of products of aquatic animal origin	3
II-9. Veterinary medicines and biologicals	3
II-10. Residue testing	4
II-11. Aquatic animal feed safety	4
II-12.A. Aquatic animal movement control	4
II-12.B. Traceability of products of aquatic animal origin	4
II-13. Welfare of farmed fish	2
III. INTERACTION WITH INTERESTED PARTIES	
III-1. Communication	3
III-2. Consultation with interested parties	3
III-3. Official representation	3
III-4. Accreditation/authorisation/delegation	3
III-5.A. VSB authority	2
III-5.B. VSB capacity	2
III-5.C. Other professional authorities	1
III-5. Participation of producers and other interested parties in joint programmes	3
IV. ACCESS TO MARKETS	
IV-1. Preparation of legislation and regulations	4
IV-2. Implementation of legislation and regulations and compliance thereof	3
IV-3. International harmonisation	3
IV-4. International certification	4
IV-5. Equivalence and other types of sanitary agreements	4
IV-6. Transparency	3
IV-7. Zoning	2
IV-8. Compartmentalisation	2

I.3 Key recommendations

I.3.A Human, physical and financial resources

Develop a seven-year national strategic plan for AAHS (a road map for the future) and an accompanying business and work plan to meet the needs of the 2023 production target.

Consider the creation of a dedicated AAH branch (task force or similar group) that would be responsible for providing national leadership, strategic planning and direction for all AAHS.

Collaborate with the relevant veterinary university bodies to improve continuing education courses, university level curricula and specialist training for AAH, in order to comply with OIE Day 1 competencies for AAHS.

Develop policy and instructions confirming a clear distinction between the roles and responsibilities of veterinarians and aquaculture engineers, especially within the private production sector.

Evaluate, develop and implement an electronic management system.

I.3.B Technical authority and capability

Regularly review and update the national list of notifiable aquatic animal diseases to improve planning for AAHS and to meet reporting obligations. National list review activities should be scheduled to follow the regular meetings and determinations made by the OIE.

Develop an emergency response plan/manual and conduct training for sea bass aquaculture. Include aquatic animal disease in the compensation fund.

Strengthen the policy and procedures regarding passive surveillance for wild fish kills and susceptible wild species. Develop a public awareness programme for reporting fish kills.

Put in place an active surveillance policy (and plan) for prioritising, planning and resourcing active surveillance activities.

Since Turkey imports very few lots of live aquatic animals routinely test all imported consignments for diseases of concern and for banned substances.

Develop biosecurity plans (for all types of facilities including hatcheries, feed mills, grow-out, processors) and plans/manuals for disease identification, notification procedures, destruction, disposal and decontamination. Produce a national aquatic animal disease field guide for veterinarians, aquaculture engineers and technicians, including those working in aquaculture and conduct training to support the field guide.

Develop a formal policy framework or procedures for consultation and evaluation of the need for new veterinary medicines and veterinary biological and investigate the risks of entry and distribution of banned veterinary medicines and biologicals.

Make controls for the prudent use of all registered medicines.

The food safety standards for the domestic fish market should be improved so that they meet the same standards applied to export establishments.

Ensure the legislation for the welfare of farmed fish complies with the OIE standards.

I.3.C Interaction with interested parties

Improve the communication skills of the AAHS.

Prioritise the redevelopment of the GDFC website and include more information regarding activities and outcomes.

Formally coordinate and schedule meetings, workshops and extension activities with all AAHS stakeholders.

The TVMA can remain as a representative association; however, a VSB must be established by law to regulate professionals and para-professionals working in AAHS in compliance with OIE standards.

The VSB must draft policy determining a clear distinction between the responsibilities of veterinarians and aquaculture engineers (AAHP's) with regards to all aquatic animal health activities.

Increase the TVMA/VSB role in veterinary continued education.

I.3.D Access to markets

Regularly review and update the national list of notifiable aquatic animal diseases to improve planning for AAHS and to meet reporting obligations. National list review activities should be scheduled to follow the regular meetings and determinations made by the OIE.

The Central GDFC should regularly audit the compliance programme against relevant legislation.

Audit the health certification programme with the aim of checking the effectiveness of the system.

Transfer export control documents from a paper-based system to an electronic-based system with secure online access.

Create a secretariat to coordinate the drafting of responses for all international harmonisation and standard setting activities.

PART II: CONDUCT OF THE EVALUATION

II.1 OIE PVS Tool - Aquatic: method, objectives and scope of the evaluation

To assist countries to establish their current level of performance, form a shared vision, establish priorities and carry out strategic initiatives, the OIE has developed an evaluation tool called the OIE Tool for the Evaluation of Performance of Aquatic Animal Health Services (OIE PVS Tool - Aquatic), which comprises four fundamental components:

- Human, physical and financial resources
- Technical authority and capability
- Interaction with interested parties
- Access to markets.

These four fundamental components encompass 47 critical competencies, for each of which five qualitative levels of advancement are described. For each critical competency, a list of suggested indicators was used by the OIE Evaluation Team to help determine the level of advancement.

A glossary of terms is provided in Appendix 2.

The report follows the structure of the OIE PVS Tool - Aquatic. The objective and scope of the Aquatic PVS evaluation includes all aspects relevant to the OIE Aquatic and Terrestrial Animal Health Codes. In addition, the scope and objectives were clarified before the mission (see Appendix 7) as appropriate to the mandate and context of the AAHS in this country.

II.2 Country information (geography, administration, agriculture and livestock)

Largely located in Western Asia, with the smaller portion of Eastern Thrace in Southeast Europe, Turkey is bordered by eight countries: Syria and Iraq to the south; Iran, Armenia, and the Azerbaijani enclave of Nakhchivan to the east; Georgia to the northeast; Bulgaria to the northwest; and Greece to the west. The Black Sea is to the north, the Mediterranean Sea to the south, and the Aegean Sea to the west. The Bosphorus, the Sea of Marmara, and the Dardanelles (which together form the Turkish Straits) demarcate the boundary between Thrace and Anatolia; they also separate Europe and Asia.

Turkey's location at the crossroads of Europe and Asia makes it a country of significant geostrategic importance.[1]

The territory of Turkey is more than 1,600 kilometres long and 800 kilometres wide, with a roughly rectangular shape. Turkey's land area, including lakes, occupies 783,562 square kilometres.

According to the official census held in 2014, Turkey has 77,695,904 inhabitants with a density of 95.38/km^2

The Republic of Turkey is a parliamentary republic.

With a Gross Domestic Product (GDP) of $ 799.54 billion, Turkey is the 17th largest economy in the world. In less than a decade, per capita income in the country has nearly tripled and now exceeds $10,500[2].

[1] Excerpt from https://en.wikipedia.org/wiki/Turkey
[2] Excerpt from http://www.worldbank.org/en/country/turkey/overview

Turkey is subject to both a continental climate characterized by rainy weather throughout the year and also to a subtropical climate distinguished by dry summers. Heavy rainfall is generally on the mountain slopes facing the sea. Moving towards the interior the rainfall generally decreases. Thus there is substantial variation with respect to precipitation between parts of the coastline mountains facing the seas and those facing the interior regions. Autumn is the start of the rainy season, which continues until late spring on the Marmara, Mediterranean and Aegean coasts. The Black Sea coasts receive rain throughout the year; in this region, the amount of rainfall steadily decreases in an east-west direction from 2,000 to 600 mm/year[3].

FIGURE 1: MAP OF TURKEY

Table 2: Data summary for geography, marine fisheries and aquaculture

Geographic features

Climatic and/or agro-ecological zones	Rainfall (mm/year)
Mediterranean/Black Sea zones	2,000
Continental zones	600

Topography	Km
Total area	783,562Km2
Coastline	8,330 Km

Demographic data

Human population		Aquaculture households/farms	
Total number	**77,695,904 (2014)**	Total number	2,377
Average density / km^2	**95.38**	Inland	1,950
		Marine	427

[3] Excerpt from http://www.fao.org/ag/agp/agpc/doc/counprof/Turkey/Turkey.htm

According to data provided by MFAL while fishery production is very unstable and is progressively decreasing, aquaculture is in constant increase mainly in marine production.

Since 2003 marine aquaculture production increased from 39,726 tons until 126,894 tons in 2014.

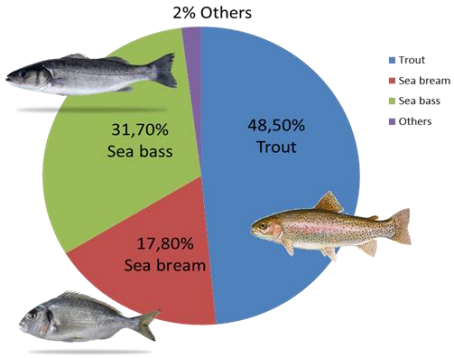
Table A – MFAL (E4)

Years	Fisheries (tone)		Aquaculture(tone)		Total Production (tone)
	Marine	Inland	Marine	Inland	
2003	463.074	44.698	39.726	40.217	587.715
2004	504.897	45.585	49.895	44.115	644.492
2005	380.381	46.115	69.673	48.604	544.773
2006	488.966	44.082	72.249	56.694	661.991
2007	589.129	43.321	80.840	59.033	772.323
2008	453.113	41.011	85.629	66.557	646.310
2009	425.275	39.187	82.481	76.248	623.191
2010	445.680	40.259	88.573	78.568	653.080
2011	477.658	37.097	88.344	100.446	703.545
2012	396.322	36.120	100.853	111.557	644.852
2013	339.047	35.074	110.375	123.019	607.515
2014	**266.078**	**36.134**	**126.894**	**108.239**	**537.345**

Considering aquaculture production according to species in 2014 there was an overall production of 235,133 tons made up of 113,593 trout, 74,635 sea bream, 41,873 sea bass and 5,014 other species (mainly carps).

Table B - MFAL (E4)

AQUACULTURE PRODUCTION IN ACCORDING TO SPECIES (2014)

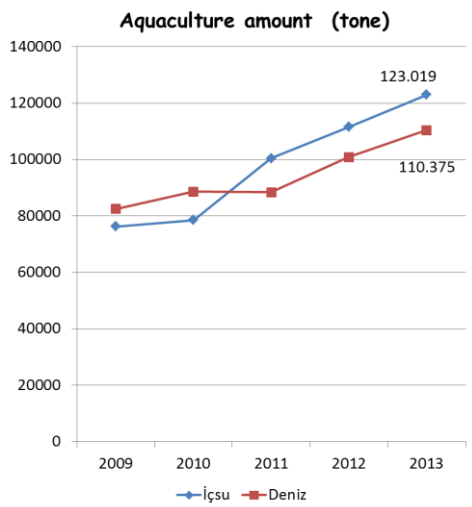


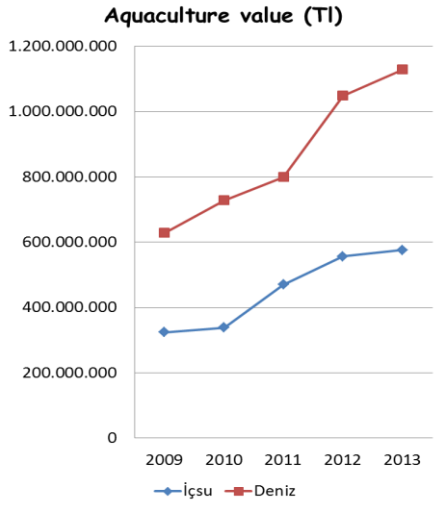
Species	Amount (tone)
Trout	113.593
Sea bream	74.653
Sea bass	41.873
Others	5.014
Total	235.133

In the last few years, aquaculture production has been steadily increasing (amount and value) both in marine water (Deniz) and in inland water (Icsu).

Table C - MFAL (E4)

AQUACULTURE PRODUCTION AND VALUE IN MARINE WATER AND INLAND WATER





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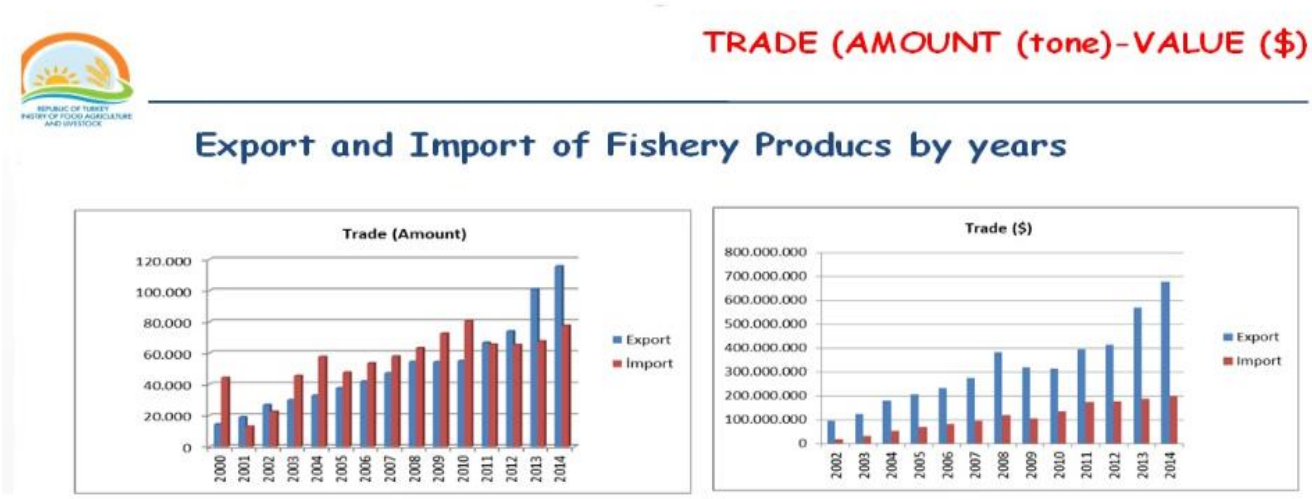
Fishery export has continuously increased in the last 14 years, both in volume and in value mainly due to the export of aquaculture products.

Table D - MFAL (E4)



Development of aquaculture production was particularly strong for sea bass (436%) and sea bream (250%).

As previously mentioned, the future target of MFAL is to reach an aquaculture production of 500,000 tons with a value of $1 billion by 2023.

Aquatic animal and aquatic animal product trade data

Aquatic animals and aquatic animal products	Average annual import		Average annual export	
	Quantity	Value	Quantity	Value
	78,000 tons	$ 200 million	129,000 tons	$ 680 million

Economic data

National GDP	$ 799,540 billion
National budget	$ 153,688 billion [4]
Agriculture, forestry and fisheries GDP	$ 63,963 billion[5]
Aquaculture GDP	$ 0,676 billion

[4] http://www.tradingeconomics.com/turkey/government-budget
[5] http://data.worldbank.org/indicator/NV.AGR.TOTL.ZS

II.3 Context of the evaluation

II.3.A Availability of data relevant to the evaluation

A list of documents received by the Team before and during the Aquatic PVS Evaluation mission is provided in Appendix6.

All documents listed in Appendix 6are referenced to relevant critical competencies to demonstrate the levels. Documents and pictures are also referenced for relevant critical competencies to support the related findings.

The following table provides an overview of the availability of the main categories of documents or data needed for the evaluation, taking into account the information requirements set out in the OIE Aquatic and Terrestrial Animal Health Codes.

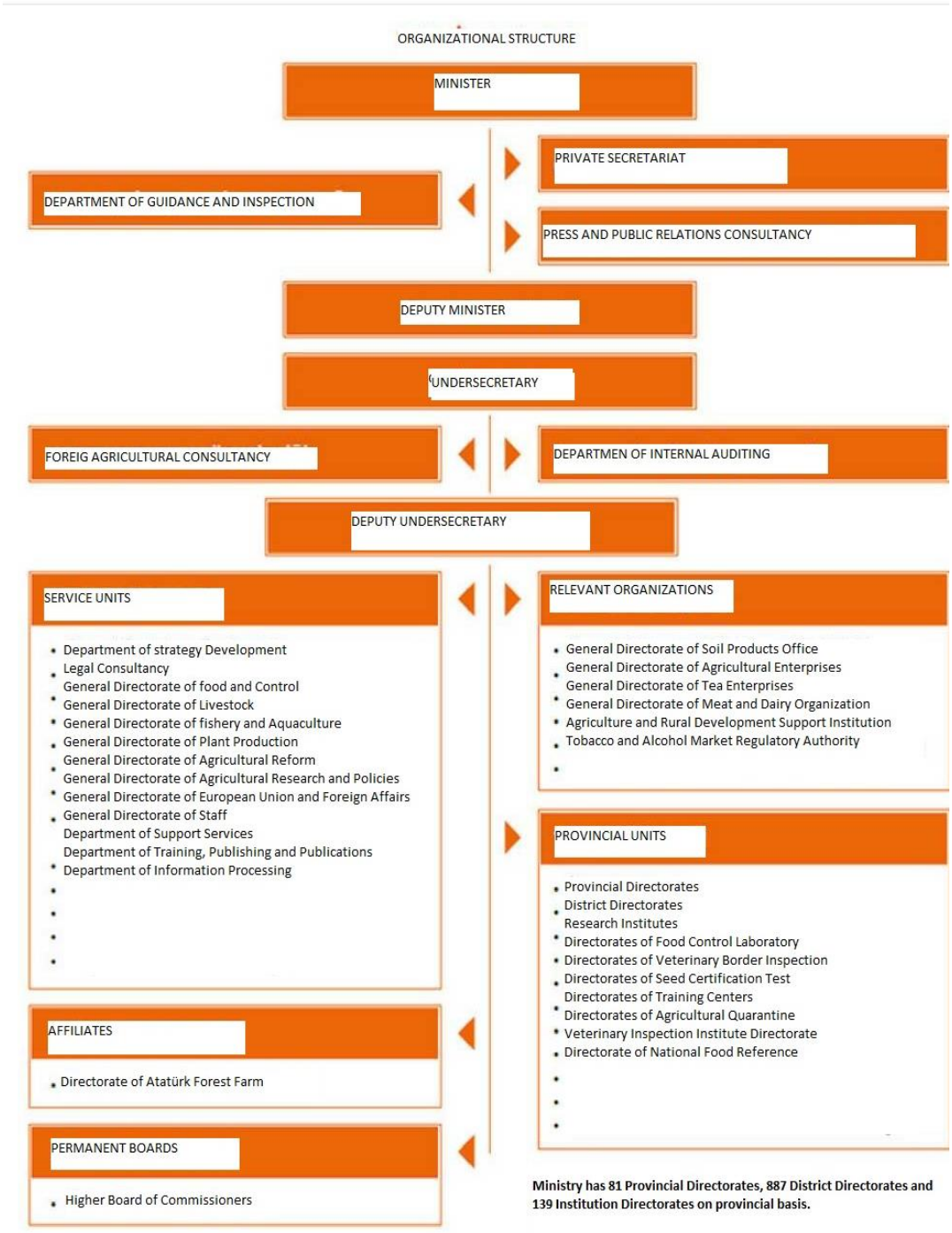
Table 3: Summary of data available for evaluation

Main document categories	Data available in the public domain	Data accessible only on site or on request	Data not available
→ **Aquatic Animal census:**			
○ at 1st administrative level		X	
○ at 2nd administrative level			X
○ at 3rd administrative level			X
○ per animal species		X	X
○ per production systems			X
→ **Organisations charts**			
○ Central level of the VS/AAHS	X		
○ 2nd level of the VS/AAHS	X		
○ 3rd level of the VS/AAHS			X
→ **Job descriptions in the VS/AAHS**			
○ Central levels of the VS/AAHS			X
○ 2nd level of the VS/AAHS			X
○ 3rd level of the VS/AAHS			X
→ **Legislations, regulations, decrees …**			
○ Aquatic animal health and public health		X	
○ Veterinary practice		X	
○ Veterinary statutory body		X	
○ Other professional authorities			X
○ Veterinary medicines and biologicals		X	
○ Official delegation			
→ **Veterinary census**		X	
○ Global (public, private, veterinary, aquatic animal health professional, technical personnel)		X	
○ Per level			X
○ Per function			X
→ **Census of logistics and infrastructures**			X
→ **Activity reports**			X
→ **Financial reports**			X
→ **Aquatic animal health status reports**		X	
→ **Evaluation reports**			X
→ **Procedures, registers, records, letters …**		X	
→			

II.3.B General organisation of the Aquatic Animal Health Services

The Competent Authority for aquatic animal health services is the General Directorate of Food and Control (GDFC), which belongs to the Ministry of Food, Agriculture and Livestock (MFAL).

FIGURE 2: Ministry of Food, Agriculture and Livestock



In the MFAL there are 2 General Directorates involved in aquaculture sector: GDFC and General Directorate of Fisheries and Aquaculture (GDFA).

Both are under the responsibilities of the Deputy Undersecretary who is, currently, also the Chief Veterinary Officer and the OIE Delegate.

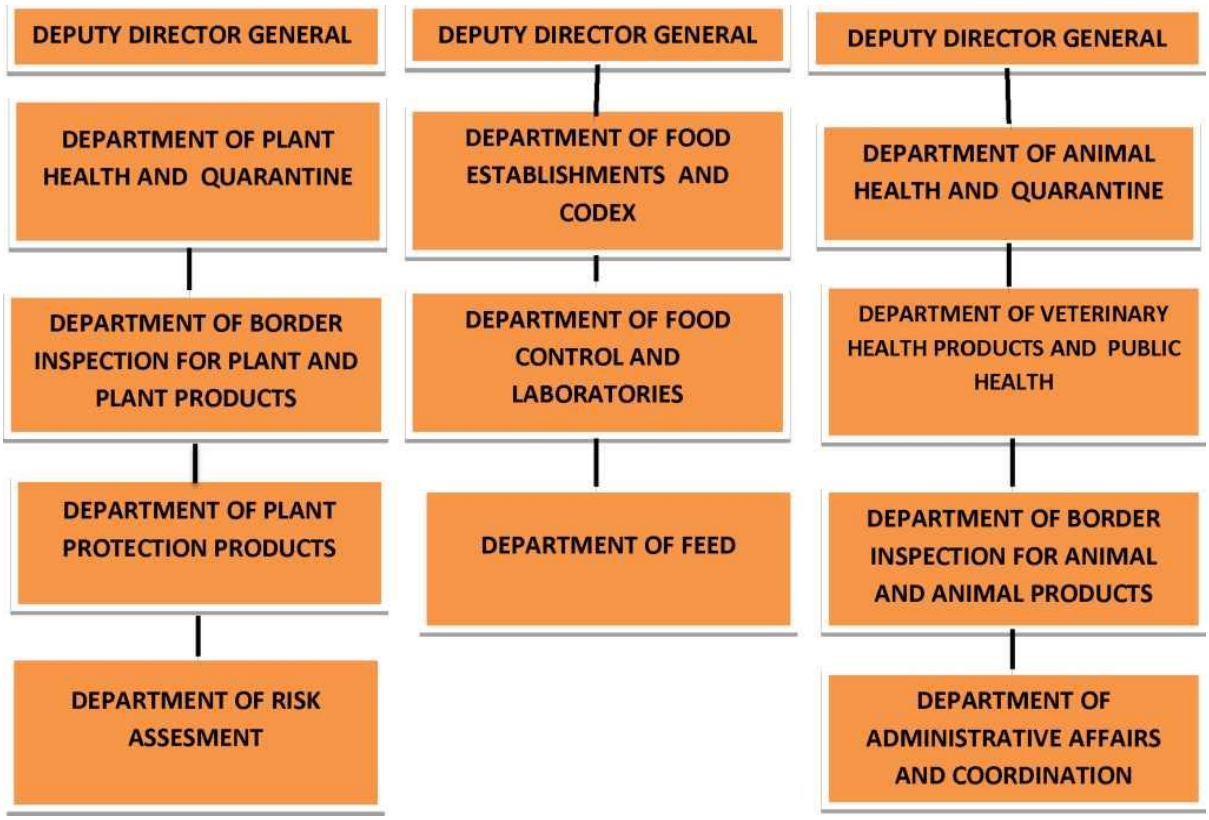
GDFC is the Aquatic Animal Health Service with duties, among others,:

- to perform fight against animal diseases and to determine the relevant principles;
- to provide the reliable food (including fishery and aquaculture products) and feed supply, to create and supervise policies for this purpose;

- to determine the principles on the traceability of processes related to production, processing and marketing of food, food additives and food contact substances and materials at every stage;
- to determine qualifications of workplaces which produce food, food additives and food contact substances and materials and also their permission and registration procedures;
- to determine veterinary border inspection points and their working principles;
- to determine the animal health identification and to control the movements of animals;
- to determine the health conditions on foreign trade of livestock, animal and food and feed;
- to carry out studies in order to ensure animal welfare;
- to determine the principles on certification of laboratories which operate in the fields of animal;
- to perform risk assessment and provide risk communication.

GDFC is the Competent Authority in terms of Veterinary Services; it is organised in 11 Departments under 3 Deputy Directors General. The organization chart is as follows:

FIGURE 3: General Directorate of Food and Control



Six Departments have competencies related to aquaculture animal health and to food of aquatic origin (Dep. of animal health and quarantine, Dep. of veterinary health products and public health, Dep. of border inspection for animal and animal products, Dep. of food establishments and Codex, Dep. of food control and laboratories, Dep. of feed).

The General Directorate of Fisheries and Aquaculture is competent in fishery and aquaculture production; its main duties are:

- to determine the principles of sustainable fishery, aquaculture and fishing in seas and inland waters and to encourage them;
- to protect fishery and aquaculture resources;
- to collect and evaluate fishery statistics and establishment of fishery policy;
- to make studies on fishery and aquaculture production, development and research projects.

GDFC has 81 Provincial Directorates, which deal with aquaculture animal health and food of aquatic origin directly or via their Districts. Provincial Directorates have a total of 887 Districts.

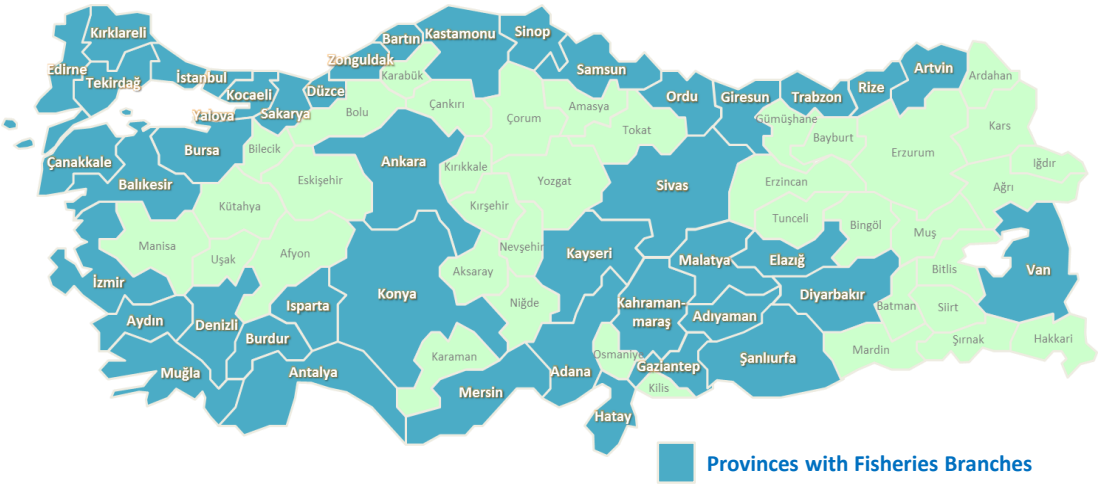
There are 43 Provinces with Fisheries Branches and 38 withAnimal Health, Animal Breeding and Fisheries Branches.

Provinces with Fisheries Branches are the richest in aquaculture and fishery production.

Table E - GDFC (E4)

Provincial Organisation

- Fisheries Branches at 43 provinces
- Other Provinces Animal Health, Animal Breeding and Fisheries Branches



GDFC has 23 BIPs: 11 Ports, 5 Airports and 7 Highway border posts.

FIGURE 4: BORDER INSPECTION POSTS

KARAYOLU V.S.K.N.

1 Cilvegözü/Hatay
2. Gürbulak/Ağrı
3. Habur/Şırnak
4. Iğdır
5. İpsala/Edirne
6. Kapıkule/Edirne
7. Sarp/Artvin

DENİZYOLU V.S.K.N.

1. Ambarlı/Ist.
2. Bandırma/Balıkesir
3. Derince/Kocaeli
4. Iskenderun /Hatay
5. Izmir
6. Mersin
7. Samsun
8. Tekirdağ
9. Trabzon
10. Zonguldak
11. Pendik (Istanbul/Anatolian)

HAVAYOLU V.S.K.N.

1. Ankara
2. Antalya
3. Istanbul Atatürk
4. İzmir
5. Sabiha Gökçen/İst

II.3.C Aquatic animal disease occurrence

Table 4: Notifiable diseases of Turkey

Disease	Notifiable	Not notifiable

Disease	Notifiable	Type of surveillance
Epizootic Haematopoietic necrosis disease	✓	General surveillance
Infection with Aphanomyces invadans (epizootic ulcerative syndrome)	✓	General surveillance
Infection with Gyrodactylus salaris	✗	
Infection with HPR-deleted or HPR0 infectious salmon anaemia virus	✓	General surveillance
Infection with salmonid alphavirus	✗	
Infectious haematopoietic necrosis	✓	General surveillance
Koi herpes virus disease	✓	General surveillance
Red sea bream iridoviral disease	✗	
Spring viraemia of carp	✗	
Viral haemorrhagic septicaemia	✓	General surveillance
Infection with abalone herpesvirus	✗	
Infection with *Bonamia ostreae*	✓	General surveillance
Infection with *Bonamia exitiosa*	✓	General surveillance
Infection with *Marteilia refringens*	✓	General surveillance
Infection with *Perkinsus marinus*	✓	General surveillance
Infection with *Perkinsus olseni*	✗	
Infection with *Xenohaliotis californiensis*	✗	
Acute hepatopancreatic necrosis disease	✗	
Crayfish plague (*Aphanomyces astaci*)	✓	General surveillance
Infection with yellow head virus	✓	General surveillance
Infectious hypodermal and haematopoietic necrosis	✗	
Infectious myonecrosis	✗	
Necrotising hepatopancreatitis	✗	
Taura syndrome	✓	General surveillance
White spot disease	✓	General surveillance
White tail disease	✗	

None of notifiable diseases were reported in 2015.

The last aquatic animal disease notified to the OIE was Viral Haemorrhagic Septicaemia in 2007.

II.4 Organisation of the evaluation

II.4.A Timetable of the mission

Appendix 3 provides a list of persons met; Appendix 4 provides the timetable of the mission and details of the facilities and locations visited by the OIE Aquatic PVS Team and Appendix 5 provides the international air travel itinerary of team members.

II.4.B Categories of sites and sampling for the evaluation

Table 5 lists the categories of site relevant to the evaluation and the number of each category of site in the country. It indicates how many of the sites were visited, in comparison with the suggested sampling framework ("ideal" sampling) recommended in OIE PVS Manuals.

Appendix 4 provides a detailed list of sites visited and meetings conducted.

Table 5: Site sampling	Terminology or names used in the country	Number of sites	"Ideal" sampling	Actual sampling
ADMINISTRATIVE ORGANISATION OF THE COUNTRY				
1st administrative level	*national*	1	all	1
2nd administrative level	*provincial*	81	all	3
3rd administrative level	*district*	887	all	3
4th administrative level	*not applicable*			
Urban entities	not applicable			
VETERINARY SERVICES OR AQUATIC ANIMAL HEALTH SERVICES ORGANISATION AND STRUCTURE				
Central (Federal/National) VS/AAHS	Headquarters of GDFC	1	all	1
Internal division of the central VS/AAHS	6 Technical Departments	6	all	6
1st level of the VS/AAHS	GDFC Headquarters	1	all	1
2nd level of the VS/AAHS	GDFC Provincial Directorates	81	all	3
3rd level of the VS/AAHS	GDFC District Directorates	887	all	3
Veterinary organisations (VSB, unions…)	Turkish Veterinary Medical Association	1	all	1
FIELD AQUATIC ANIMAL HEALTH NETWORK				
Field level of the VS/AAHS(aquatic animal health)	GDFC Provincial Directorates	81	all	3
Private veterinary sector	Veterinary practices	8	all	1
Other sites	Farms	2,377	all	2
VETERINARY MEDICINES & BIOLOGICALS				
Production sector				
Import and wholesale sector				
Retail sector				
Other partners involved				
LABORATORIES				
National labs	Bornova, Izmir – National Food Reference Lab., Ankara	2	all	2
Regional and local labs	7 AAH labs and 5 food safety labs at regional level	12	all	2
Associated, accredited and other labs	92 private laboratories	92	-	-
AQUATIC ANIMAL AND ANIMAL PRODUCTS MOVEMENT CONTROL				
Bordering countries	Greece, Bulgaria, Georgia, Armenia, Iran, Iraq, Syria, Azerbaijani enclave of Nakhchivan	8	-	-
Airports and ports border posts	11 ports and 5 airports	16	all	3
Main terrestrial border posts	7 highway posts	7	all	-
PUBLIC HEALTH INSPECTION OF AQUATIC ANIMALS AND AQUATIC ANIMAL PRODUCTS				
Export processing plants	183 processing plants	183	all	2
National market processing plants	2,377 processing plants	2,377	all	2
TRAINING AND RESEARCH ORGANISATIONS				
Veterinary university	19 Veterinary Universities	19	all	1
Aquatic animal health professional training schools	3 high schools with courses for veterinary technicians	3	-	-
STAKEHOLDERS' ORGANISATIONS				
Agricultural Chamber / organisation				
National aquaculture farmers organisations	Central Union of Aquaculture Producers	1	all	1
Local aquaculture farmers organisations	Local Provincial of Aquaculture Producers	18	-	-
Consumer organisations	Consumer Rights Association	1	all	1

PART III: RESULTS OF THE EVALUATION& GENERAL RECOMMENDATIONS

This evaluation identifies the strengths and weaknesses of the veterinary services, and makes general recommendations.

FUNDAMENTAL COMPONENTS

1.	HUMAN PHYSICAL AND FINANCIAL RESOURCES
2.	TECHNICAL AUTHORITY AND CAPABILITY
3	INTERACTION WITH INTERESTED PARTIES
4.	ACCESS TO MARKETS

The activities of the Veterinary services and Aquatic Animal Health Services are recognised by the international community and by OIE Members as a '**global public good**'. Accordingly, it is essential that each country acknowledges the importance of its role and responsibilities and gives them the human and financial resources needed to fulfil their responsibilities.

OIE PVS Evaluations examined each critical competency under the 4 fundamental components, listed strengths and weaknesses where applicable, and established a current level of advancement for each critical competency. Evidences supporting this level are listed in Appendix 6. General recommendations were provided where relevant.

The current level of advancement for each critical competency is shown in cells shadowed in grey (15%) in the table.

III.1 Fundamental component I: human, physical and financial resources

This component of the evaluation concerns the institutional and financial sustainability of the VS/AAHS as evidenced by the level of professional/technical and financial resources available and the capacity to mobilize these resources. It comprises fourteen critical competencies:

Critical competencies:

Section I-1	**Professional and technical staffing of the VS or AAHS**
	A. Veterinary or aquatic animal health professionals (university qualification)
	B. Aquatic animal health professional and other technical personnel (non university level qualification)
Section I-2	**Competencies of veterinarians or aquatic animal health professionals, and other technical personnel**
	A. Professional competencies of veterinary or aquatic animal health professionals (university qualification)
	B. Competencies of aquatic animal health professional and other technical personnel (non university level qualification)
Section I-3	**Continuing education**
Section I-4	**Technical independence**
Section I-5	**Stability of structures and sustainability of policies**
Section I-6	**Coordination capability of the VS or AAHS**
	A. Internal coordination (chain of command)
	B. External coordination
Section I-7	**Physical resources**
Section I-8	**Operational funding**
Section I-9	**Emergency funding**
Section I-10	**Capital investment**
Section I-11	**Management of resources and operations**

Aquatic Code Reference(s):

Points 1-7, 9 and 14 of Article 3.1.2. on Fundamental principles of quality: Professional judgement / Independence / Impartiality / Integrity / Objectivity / Aquatic animal health legislation and regulations / General organisation / Procedures and standards / Human and financial resources.

Terrestrial Code Reference(s):

Point 1 of Article 3.2.2. on Scope.

Points 1 and 2 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services.

Point 2 of Article 3.2.4. on Evaluation criteria for quality system: “Where the Veterinary Services undergoing evaluation… than on the resource and infrastructural components of the services”.

Article 3.2.5. on Evaluation criteria for human resources.

Points 1-3 of Article 3.2.6. on Evaluation criteria for material resources: Financial / Administrative / Technical.

Points 3 and Sub-point d) of Point 4 of Article 3.2.10. on Performance assessment and audit programmes: Compliance / In-Service training and development programme for staff.

Article 3.2.12. on Evaluation of the veterinary statutory body.

Points 1-5 and 9 of Article 3.2.14. on Organisation and structure of Veterinary Services / National information on human resources / Financial management information / Administration details / Laboratory services / Performance assessment and audit programmes.

I-1. Professional and technical staffing of the Veterinary Services (VS) or Aquatic Animal Health Services *The appropriate staffing of the VS or AAHS to allow for veterinary and aquatic animal health professional and technical functions to be undertaken efficiently and effectively.* **A.Veterinary or aquatic animal health professionals (university qualification)**	**Levels of advancement**
	1.The majority of veterinary and aquatic animal health professional positions are not occupied by appropriately qualified personnel.
	2.The majority of veterinary and aquatic animal health professional positions are occupied by appropriately qualified personnel at central and state / provincial levels.
	3.The majority of veterinary and aquatic animal health professional positions are occupied by appropriately qualified personnel at local (field) levels.
	4.There is a systematic approach to defining job descriptions and formal appointment procedures for veterinarians and aquatic animal health professionals.
	5.There are effective management procedures for performance assessment of veterinarians and aquatic animal health professionals.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix6):E1, E2, E4, E6, E7, E11, E14, E15, E21, E24, E25, H7, P1.

Findings:

The organisational structure of the General Directorate of Food and Control (GDFC) roles and responsibilities are well organised. However, there is no dedicated branch/department at central level for AAHS strategic planning, leadership and direction. AAHS are therefore not coordinated and administered centrally as a distinct government office as AAHS form part of several branches. Apart from core operational responsibilities there was no evidence of higher-level central strategic business planning and associated branch and individual work plans specifically for AAHS.

For a country of 80 million people with aquaculture production contributing to approximately 15% of total animal production the staffing resources seem disproportionately sparse in comparison its needs, especially with respect to the ambitious goal of being one of the highest aquatic animal producing country globally.

The Ministry does not have data available regarding the number of private Veterinarians working in the AAHS sector (in total there are around 16,000 private veterinarians). The GDFC currently have a working group of15 people covering all animal health issues, including terrestrial and aquatic.

Strengths:

- AAHS are embedded within relevant work branches/departments and are functional.
- Veterinarians and AAHP numbers are adequate and staff are appropriately qualified to meet demands (423 at central level and 7,935 at provincial level).
- At central, provincial and district level there is good understanding among staff of their mission and core operational duties.

Weaknesses:

- Although embedded AAHS are functional they lack central coordination and long term strategic planning, leadership and direction.
- There was no evidence of performance management programmes for staff.
- Focus currently is on disease priority areas such as FMD while disease in aquaculture is a low priority. Therefore, there is a need to review this focus to meet expanding industry.

Recommendations:

- Define clear job descriptions, skills required to meet each employment level and formal appointment procedures for veterinarians and AAHP's.
- Need of effective management procedures for performance assessment of personnel working in GDFC.

B.Aquatic animal health professional and other technical personnel (non university level qualification)	Levels of advancement
	1.The majority of aquatic animal health professionals and other technical positions are not occupied by personnel holding appropriate qualifications.
	2.The majority of aquatic animal health professionals and other technical positions at central and state / provincial levels are occupied by personnel holding appropriate qualifications.
	3.The majority of aquatic animal health professionals and other technical positions at local (field) levels are occupied by personnel holding appropriate qualifications.
	4.The majority of aquatic animal health professionals and other technical positions are effectively supervised on a regular basis.
	5.There are effective management procedures for formal appointment and performance assessment of aquatic animal health professionals and other technical personnel.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E4, E6, E7, E11, E14, E15, E21, E24, E25, H7, P1.

Findings:

Paraprofessionals and technicians are trained either three years from technical institutes or two years in university faculties.

1,844 non-university staff are employed at provincial and district levels.

GDFC technical staff (non-university) engages in certified continual learning programmes. However, numbers of non-university educated staff are low with most positions filled by university-qualified staff.

Non-university level technical staff adequately meet the requirements of GDFC.

Strengths:

- Non-technical staff numbers are adequate.
- There are 30 training establishments for aquaculture engineers.

Weaknesses:

- There are no job descriptions relating to an AAHS work plan.

Recommendations:

- Perform analysis on the roles and responsibilities of non-technical staff and develop clear job descriptions and human resource policy for AAHS. For example, qualifications and level of skill required for employment of non-technical staff.

I-2. Competencies of veterinarians or aquatic animal health professionals, and other technical personnel *The capability of the VS or AAHS to carry out their veterinary or aquatic animal health professional practices and technical functions; measured by the qualifications of their personnel.* **A. Professional competencies of veterinary or aquatic animal health professionals (university qualification) including the OIE Day 1 competencies for veterinarians**	Levels of advancement
	1.The veterinarians' or aquatic animal health professionals' practices, knowledge and attitudes are of a variable standard that usually allow for elementary clinical and administrative activities of the VS or AAHS.
	2.The veterinarians' or aquatic animal health professionals' practices, knowledge and attitudes are of a uniform standard that usually allow for accurate and appropriate clinical and administrative activities of the VS or AAHS.
	3.The veterinarians' or aquatic animal health professionals' practices, knowledge and attitudes usually allow undertaking all professional/technical activities of the VS or AAHS (e.g. epidemiological surveillance, early warning, public health, etc.).
	4.The veterinarians' or aquatic animal health professionals' practices, knowledge and attitudes usually allow undertaking specialized activities as may be needed by the VS or AAHS.
	5.The veterinarians' or aquatic animal health professionals' practices, knowledge and attitudes are subject to regular updating, international harmonisation or evaluation.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1.

Findings:

Veterinarians are trained to meet Day 1 competencies in a well-structured education system in compliance with accreditation requirements of the EAEVE, but veterinary faculties have weak curricula regarding the AAH sector.

Aquaculture engineers are strictly trained on production and not on disease prevention, detection or control. This is a major point of difference between professions. Establishments would prefer AAHP's do all health work, including health certification currently performed by a public veterinarian.

While aquaculture engineers may perform general biosecurity functions and health management functions under the direction of a veterinarian, this work is strictly within the remit and responsibility of veterinarians under law.

Representatives from veterinarian faculties stated a desire to see a clear distinction between the responsibilities of a veterinarian and an aquaculture engineer with regards to all aquatic animal health activities.

At the last meeting of the Turkish Higher Education Institute, aquaculture engineers wanted to participate in health management, however Turkish (and EU) rules do not allow this to occur, as health management is strictly the remit of veterinarians.

Strengths:

- Veterinarians have training that meets accreditation requirements of the EAEVE.
- In Turkey, aquatic animal health is now studied in 30 aquaculture-engineering faculties. There are some Veterinary faculties that also offer units in aquaculture for veterinarians with plans to expand establishment of aquaculture specialty curricula across all Turkish veterinary faculties based on expanding industry needs and student preference.
- There are currently 6 faculties specialising in aquaculture within veterinary medicine specialties with curricula taught in a multi-disciplinary way (this includes Ankara University). Current aquaculture courses include two theoretical and two practical units for aquatic animal diseases.

- PhD programmes for continued education of aquatic animal disease specialists are also available when appropriate research activities in alignment with industry health needs are identified. Ankara University's long-term curricula planning includes a specialty aquatic animal health veterinary degree.

Weaknesses:

- Low recruitment rates of private veterinarians in aquaculture.
- Not clear definition and distinction between the responsibilities of veterinarians and aquaculture engineers (AAHP's) with regards to all aquatic animal health activities.
- Veterinary faculties have weak curricula regarding the Aquatic Animal Health sector.

Recommendations:

- A clear definition and distinction between the responsibilities of veterinarians and aquaculture engineers (AAHP's) with regards to all aquatic animal health activities (also see recommendation CC III-5.A).
- Strengthen the legal role and responsibilities of veterinarians in aquaculture through clear AAHS policy.
- Veterinary curricular is expanded to accommodate more training in aquatic animal diseases, including offering post-graduate degrees for veterinarians wishing to specialise in aquatic animal health.
- AAHS would benefit by strengthening Day 1 competencies for veterinarian working in AAHS through improved university level curricula.
- VSB should be clearly defined and its missions with a focus on education, licensing and activity on the field of veterinarians.

B.Competencies of aquatic animal health professional and other technical personnel (non university level qualification)	Levels of advancement
	1.The majority of aquatic animal health professional and other technical personnel have no formal entry-level training.
	2.The training of aquatic animal health professional and other technical personnel is of a variable standard and allows the development of only basic competencies.
	3.The training of aquatic animal health professional and other technical personnel is of a uniform standard that allows the development of only basic specific competencies.
	4.The training of aquatic animal health professional and other technical personnel is of a uniform standard that allows the development of some advanced competencies.
	5.The training of aquatic animal health professional and other technical personnel is of a uniform standard and is subject to regular evaluation and/or updating.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1.

Findings:

Three high schools have courses in veterinary technician training.

GDFC employ 896 people graduating from high school having completed veterinary technician training.

Strengths:

- Training institutions for technicians are available.

Weaknesses:

- There are no specific aquatic animal health tertiary level courses or units (tertiary: courses outside the school system) available for AAHP's and technicians.
- There is no VSB in charge of para-professionals in AAH.

Recommendations:

- Update curricula to reach the needed level for technician competencies in AAH.
- Create a VSB according to OIE standards.

I-3. Continuing education (CE)[6] *The capability of the VS or AAHS to maintain and improve the competence of their personnel in terms of relevant information and understanding; measured in terms of the implementation of a relevant training programme.*	Levels of advancement
	1.The VS or AAHS have no access to veterinary, professional or technical CE.
	2.The VS or AAHS have access to CE (internal and/or external programmes) on an irregular basis but it does not take into account needs, or new information or understanding.
	3.The VS or AAHS have access to CE that is reviewed annually and updated as necessary, but it is implemented only for some categories of the relevant personnel.
	4.The VS or AAHS have access to CE that is reviewed annually and updated as necessary, and it is implemented for all categories of the relevant personnel.
	5.The VS or AAHS have up-to-date CE that is implemented for all relevant personnel and is subject to regular evaluation of effectiveness.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1 and meetings with GDFC.

Findings:

GDFC claim that beginning from the year of 2014, in-service training on aquatic animal diseases, controls and the relevant legislation have been provided to the personnel employed in provincial, district directorates and regional institute directorates every year. Also relevant presentations have been made in assessment meetings and workshops.However, evaluation of the Inter-service Training Programme 2016 provided evidence of terrestrial animal health only.

There is no aquatic animal disease field guide; no standard diagnostic procedures (SDP's); some laboratory procedures manuals were available at the laboratories; no validation of SDP's for laboratory (for diseases on the national list and other diseases of concern); no notification procedure manual including case definition and alerts; no emergency response manuals (aquaculture specific) and training; no disposal and decontamination manuals; no aquatic animal biosecurity manuals or training.

Continuing education is available and has been identified by faculties as a future need for training specialists in AAH. However, faculties of veterinary science need a higher level of involvement in continued the education programme through development and involvement in courses/workshops/curricular performed by the GDFC.

Strengths:

- Continuing education is available via the Inter-service Training Programme.
- High level of awareness regarding the need for development of continuing education on AAH.

Weaknesses:

- There is no training for aquatic animal health.
- Faculties of veterinary science are not involved in continuing education.
- There is no VSB available to act as a third party for continuing education on AAH for the private sector (veterinarians and technicians and other AAHP's)

[6] Continuing education includes Continuous Professional Development (CPD) for veterinary, or aquatic animal health professional and other technical personnel.

Recommendations:

- Include aquatic animal diseases and AAH training in the Inter-service Training Programme.
- Develop AAH training programmes in collaboration with University Veterinary faculties, TVMA, Aquaculture Engineering faculties, aquaculture industry peak bodies and other stakeholders.
- Ensure training programmes are based on the issuing of a certificate and training is compulsory and performed on a regular basis within a regulatory framework.
- Consider the set up of a VSB.
- Consider the development of a comprehensive set of manuals for AAH, for example:
    - Development of a suite of national AAH standard diagnostic procedures and conduct test validation and proficiency programmes throughout the country.
    - Updated sampling, sample preparation and sample submission procedures.
    - Develop an emergency response manual for aquatic animals (sea bass) and conduct a simulation exercise.
    - Develop a post-outbreak decontamination manual (or adapt OIE guidelines and conduct training as part of a simulation exercise).
    - Develop a mortality disposal manual (or adapt OIE guidelines and conduct training as part of a simulation exercise).
    - Develop an on-farm biosecurity and health management manual that includes clear instruction and distinction of the roles and responsibilities of veterinarians and AAHP's.
    - Develop a national endemic/exotic AAH field guide.
    - Consider developing or upgrading other important regulatory Standard Operating Procedures and Work Instructions relevant to AAHS.
- Turkish personnel are experienced in simulation exercise, for example Avian Influenza (communication to OIE in April 2016), therefore training against OIE standards are in place. However, GDFC need to develop emergency manuals specific to the aquaculture situation, especially for sea bass.

I-4. Technical independence	Levels of advancement
The capability of the VS or AAHS to carry out their duties with autonomy and free from commercial, financial, hierarchical and political influences that may affect technical decisions in a manner contrary to the provisions of the OIE (and of the WTO SPS Agreement where applicable).	1.The technical decisions made by the VS or AHHS are generally not based on scientific considerations.
	2.The technical decisions take into account the scientific evidence, but are routinely modified to conform to non-scientific considerations.
	3.The technical decisions are based on scientific evidence but are subject to review and possible modification based on non-scientific considerations.
	4.The technical decisions are made and implemented in general accordance with the country's OIE obligations (and with the country's WTO SPS Agreement obligations where applicable).
	5.The technical decisions are based only on scientific evidence and are not changed to meet non-scientific considerations.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E12, E14, E24, E25, P1.

Findings:

Structures across provinces and districts, such as residue analysis laboratories are technically independent i.e. not under the Provincial Directorate of GDFC.

A tracing back study was performed by GDFC and checked by the Team on an investigation into the alleged use a banned substances based on positive laboratory sampling. The process was found to be technically independent.

There is little evidence that import/export risk management decisions are based on scientific evidence; for example, import risk analysis. This may be due to the adoption of international standards without the identified need to conduct risk analysis (see also CC II-3).

Remuneration and working conditions for AAHS/VS staff is generally considered to be average compared with other professionals working in Turkey and commensurate with qualifications and experience.

OIE reporting is regularly updated. The last report is the 2015-second six monthly report for aquatic animal health status.

The GDFC do not monitor emerging disease outbreaks within bi-lateral trading countries and there is no general health screening or targeted testing of live aquatic animals for listed or emerging diseases on arrival (see CC II-3).

Strengths:

- Staff are not permitted to undertake extra-curricular work activities associated with their profession. Staff turnover is regarded as higher than average.
- Remuneration of staff seems to be adequate and no complaints have been recorded.

Weaknesses:

- Low-level of awareness regarding AAH technical issues at the different responsibility levels within the VS/AAHS.

Recommendations:

- Develop a comprehensive framework for continuing education.
- Develop the capacity for Import Risk Assessment in AAH
- Establish a VSB in accordance with international standards .

- Conduct technically independent import risk analysis for live aquatic animals for all end use pathways including, but not limited to aquaculture, ornamental aquatic animals, human consumption, stock feed.
- Pending outcomes and prioritisation of higher risk pathways determined by an IRA, evaluate exporting CA's, monitor the health situation of exporting countries and conduct health screening of live animals for diseases of concern on-arrival.

I-5. Stability of structures and sustainability of policies *The capability of the VS or AAHS structure and/or leadership to implement and sustain policies over time.*	Levels of advancement
	1. Substantial changes to the organisational structure and/or leadership of the public sector of the VS or AAHS frequently occur (e.g. annually) resulting in lack of sustainability of policies.
	2.Sustainability of policies is affected by changes in the political leadership and/or the structure and leadership of VS or AAHS.
	3.Sustainability of policies is not affected or is slightly affected by changes in the political leadership and/or the structure and leadership of VS or AAHS.
	4.Policies are sustained over time through national strategic plans and frameworks and are not affected by changes in the political leadership and/or the structure and leadership of VS or AAHS.
	5.Policies are sustained over time and the structure and leadership of the VS or AAHS are stable. Modifications are based on an evaluation process, with positive effects on the sustainability of policies.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E14, E24, E25, P1.

Findings:

Current structure of the GDFC has been in place since 2011. The recent change of structure is due to the appointment of a new Director General. Changes are regarding leadership changes and do not affect sustainability of existing policies. This is due to the current overarching policy to adopt the same standard policy as the EU, which is aligned with OIE international standards and SPS obligations.

For leadership positions (DG and Heads of Department) law prescribes that they are to be decided by the Minister. The DG appointed by the Minister must be based on merit, including 10 years minimum length of service as a sufficiently high-ranking civil servant. There is no open or restricted (internal) application process.

For other leadership positions (veterinarians, AAHP's and all civil servants), the employment process is an open and transparent application process for applicants meeting selection criteria. The process for all civil servants includes an examination with a minimum pass mark of 70%.

Strengths:

- Adoption of EU policy and OIE standards.
- Changes in leadership at the political level of at level of Director General do not adversely affect the stability of structures.

Weaknesses:

- Leadership positions are decided by the Minister without an open call.
- OIE standards are not routinely updated.

Recommendations:

- Leadership positions should be open to all properly qualified Turkish citizens.
- The employment process, including necessary qualifications, should be more transparent.

I-6. Coordination capability of the Veterinary Services or AAHS A. Internal coordination (chain of command) *The capability of the VS or AAHS to coordinate its resources and activities (public and private sectors) with a clear chain of command, from the central level to the field level of the VS or AAHS in order to implement all national activities relevant for OIE Codes (i.e. surveillance, disease control and eradication, food safety and early detection and rapid response programmes).*	Levels of advancement
	1. There is no formal internal coordination and the chain of command is not clear.
	2.There are internal coordination mechanisms for some activities but the chain of command is not clear.
	3.There are internal coordination mechanisms and a clear and effective chain of command for some activities.
	4.There are internal coordination mechanisms and a clear and effective chain of command at the national level for most activities.
	5.There are internal coordination mechanisms and a clear and effective chain of command for all activities and these are periodically reviewed/audited and updated.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E13, E24, E25, H16, P1 and meetings with Provincial Directorates and District Directorates.

Findings:

Organisational structure, roles and responsibilities are well defined. However, there is no dedicated branch (or committee/working group) at central level for AAHS strategic planning, leadership and direction. AAHS are dispersed throughout several branches (Department of animal health quarantine, Department of border inspection for animal and animal products, Department of food establishments and Codex, Department of food control and laboratories, Department of feed).

The Provincial Directorate is under the responsibility of the Governor of the province, but it is appointed by the GDFC. The central office in Ankara gives direct instructions to the Provincial Directorate from the relevant Director General of the GDFC.

The primary protocol and communication instrument for aquatic animal disease outbreaks is via Circular Notice (Annex's 18-19) and submission of samples to the Bornova laboratory for analysis and result. In case of outbreaks, hatcheries and establishments providing influents such as eggs, fish fry, feed etc., are investigated.

Although there are no examples of its occurrence for a disease outbreak in aquatic animals, outbreaks of all notifiable diseases are subject to emergency response including movement restriction, epidemiological survey, slaughter, emergency harvest, destruction, and decontamination. Animals showing clinical signs or are unsuitable for human consumption are destroyed. Animals fit for human consumption are emergency harvested and are able to be placed on the market for human consumption. Quarantine measures are lifted no sooner than 30 days post-outbreak.

Specific roles of the Provincial Directorate include meeting operational requirements of the national residue monitoring plan, sample collection and laboratory submission when diseases are self-reported by establishments, emergency response, inspection of establishments for licencing purposes.

Other visits include visits by the District Directorate for aquaculture and fishing regulation and extension activities. Provincial Directorates claim close collaboration with district and farms where new issues and extension activities can be discussed and delivered.

Staff have a clear understanding of legislation, regulations and core duties relating to administration and regulation of disease in aquaculture.

There is functional structure, communication and coordination at Provincial and District level for core operational activities. However, AAHS at the higher policy level (central level)is not

structured directly within an AAH unit (branch). AAHS strategic planning and policy activities are delegated to general animal health divisions, for example, risk analysis and implementation of risk management measures (quarantine), emergency response planning for aquatic animal disease outbreaks, drugs and biologicals, are carried out within separate units that are capable of performing AAHS planning and policy.

As aquatic animal production is approximately 15% of total animal production (with plans to double production by 2023) it may be functionally more efficient to coordinate AAHS from a dedicated AAH branch (or committee or working group) at central level.

Strengths:

- AAHS are embedded within relevant work branches and are functional.
- There is a clear chain of command from the central to the field level allowing the implementation of all VS programmes for aquatic animals.
- AAHS at the operational level are well coordinated.

Weaknesses:

- Although embedded AAHS are functional they lack central coordination and long-term strategic planning, leadership and direction
- No clear instructions confirming a clear distinction between the roles and responsibilities of veterinarians and AAHP's.
- Internal coordination mechanisms are not periodically reviewed/audited.

Recommendations:

- Consider the creation of a dedicated AAHS branch or, if this is problematic, a Task Force under CVO coordination encompassing people from the several Departments of GDFC involved in AAHS and people from the General Directorate of Fisheries and Aquaculture that would be responsible for providing national leadership, strategic planning and direction for all AAHS.
- Internal coordination mechanisms should be periodically reviewed/audited across different government branches..

B.External coordination	Levels of advancement
The capability of the VS or AAHS to coordinate its resources and activities (public and private sectors) at all levels with other relevant authorities as appropriate, in order to implement all national activities relevant for OIE Codes (i.e. surveillance, disease control and eradication, food safety and early detection and rapid response programmes). *Relevant authorities include other ministries and Competent Authorities, national agencies and decentralised institutions.*	1. There is no external coordination. 2.There are informal external coordination mechanisms for some activities, but the procedures are not clear and/or external coordination occurs irregularly. 3.There are formal external coordination mechanisms with clearly described procedures or agreements for some activities and/or sectors. 4.There are formal external coordination mechanisms with clearly described procedures or agreements at the national level for most activities, and these are uniformly implemented throughout the country. 5.There are national external coordination mechanisms for all activities and these are periodically reviewed and updated.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1.

Findings:

There are no formal policies on two-way reporting between Ministry of Health for food safety and zoonosis issues and Ministry of Environment for sharing information regarding test results on the environment.

Regarding aquatic animal disease there are no formal policies, procedures or mechanisms in place for early detection and rapid response for suspected aquatic animal disease outbreaks i.e. internal communication, public reporting hotline, sampling and submission to laboratories, public notification etc.

There are no established formal inter-departmental coordination activities.

Strengths:

- GDFC have the authority and capability to initiate regulatory frameworks for its core missions.

Weaknesses:

- There is a lack of external inter-ministerial coordination (weak formal procedures) leading to potential inefficiencies for collaboration and operation of joint programmes.

Recommendations:

- Establish formal procedures and operating manuals and training for early detection and rapid response for suspected aquatic animal disease outbreaks.
- Establish formal mechanisms for external coordination and communication with Ministry of Health and Ministry of Environment.
- Establish inter-departmental meetings and formal procedures for biosecurity management.
- Establish mechanisms for a public reporting hotline and public notification (see CC II-5 A) of AAH events or suspicious cases.

I-7. Physical resources *The access of the VS or AAHS to relevant physical resources including buildings, transport, telecommunications, cold chain, and other relevant equipment (e.g. computers).*	Levels of advancement
	1.The VS or AAHS have no or unsuitable physical resources at almost all levels and maintenance of existing infrastructure is poor or non-existent.
	2.The VS or AAHS have suitable physical resources at national (central) level and at some regional levels, and maintenance and replacement of obsolete items occurs only occasionally.
	3.The VS or AAHS have suitable physical resources at national, regional and some local levels and maintenance and replacement of obsolete items occurs only occasionally.
	4.The VS or AAHS have suitable physical resources at all levels and these are regularly maintained.
	5.The VS or AAHS have suitable physical resources at all levels (national, sub-national and local levels) and these are regularly maintained and updated as more advanced and sophisticated items become available.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E4, E5, E6, E7, E11, E17, E24, E25, P1, P9, P10and meetings with Provincial Directorates and District Directorate.

Findings:

As veterinarians responsibilities extend to all animals the AAHS uses the VS network. Generally, AAHS work accounts for approximately 10% of VS. Therefore, physical resources of the VS are available to AAHS. It was not possible to obtain detailed division of work planning information on which resources are used exclusively or partially on AAH activities. In general, the physical resources are adequate for the scope of activities performed.

For example: Izmir region is the largest aquaculture production province in Turkey and it is where most of the planned future expansion (500,000 tons production) in sea bass and sea bream culture will take place. There are four veterinarians working in Urlu district (17 sea farms, 1 Bluefin tuna, 16 sea bass/bream, fry for stocking is not imported into this district and all fry are produced within the province) and they spend up to 30% (40% in neighbouring Cesme district) of their roles and responsibilities directly related to aquaculture e.g. sampling, food safety, monitoring programme, inspections, diagnosis, prescribing etc. Work is carried out in hatcheries, feed mills, grow-out, processors, and BIP's. There is one AAHP providing AAH support for the veterinary staff as required. AAHP's perform health related non-veterinarian duties such as, movement control and limited technical assistance as directed by veterinarians.

On-farm AAHS extension activities: On-farm and contracted private veterinarians interact directly with Bornova aquatic animal health laboratory for veterinary diagnostic services. AAHS perform regular on-farm visits (at least once per month) to check all health related records for compliance to health regulations (movement control, mortality records, medicine prescription and use, certification, sample collection for the national residue programme and disease screening) with dedicated adequate resources.

BIP's are also well equipped with necessary transportation, communication and inspection means.

GDFC at the Central, Provincial and District level, have adequate physical resources (including the national laboratory network; diagnostic, residue and food safety which is elaborated in CC II-1).

All physical resources are adequately funded and maintained. Physical resources for border control documentation consist of a paper-based system.

Strengths:

- There are adequate physical resources at the central and province level.
- BIP's are also well equipped with necessary transportation, communication and inspection means.

Weaknesses:

- There is no cost efficiency audit of physical resources (e.g. business risk planning, including the efficient and effective provision and use of computers and software).
- Document control is a paper-based system.
- There is no information management system allowing for more efficient evaluation of the AAHS programmes.

Recommendations:

- Implement an information management system for more efficient evaluation of AAHS programmes.
- Transfer quarantine and border control documents from a paper-based system to an electronic-based information management system with secure online access.

I-8. Operational funding *The ability of the VS or AAHS to access financial resources adequate for their continued operations, independent of political pressure.*	Levels of advancement
	1. Funding for the VS or AAHS is neither stable nor clearly defined but depends on resources allocated irregularly.
	2.Funding for the VS or AAHS is clearly defined and regular, but is inadequate for their required base operations (i.e. disease surveillance, early detection and rapid response and veterinary public health).
	3.Funding for the VS or AAHS is clearly defined and regular, and is adequate for their base operations, but there is no provision for new or expanded operations.
	4.Funding for new or expanded operations is on a case-by-case basis, not always based on risk analysis and/or cost benefit analysis.
	5.Funding for all aspects of VS or AAHS activities is adequate; all funding is provided under full transparency and allows for full technical independence, based on risk analysis and/or cost benefit analysis.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1.

Findings:

The GDFC operational budget for 2015 is $22 million Turkish lire (TL) used mostly to operate provincial services (not including salaries). $43.4 million TL is dedicated to combat animal diseases (terrestrial animal diseases because there is no identified need in AAH).

In addition, $120 million TL is set aside for the compensation fund for selected diseases i.e. FMD, TB, and AI. There are currently 10 diseases covered by the compensation fund. No aquatic animal diseases are covered.

For AAHS there is no strategic plan dedicated that allows for the evaluation and adequacy of the funding.

Strengths:

- Adequate funding is available for current operations and activities.

Weaknesses:

- There is no strategic plan for the evaluation and adequacy of the funding for new or expanded operations in the AAH field.

Recommendations:

- Undertake a PVS Gap Analysis Mission for AAHS in order to establish a plan of action based on the national priorities and international standards in order to define an appropriate functional budget.

I-9. Emergency funding	Levels of advancement
The capability of the VS or AAHS to access extraordinary financial resources in order to respond to emergency situations or emerging issues; measured by the ease of which contingency and compensatory funding (i.e. arrangements for compensation of producers in emergency situations) can be made available when required.	1. No funding arrangements exist and there is no provision for emergency financial resources.
	2.Funding arrangements with limited resources have been established, but these are inadequate for expected emergency situations (including emerging issues).
	3.Funding arrangements with limited resources have been established; additional resources for emergencies may be approved but approval is through a political process.
	4.Funding arrangements with adequate resources have been established, but in an emergency situation, their operation must be agreed through a non-political process on a case-by-case basis.
	5.Funding arrangements with adequate resources have been established and their rules of operation documented and agreed with interested parties.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1 and meetings with GDFC.

Findings:

Emergency response and action plans in aquatic animal diseases are applied within the scope of the "Regulation on Health Conditions of Aquatic Animals and Fighting and Protection against Diseases" published on 31.01.2012 and 28190 numbered official gazette regarding Aquatic Animal Health conforming with the European Union Directive 2006/88 EC, and in accordance with the "Fighting against Animal Diseases and Pests Booklet" published every year.

$120 TL for compensation fund for selected diseases i.e. FMD, TB or AI. There are currently 10 diseases covered by compensation. No aquatic animal diseases are covered by the compensation fund so far because there is no identified need.

Emergency response planning and extension activities are in place for terrestrial animal diseases.

There are no contingency plans for aquatic animal diseases.

A compensation fund is accessible for three terrestrial animal disease of concern and could be extended to aquatic animal diseases.

Strengths:

- Funded emergency response arrangements are in place.

Weaknesses:

- There are no dedicated resources for developing emergency response plans for aquatic animal disease outbreaks.
- Aquatic animals are not included in compensation funding arrangements.
- There are no contingency plans for aquatic animal diseases.

Recommendations:

- Provide resources to develop an emergency response plan/manual and conduct training for sea bass aquaculture.
- Include aquatic animal diseases in the compensation fund.

I-10. Capital investment *The capability of the VS or AAHS to access funding for basic and additional investments (material and non-material) that lead to a sustained improvement in the VS operational infrastructure.*	Levels of advancement
	1. There is no capability to establish, maintain or improve the operational infrastructure of the VS or AAHS.
	2.The VS or AAHS occasionally develops proposals and secures funding for the establishment, maintenance or improvement of operational infrastructure but this is normally through extraordinary allocations.
	3.The VS or AAHS regularly secures funding for maintenance and improvements of operational infrastructure, through allocations from the national budget or from other sources, but there are constraints on the use of these allocations.
	4.The VS or AAHS routinely secures adequate funding for the necessary maintenance and improvement in operational infrastructure.
	5.The VS or AAHS systematically secures adequate funding for the necessary improvements in operational infrastructure, including with participation from interested parties as required.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1.

Findings:

VS are housed in the newly constructed Central office. At provincial level adequate infrastructure is also available. Desk operations and communication capabilities are regularly renewed.

Laboratories have recently been renewed and are regularly maintained. A major upgrade to the National Reference Laboratory in Ankara has been co-funded by the EU and was visited during the mission. Bornova laboratory has also been recently renewed.

VS are located at central level on the MFAL campus and at provincial level on the Provincial Directorate campus. Both under the maintenance remit of the MFAL, which is responsible for securing the budget for investment in infrastructure and operations.

Strengths:

- Infrastructure maintenance capitalized at Central and Provincial level within the MFAL budget.
- Adequate budget allocated to VS for operations, maintenance and new investments.

Weaknesses:

- No other source of funding for such capital investment.

Recommendations:

- Nil, provided the current level corporate governance for capital investment is maintained.

I-11.Management of resources and operations *The capability of the VS or AAHS to document and manage their resources and operations in order to analyse, plan and improve both efficiency and effectiveness.*	Levels of advancement
	1.The VS or AAHS do not have adequate records or documented procedures to allow appropriate management of resources and operations.
	2.The VS or AAHS have adequate records and/or documented procedures but do not use these for management, analysis, control or planning.
	3.The VS or AAHS have adequate records, documentation and management systems and use these to a limited extent for the control of efficiency and effectiveness.
	4.The VS or AAHS regularly analyse records and documented procedures to improve efficiency and effectiveness.
	5.The VS or AAHS have fully effective management systems, which are regularly audited and permit a proactive continuous improvement of efficiency and effectiveness.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1.

Findings:

There is functional structure, communication and coordination at Provincial and District level for core operational activities. However, AAHS at the higher policy level (Central level) is not structured directly within an AAHS branch. AAHS strategic planning and policy activities, risk analysis and implementation of risk management measures (quarantine), emergency response planning for aquatic animal disease outbreaks, drugs and biologicals, feed, and aquatic animal product hygiene, are carried out within separate departments.

As aquatic animal production is approximately 15% of total animal production (with plans to double production by 2023) it may be functionally more efficient to coordinate AAHS from a dedicated AAH branch (or Task Force) at Central level.

Strategic planning, policy and coordination could extend to activities relevant to all provinces, such as import risk analysis; emergency response coordination; training and planning; updating the national list of aquatic animal diseases; strategic research planning; OIE reporting obligations (focal point); administration of surveillance and monitoring programmes; developing and validating national standard diagnostic procedures; coordination and communication between branches; and development and delivery of continual education programmes. A dedicated AAH branch (or a strategic Task Force) would be responsible for providing national leadership, strategic planning and direction for all AAHS.

Without high-level strategic planning and a work plan with an aligned budget, appropriate management of resources is inadequate despite the governance system in place.

Strengths:

- Operational AAHS services are in place at Central, Provincial and District levels.

Weaknesses:

- There is no national leadership group responsible for policy and planning of national AAHS's.
- AAH activities are dispersed throughout the GDFC and are not coordinated or fully functional according to strategic planning.
- There is no information management system in place.

Recommendations:

- Develop and implement a Data Base Management System encompassing information on fish health, feeding, import, export etc.
- Develop and implement a national strategic plan (e.g. a high-level 5 year plan) for AAHS.
- Develop a work plan and budget aligned to the national strategic plan.
- Consider the creation of a dedicated AAHS branch or, if this is problematic, a Task Force under the CVO coordination encompassing people from the several departments involved in AAHS that would be responsible for providing national leadership, planning and direction for all AAHS.

III.2 Fundamental component II: Technical authority and capability

This component of the evaluation concerns the authority and capability of the VS or AAHS to develop and apply sanitary measures and science-based procedures supporting those measures. It comprises seventeen critical competencies

Critical competencies:

Section II-1	**Laboratory diagnosis**
	A. Access to laboratory diagnosis
	B. Suitability of national laboratory infrastructures
Section II-2	**Laboratory quality assurance**
Section II-3	**Risk analysis**
Section II-4	**Quarantine and border security**
Section II-5	**Epidemiological surveillance and early detection**
	A. Passive Epidemiological surveillance
	B. Active Epidemiological surveillance
Section II-6	**Emergency response**
Section II-7	**Disease prevention, control and eradication**
Section II-8	**Food safety:**
	A. Regulation, authorisation and inspection of establishments
	B. Inspection of collection, processing and distribution of products of animal origin
Section II-9	**Veterinary medicines and biological**
Section II-10	**Residue testing**
Section II-11	**Aquatic animal feed safety**
Section II-12	**Traceability**
	A. Aquatic animal movement control
	B.Traceability of products of aquatic animals origin
Section II-13	**Welfare of farmed fish**

Aquatic Code Reference(s):

Chapter 2.2. on Import risk analysis.
Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards.
Chapters 6.2. on Introduction to the recommendations for controlling antimicrobial resistance.
Chapter 6.3. on Principles for responsible and prudent use of antimicrobial agents in aquatic animals.
Chapter 6.4. on Monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals.
Chapter 6.5. on Development and harmonisation of national antimicrobial resistance surveillance and monitoring programmes for aquatic animals.
Chapter 7.1. on Introduction to the recommendations for the welfare of farmed fish.
Chapter 7.2. on Welfare of farmed fish during transport.
Chapter 7.3. on Welfare aspects of stunning and killing of farmed fish for human consumption.
Chapter 7.4. on Killing of farmed fish for disease control purposes.

Terrestrial Code Reference(s):

Point 1 of Article 3.2.4. on Evaluation criteria for quality systems.
Point 3 of Article 3.2.6. on Evaluation criteria for material resources: Technical.
Points 1 and 2 of Article 3.2.7. on Legislation and functional capabilities: Animal health, animal welfare and veterinary public health / Export/import inspection.
Points 1-3 of Article 3.2.8. on Animal health controls: Animal health status / Animal health control / National animal disease reporting systems.
Points 1-5 of Article 3.2.9. on Veterinary public health controls: Food hygiene / Zoonoses / Chemical residue testing programmes / Veterinary medicines/ Integration between animal health controls and veterinary public health.
Sub-point f) of Point 4 of Article 3.2.10. on Veterinary Services administration: Formal linkages with sources of independent scientific expertise.
Points 2 and 5-7 of Article 3.2.14. on National information on human resources / Laboratory services / Veterinary legislation, regulations and functional capabilities / Animal health and veterinary public health controls.

Codex Alimentarius Commission standards:

General Principles of Food Hygiene (CAC/RCP 1-1969).
Code of practice for fish and fishery products (CAC/RCP 52-2003).

II-1. Laboratory diagnosis **A. Access to laboratory diagnosis** *The authority and capability of the VS or AAHS to have access to laboratory diagnosis in order to identify and record pathogenic agents, including those relevant for public health, that can adversely affect aquatic animals and aquatic animal products.*	Levels of advancement
	1. Disease diagnosis is almost always conducted by clinical means only, with no access to and use of a laboratory to obtain a correct diagnosis.
	2.For major diseases of national economic importance, the VS or AAHS have access to and use a laboratory to obtain a correct diagnosis.
	3.For other diseases present in the country, the VS or AAHS have access to and use a laboratory to obtain a correct diagnosis.
	4.For diseases of economic importance not present in the country, but known to exist in the region and/ or that could enter the country, the VS or AAHS have access to and use a laboratory to obtain a correct diagnosis.
	5.In the case of new and emerging diseases in the region or world, the VS or AAHS have access to and use a network of national or international reference laboratories (e.g. an OIE Reference Laboratory) to obtain a correct diagnosis.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, H2, H5, E3, E12, E15, P2, P3, P17, P22, P23, P35.

Findings:

The Reference Laboratory for all aquatic animal disease is the Bornova Veterinary Control Institute (accreditation: TURKAK and ISO:17025) located in Izmir province. Seven other fisheries institute laboratories in the network have some limited capacity to perform diagnosis (all laboratories ISO:17025 accredited), but are not routinely performing aquatic animal disease diagnosis apart from basic gross pathology, wet preparation and sampling when required.

Sampling for disease is performed at Provincial and District level and samples are submitted to the Bornova laboratory if required (positive or suspected positive confirmation testing). Individual diagnostic tests are accredited by the Turkish Laboratory Accreditation Institution (TURKAK): which is the official government-recognized accreditation laboratory and a signatory of ILAC.

Laboratories are audited once a year for compliance and non-compliance dispute resolution protocol is by official process.

Research is actively carried out at the Bornova laboratory on priority research areas including; vaccine development and efficacy, epidemiology, antimicrobial presence and emerging diseases of concern.

Passive and active surveillance for diseases on the national list is conducted according to a sampling schedule and as required respectively.

Tests are accredited, and there are published Standard Diagnostic Procedure (SDP) manuals (see P3, P17, P22, P23, and P35), including very basic SDP's for instruction at Provincial and District level for veterinarians, AAHP's and field technicians.

No test validation or proficiency testing is carried out between laboratories in the national diagnostic network.

Provincial fisheries laboratories have limited capacity for aquatic animal disease diagnosis apart from simple diagnostic tests, such as gross pathology and wet preparation.

Any suspected disease samples are sent to Bornova for further diagnosis.

Strengths:

- The Bornova aquatic animal disease reference laboratory has adequate management and capacity to receive samples and provide correct diagnosis for most diseases of concern.
- Tests are accredited and there are published Standard Diagnostic Procedure (SDP) manuals.

Weaknesses:

- Rapid diagnostic techniques that are in high demand are only found at Bornova. Transport logistics may unnecessarily slow down diagnostic capacity.
- Shallow support for the other seven provincial fisheries laboratory services inhibits rapid and thorough diagnostic investigations by AAHS.
- Provincial and District capacity for aquatic animal disease testing is under-developed or completely lacking in many areas.
- Bornova aquatic animal disease reference laboratory has very good, but limited capacity to accurately test for all OIE listed diseases (exotic and endemic). This is caused by the national list of diseases not being routinely updated.

Recommendations:

- Conduct a study into the feasibility for extending aquatic animal disease diagnostic capacity to the seven provincial fisheries laboratories strategically located throughout Turkey.
- Update the national list of notifiable aquatic animal diseases and develop SDP's for all endemic and exotic diseases of concern, including emerging diseases.

II-1. Laboratory diagnosis **B.Suitability of national laboratory infrastructures** *The sustainability, effectiveness and efficiency of the national (public and private) laboratory infrastructures to service the needs of the VS or AAHS.*	Levels of advancement
	1.The national laboratory infrastructure does not meet the need of the VS or AAHS.
	2.The national laboratory infrastructure meets partially the needs of the VS or AAHS, but is not entirely sustainable, as organisational deficiencies with regard to the effective and efficient management of resources and infrastructure (including maintenance) are apparent.
	3.The national laboratory infrastructure generally meets the needs of the VS or AAHS. Resources and organisation appear to be managed effectively and efficiently, but their regular funding is inadequate to support a sustainable and regularly maintained infrastructure.
	4.The national laboratory infrastructure generally meets the needs of the VS or AAHS and is subject to timely maintenance programmes but needs new investments in certain aspects (e.g. accessibility to laboratories, number or type of analyses).
	5.The national laboratory infrastructure meets the needs of the VS or AAHS, and is sustainable and regularly audited.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, H2, H5, E3, E12, E15, P2, P3, P17, P22, P23, P35.

Findings:

As stated in CC II-1A the Reference Laboratory for all aquatic animal disease is the Bornova Veterinary Control Institute (accreditation: TURKAK and ISO:17025) in Izmir province. Seven other fisheries institute laboratories in the network have some limited capacity to perform diagnosis (all laboratories ISO:17025 accredited), but are not routinely performing aquatic animal disease diagnosis apart from basic gross pathology, wet preparation and sampling when required. Sampling for disease is performed at Provincial and District level and samples are submitted to the Bornova laboratory if required (positive or suspected positive confirmation testing).

For food safety (and very limited diagnostic testing) the National Reference Laboratory is in Ankara and five other food safety laboratories are in the national network throughout Turkey. There are also another 40 public Provincial laboratories delegated to conduct limited food safety analysis throughout the Turkish food safety laboratory network.

National laboratory infrastructure for food safety and aquatic animal disease diagnosis was found to have adequate human, physical and financial resources.

Reference laboratories for food safety and aquatic animal diseases all had access to the latest technology and were updating major infrastructure (buildings), tests and equipment on a regular basis to meet exporting country import risk management requirements.

Laboratory Information Management Systems (LIMS) are in place at laboratories and are subject to the accreditation process. LIMS were found to be adequate.

Strengths:

- The national reference laboratory diagnostic capacity is well equipped and well resourced both in aquaculture animal health and food safety.

Weaknesses:

- Shallow support for the other seven provincial fisheries laboratory services inhibits rapid and thorough diagnostic investigations by AAHS.
- Provincial and District capacity for aquatic animal disease testing is under-developed in some areas.

Recommendations:

- Conduct an evaluation of the network of laboratories performing aquatic animal health activities to determine needs/gaps and enhance laboratory network efficiency.
- The national laboratory infrastructure should be regularly audited.

II-2. Laboratory quality assurance *The quality of laboratories as measured by the use of formal QA systems, including, but not limited to, participation in relevant proficiency testing programmes.*	Levels of advancement
	1. No laboratories used by the public sector VS or AAHS are using formal QA systems.
	2.Some laboratories used by the public sector VS or AAHS are using formal QA systems.
	3.All laboratories used by the public sector VS or AAHS are using formal QA systems.
	4.All the laboratories used by the public sector VS or AAHS and most or all private laboratories are using formal QA systems.
	5.All the laboratories used by the public sector VS or AAHS and most or all private laboratories are using formal QA programmes that meet OIE, ISO 17025, or equivalent QA standard guidelines.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, H2, H5, E3, E12, E15, P2, P3, P17, P22, P35.

Findings:

As stated in CC II-1A the Reference Laboratory for all aquatic animal disease is the Bornova Veterinary Control Institute (accreditation: TURKAK and ISO:17025) in Izmir province. Seven other laboratories in the network have limited capacity to perform diagnosis. All are TURKAK and ISO:17025 accredited.

Individual diagnostic tests are accredited by TURKAK, which is the official government recognized accreditation laboratory and ILAC signatory.

Laboratories are audited once a year for compliance. There is an official process in place to manage non-compliance dispute resolution.

Laboratory standards for AAH are guided by the high-level general GDFC policy to meet EU standards.

Proficiency testing and test validation activities between Bornova and the other seven fisheries laboratories in the AAH network are not carried out.

Published Standard Diagnostic Procedures (SDP's) are available to all public and private laboratories and are updated every year. Diagnostic procedures are developed by the Bornova National Reference Laboratory for aquatic animal diseases.

Formal QA systems is mandatory for all public and private laboratories.

Strengths:

- Turkey has a national laboratory network that meets accreditation standards.
- Formal QA systems apply to all public and private laboratories.

Weaknesses:

- Rapid diagnostic techniques that are in high demand are only found at Bornova. Transport logistics may unnecessarily slow down diagnostic capacity.

Recommendations:

- Conduct an evaluation of the network of laboratories performing aquatic animal health activities to determine needs/gaps and enhance laboratory network efficiency.
- Conduct a study into the feasibility for extending aquatic animal disease diagnostic capacity to the seven provincial fisheries laboratories strategically located throughout Turkey.
- Conduct proficiency testing for any diagnostics carried out at laboratories other than Bornova, including very basic diagnostics and accompanying training material.

II-3. Risk analysis *The authority and capability of the VS or AAHS to base its risk management measures on risk assessment.*	Levels of advancement
	1. Risk management measures are not usually supported by risk assessment.
	2.The VS or AAHS compile and maintain data but do not have the capability to carry out risk analysis. Some risk management measures are based on risk assessment.
	3.The VS or AAHS compile and maintain data and have the capability to carry out risk analysis. The majority of risk management measures are based on risk assessment.
	4.The VS or AAHS conduct risk analysis in compliance with relevant OIE standards, and base their risk management measures on the outcomes of risk assessment.
	5.The VS or AAHS are consistent in basing sanitary measures on risk assessment, and in communicating their procedures and outcomes internationally, meeting all their OIE obligations (including WTO SPS Agreement obligations where applicable).

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E6.

Findings:

IRA's (Import Risk Analysis) can be carried out according to legislation.

GDFC has a risk analysis branch within the structure of the organisation. The current priority for IRA is for food safety.

There are no IRA's for aquatic animals or aquatic animal products.

GDFC have not reviewed or identified diseases of economic or environmental concern to either themselves or their main trading partner (the EU) that require IRA.

The national list of notifiable diseases consists of those determined by the OIE and EU and was last updated in 2007 and last published in the Official Gazette, Annex-1,numbered 27823, January 22, 2011. Turkey does not have structured aquatic animal IRA's and therefore has not identified the need for more restrictive risk management measures in addition to those found in the Aquatic Code.

Current risk management measures consist of health certification declaring imports of live aquatic animals are free from diseases on the national list of notifiable aquatic animal diseases. Only live mussels are not permitted entry into Turkey, but this risk management measure is not based on evidence from an aquatic animal IRA.

The GDFC do not monitor emerging disease outbreaks within bi-lateral trading countries and there is no general health screening or targeted testing of live aquatic animals for listed or emerging diseases on arrival.

Example 1: sea bass and sea bream fingerlings are imported from Greece with health certification. There is no health screening or targeted disease testing on-arrival, there is no assessment of the Greek CA's ability to prevent, investigate or report significant emerging disease issues in sea bass/bream and there is no general monitoring of disease outbreaks or emerging issues occurring within trading countries. This lack of information collection and analysis indicates the risks associated with importing sea bass/bream fingerlings for aquaculture from exporting countries have not been thoroughly examined.

Example 2: Cyprinids (carp, goldfish) are imported for ornamental and ornamental breeding purposes on the basis of health certification. Turkey has a substantial carp aquaculture and recreational fishing industry and have sampled and tested for KHV since 2011, but no positive results have been found. Requesting only health certification is not compliant with international standards and therefore does not address the import risks associated with live

cyprinids. Risk analysis is required to determine the risk and the risk management measures required to manage live cyprinid imports.

Strengths:

- Health certification is in line with international standards and well managed.

Weaknesses:

- Not enough information or analysis (IRA's) to make critical decisions regarding risk assessment and risk management.
- Reliance only on health certification without risk analysis, risk management measures, evaluation of exporting CA's, or health screening of imported live animals.

Recommendations:

- Develop and train a Working Group (people from GDFC, Bornova and Universities) for identifying, prioritising and conducting import risk analysis for aquatic animals and aquatic animal products.
- Conduct import risk analysis for live aquatic animals for all end use pathways including, but not limited to; aquaculture, ornamental aquatic animals, human consumption, stock feed.
- Pending outcomes of an IRA, evaluate exporting CA's, monitor the health situation of exporting countries and conduct health screening of live animals for diseases of concern on-arrival.

II-4. Quarantine and border security *The authority and capability of the VS or AAHS to prevent the entry and spread of diseases and other hazards of aquatic animals and aquatic animal products.*	Levels of advancement
	1. The VS or AAHS cannot apply any type of quarantine or border security procedures for aquatic animals or aquatic animal products with their neighbouring countries or trading partners.
	2.The VS or AAHS can establish and apply quarantine and border security procedures; however, these are generally based neither on international standards nor on a risk analysis.
	3.The VS or AAHS can establish and apply quarantine and border security procedures based on international standards, but the procedures do not systematically address illegal activities relating to the import of aquatic animals and aquatic animal products.
	4.The VS or AAHS can establish and apply quarantine and border security procedures which systematically address legal pathways and illegal activities.
	5.The VS or AAHS work with their neighbouring countries and trading partners to establish, apply and audit quarantine and border security procedures which systematically address all risks identified.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6):E1,E6,H11,P4,P6,P7,P9,P10,P11,P12,P13 and meetings with BIP Directorates.

Findings:

Turkey has 23 BIP's: 11 Ports, 5 Airports and 7 Highway border posts.

BIP's are part of GDFC.

Import control operations and compliance is governed by the legislative framework of both GDFC (Law 5996 on Veterinary Services, Plant Health, Food, and Feed)and Customs (Customs Law 5607).

The national electronic management system notifies Customs for imported products to be diverted to veterinary control (BIP). The border control pathway includes: product tariff identification code, customs declaration summary, customs declaration document, Veterinary Entry Document, import permit, and health certificates. The list of products subject to BIP controls is updated as required by GDFC. Officers access the electronic system for all information including SOP's and work instructions for BIP activities.

Veterinary control consists of documentary check, identification check and physical check on a random basis.

The responsible person or importer for the shipment of live animals and animal products that are subjected to veterinary control is obliged to:

Make prior notification via **"Veterinary Entry Document (VGB)".**
- at least one day prior to estimated time of arrival in the country for the animals,
- prior to arrival in the country for the products.

Controls are carried out by Veterinary Border Inspection points or authorized Provincial Directorates at entrance to the country.
-Document Control (Control of Health Certificate and other documents (vaccination, testing, etc.)).
-Identity Control (matching health certificate and other documents with delivery).
-Physical Control (all inspections and controls including packaging, temperature, sampling and laboratory testing).

Animals and animal products that comply with controls are imported without delay (shipped to free circulation, destination company).

For the animals and animal products which are non-compliant for importation, one of the following options are applied: returning, special processing, allowing for another purpose other than original intended use, culling and destruction.

Agreed model health certificates are in place attesting to the health status for all aquatic animals or aquatic animal products e.g. live sea bass and live sea bream for aquaculture, aquatic animal products and live ornamental fish.

There are no specific risk management measures for permitted species other than checking the health certificate and a declaration stating the fish are healthy and free from diseases on the national list.

Governance and operations of BIP's are satisfactorily performed at Provincial level. There is adequate staffing for border inspection; e.g. Izmir BIP port has 12 veterinarians, 1 AAHP, 2 technicians. There is evidence of inspections and non-compliance (Izmir: 1500 inspections/yr 15 rejections).

All imported aquatic animals and aquatic animal products are subject to Customs and BIP control. All live animals and products require inspection according to the rules to verify the attestations on the agreed model health certificate presented on-arrival.

The BIP's visited are well equipped (P10, P11).

Live sea bream arriving at Cesme for aquaculture are subject to routine regulated customs control and diversion to BIP to undergo routine document and physical inspection according to SOP, including species identification, water change to refresh the fish and unacceptable levels of mortality. If it is suspected that mortality is caused by disease, samples are taken and sent to Bornova laboratory, however this has not been necessary to date. Consignments can be withheld safely and refreshed on the transport vessel pending laboratory results. A veterinary inspection certificate is issued by the Provincial veterinarian once approved for release.

No other AAH measures are applied to manage disease entry risks, such as on-arrival sampling, aquatic animal health and banned substance screening (laboratory testing for diseases of concern and antimicrobials); assessment of the exporting CA for capacity to meet import health certification requirements; or monitoring of exporting country health status.

Customs have programmes to fight against illegal import activities. In the case of import of aquatic animal Customs place a GPS device on the truck to monitor movements to and from the designated farm locations.

Example of the BIP pathway for live Bluefin tuna for aquaculture from countries sharing the same resource (6 batches from Libya/Egypt in 2015). Inspections are focused on the requirements of the specific health certificate including attestation (declaration); fit for human consumption and that fish are caught in shared waters. The fish health status for Bluefin tuna is not required as the fish are migratory and the resource is shared, and therefore considered to have the same health status.

Strengths:

- Adequate BIP control systems are in place to control risks associated with aquatic animal health.
- BIP's are well equipped and properly staffed.
- There are programmes to fight against illegal import activities, which include, but are not limited to; security systems, random inspection, X-ray, and surveillance support from the Turkish Coast Guard for seaports.

Weaknesses:

- The health certificate attesting to the health status of the product issued by the exporting CA is the only on-arrival risk management measure directly relating to AAH.
- There are no structured aquatic IRA's for making determinations regarding acceptable level of protection and implementation of on-arrival risk management measures at BIP's.
- Document control is a paper-based system which weakens the effectiveness of the control.

Recommendations:

- Identify risk priorities and conduct IRA to justify improvement and strengthening of on-arrival risk management measures.
- Consider live aquatic animals for aquaculture and ornamental purposes as a priority for IRA (see recommendations for CC II-3).
- Transfer quarantine and border control documents from a paper-based system to new electronic-based system with secure online access.
- Establish a documented, risk-based programme for identification of pathogens and banned substances of concerns in imported live aquatic animals.

II-5. Epidemiological surveillance and early detection *The authority and capability of the VS or AAHS to determine, verify and report on the sanitary status of the aquatic animal populations including wildlife under their mandate.* **A. Passive epidemiological surveillance**	Levels of advancement
	1. The VS or AAHS have no passive surveillance programme.
	2.The VS or AAHS conduct passive surveillance for some relevant diseases and have the capacity to produce national reports on some diseases.
	3.The VS or AAHS conduct passive surveillance in compliance with OIE standards for some relevant diseases at the national level through appropriate networks in the field, whereby samples from suspect cases are collected and sent for laboratory diagnosis with evidence of correct results obtained. The VS have a basic national disease reporting system.
	4.The VS or AAHS conduct passive surveillance and report at the national level in compliance with OIE standards for most relevant diseases. Producers and other interested parties are aware of and comply with their obligation to report the suspicion and occurrence of notifiable diseases to the VS.
	5.The VS or AAHS regularly report to producers and other interested parties and the international community (where applicable) on the findings of passive surveillance programmes.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E6, H5, E12.

Findings:

Passive surveillance, policy and procedures for all licenced aquaculture, processing and market facilities are in place.

All routine collection samples from aquaculture and processors are sent to Bornova reference laboratory for aquatic animal diseases. Farms testing positive for diseases in the surveillance programme are subject to a regulated two-year follow-up monitoring and control programme.

Annual epidemiological surveillance, monitoring and control programmes of the aquatic animal diseases are planned, prepared and submitted by the Bornova Veterinary Control Institute for approval by the GDFC at Central level. Provincial/District Directorates shall provide necessary samples in the execution of these programmes.

Passive surveillance programmes are in place, but require strengthening with improved policy framework and procedure manuals; a field guide in the style of “A Photographic Guide to Diseases of Yellowtail (*Seriola*) Fish” by Mark Sheppard (2004), including support training as part of the continued education programme are essential awareness programmes to support passive surveillance

There is no policy and procedure for reporting or investigating of wild fish kills.

There is no hotline for public reporting, including for professional fishermen who are most likely to use such a service.

The national list of notifiable aquatic animal diseases is aligned with diseases listed by the OIE and EU and was last updated in 2007 (last published in the Official Gazette in 2011). The OIE list has since been updated and the national list is no longer aligned with the OIE listed diseases. There is no policy framework or procedure for reviewing and updating the national list with exotic and endemic diseases of environmental or economic concern, including emerging diseases.

Bivalves of the same species as those cultured are monitored through a passive surveillance programme to determine the risks both to aquaculture and the environment. However, wild susceptible fish species are not sampled.

Strengths:

- There is adequate laboratory capacity for investigating suspect cases identified through passive surveillance.

Weaknesses:

- Laboratory and field sampling resources are not being used to their full potential capacity and could be reviewed, upgraded and improved.
- The national list of notifiable aquatic animal diseases is out of date and there is no routine review to update the list for surveillance planning and reporting purposes.
- No public reporting mechanisms for suspect aquatic disease events.

Recommendations:

- Regularly review and update the national list of notifiable aquatic animal disease to improve planning for AAHS and to meet reporting obligations. National list review activities should be scheduled to follow the regular meetings and determinations made by the OIE.
- Produce a national aquatic animal disease field guide for veterinarians, AAHP's and technicians, including those working in aquaculture and conduct training to support the field guide.
- Strengthen the policy and procedures regarding passive surveillance for wild fish kills and testing wild species susceptible to diseases of concern in aquaculture after mortality events.
- Develop a public awareness programme for reporting fish kills. For example; a public reporting hotline that is easily located from a simple Internet search and a "Fish Kill Hotline" sticker that professional and recreational fishermen can place on their fishing vessels for easy reference.

B.Active epidemiological surveillance	Levels of advancement
	1. The VS/ AAHS have no active surveillance programme.
	2.The VS/ AAHS conduct active surveillance for some relevant diseases (of economic and zoonotic importance) but apply it only in a part of susceptible populations and/or do not update it regularly.
	3.The VS/ AAHS conduct active surveillance in compliance with scientific principles and OIE standards for some relevant diseases and apply it to all susceptible populations but do not update it regularly.
	4.The VS/ AAHS conduct active surveillance in compliance with scientific principles and OIE standards for some relevant diseases, apply it to all susceptible populations, update it regularly and report the results systematically.
	5.The VS/ AAHS conduct active surveillance for most or all relevant diseases and apply it to all susceptible populations. The surveillance programmes are evaluated and meet the country's OIE obligations.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E6, H5, E12.

Findings:

Annual epidemiological surveillance, monitoring and control programmes of the aquatic animal diseases are planned, prepared and submitted by the Bornova Veterinary Control Institute for approval by the GDFC at Central level.

Provincial/District Directorates shall provide necessary samples in the execution of these programmes.

There was no evidence found to support strategic active surveillance planning through the official decision-making pathway described above. Active surveillance is conducted as a research activity following successful application of research funding. No evidence was found concerning strategic active surveillance research resourcing and planning. Projects are submitted for approval by Bornova reference laboratory on an *ad hoc* basis.

Active surveillance programmes have been conducted over the last 5 years, however as stated previously, there is no decision making framework or strategic research planning in place to determine surveillance priorities and resources required.

Imported fish for aquaculture such as sea bass and sea bream are not subject to routine targeted surveillance on-arrival, including sampling and testing for major viral, bacterial or parasitic diseases of concern and banned substances.

Strengths:

- Active surveillance activities have been carried out over the last five years on an *ad hoc* basis.

Weaknesses:

- There is no active surveillance planning or prioritization at the national strategic level according to updated notifiable disease or emerging disease information.

Recommendations:

- Consider the creation of a dedicated AAH branch (or strategic planning Task Force or Working Group) that would be responsible for providing national leadership, planning and direction for all AAHS.

- The AAH branch (see first recommendation) should put in place an active surveillance policy (and plan) for prioritising, planning (including risk management) and resourcing active surveillance activities.
- Based on optimal planning, establish a surveillance system that involves routinely testing of all imported live aquatic animals for diseases of concern and banned substances.

II-6. Emergency response *The authority and capability of the VS or AAHS to respond rapidly to a sanitary emergency (such as a significant disease outbreak or food safety emergency).*	Levels of advancement
	1. The VS or AAHS have no field network or established procedure to determine whether a sanitary emergency exists or the authority to declare such an emergency and respond appropriately.
	2.The VS or AAHS have a field network and an established procedure to determine whether or not a sanitary emergency exists, but lack the necessary legal and financial support to respond appropriately.
	3.The VS or AAHS have the legal framework and financial support to respond rapidly to sanitary emergencies, but the response is not coordinated through a chain of command. They may have national contingency plans for some exotic aquatic animal diseases but they are not updated/tested.
	4.The VS or AAHS have an established procedure to make timely decisions on whether or not a sanitary emergency exists. The VS or AAHS have the legal framework and financial support to respond rapidly to sanitary emergencies through a chain of command. They have national contingency plans for some exotic diseases that are regularly updated/tested.
	5.The VS or AAHS have national contingency plans for all diseases of concern, including coordinated actions with relevant Competent Authorities, all producers and other interested parties through a chain of command. These are regularly updated, tested and audited.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E6, E13, E18.

Findings:

Emergency response and action plans in aquatic animal diseases are applied within the scope of the "Regulation on Health Conditions of Aquatic Animals and Fighting and Protection against Diseases" published in 31.01.2012 and 28190 numbered Official Gazette regarding aquatic animal health conforming with the European Union Directive 2006/88 EC, and in accordance with the "Fighting against Animal Diseases and Pests Booklet" published every year.

GDFC conduct emergency simulation exercises and recently (early 2016) conducted an emergency simulation exercise for Avian Influenza (see OIE website www.oie.int).

Current budget for GDFC 2015 to combat animal disease is $43.4 million Turkish Lire. The budget is mostly used for provincial service operations (not including salaries). In addition there are $120 million Turkish Lire for compensation fund for selected diseases i.e. FMD, TB, AI. There are currently 10 diseases covered by compensation.

No aquatic animal diseases are covered by the compensation fund.

Emergency response planning and extension activities are in place for terrestrial animal diseases. A compensation fund is accessible for three terrestrial animal disease of concern.

Strengths:

- Emergency response arrangements are in place for terrestrial animals.
- A simulation exercise has recently been conducted for AI.
- There is a compensation fund mechanism established for terrestrial food animals.

Weaknesses:

- There is no response procedure or training in place for aquatic animal disease emergencies.

- Surveillance activities to detect outbreaks and support emergency response require strengthening.
- The compensation fund is not accessible for aquatic animal diseases emergencies.

Recommendations:

- Develop contingency plan/manual and conduct training for priority species (e.g. sea bass) aquaculture.
- Include aquatic animal diseases in the compensation fund.

II-7. Disease prevention, control and eradication *The authority and capability of the VS or AAHS to actively perform actions to prevent, control or eradicate OIE listed diseases and/or to demonstrate that the country or a zone are free of relevant diseases.*	Levels of advancement
	1. The VS or AAHS have no authority or capability to prevent, control or eradicate aquatic animal diseases.
	2.The VS or AAHS implement prevention, control or eradication programmes for some diseases and/or in some areas with little or no scientific evaluation of their efficacy and efficiency.
	3.The VS or AAHS implement prevention, control or eradication programmes for some diseases and/or in some areas with scientific evaluation of their efficacy and efficiency.
	4.The VS or AAHS implement prevention, control or eradication programmes for all relevant diseases but with scientific evaluation of their efficacy and efficiency of some programmes.
	5.The VS or AAHS implement prevention, control or eradication programmes for all relevant diseases with scientific evaluation of their efficacy and efficiency consistent with relevant OIE international standards.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E6, E12, E13, E18, E23.

Findings:

Disease outbreak or incident reporting is compulsory for high mortality according to Law 5996. Regulations regarding reporting are secondary legislation under Law 5996.

Routine inspection of mortality records and sampling for disease are conducted by Provincial veterinarians during scheduled inspections. Sampling for food safety purposes is routinely undertaken by district AAHP's and technicians under the direction of the district veterinarian. The visitation schedule can vary depending on the establishment between once per week to once per month. Facilities inspected include: hatcheries, feedmills, grow-out facilities, and processors (export).

Private veterinarians must immediately notify the Provincial Directorate of high mortality or disease outbreak and take samples for investigation and laboratory analysis. Known diseases that are not of concern (not listed) are not reported and treated through self-regulated health management programmes as directed by the public/private veterinarian.

If an emergency order to slaughter (depopulate) is issued, marketable size fish can be emergency harvested for human consumption prior to death occurring. Otherwise, the farm is depopulated, stock is subject to destruction and disposal and the facility is decontaminated.

All farms are required to have on-farm biosecurity e.g. health management, vaccination programmes, control and use of medicines, biosecurity control of all influents and effluents and reporting protocols that must be followed. For example: records must be kept for mortalities, use of medicines etc. On-farm Quality Management Systems (ISO, BRC, Best Aquaculture Practice, and Global GAP certification etc.) account for governance of record keeping at larger establishments to meet GDFC health regulations.

GDFC at Central level informed us that they are currently developing improved biosecurity working instructions for production facilities.

The aquatic animal active and passive surveillance programmes need to be strengthened and aligned with an updated national list of notifiable diseases to provide improved detection, early warning and disease status capability.

Emerging and suspected cases are not reported to the Central level of the GDFC if the disease is controlled at Provincial level i.e. the disease problem is not elevated as a nationally significant problem and is resolved at District or Provincial level.

Emergency response is in place, but requires updating for aquaculture (see CC II-6) and although GDFC has a compensation fund it is not accessible for aquatic animal diseases emergencies.

Strengths:

- AAHS have the physical and human resources capable to actively perform actions to prevent, control or eradicate OIE listed diseases.

Weaknesses:

- National list of diseases is not reviewed and updated on a regular basis.
- Active and passive surveillance require strengthening.
- The aquatic animal disease laboratory network relies only on Bornova for diagnostics.
- Emergency response programmes (including compensatory funding) are not in place for aquatic animal diseases.

Recommendations:

- Prioritise development of biosecurity plans (for all types of facilities including hatcheries, feed mills, grow-out, processors).
- Develop a plan/manual for disease identification in the field (field guide, see CC I-3).
- Develop manuals for destruction, disposal and decontamination (see CC I-3).
- Refer to the recommendations in the relevant critical competency for surveillance (CC II-5), emergency response (CC II-6), and review and updating the national list (CC II-5).
- Improve the diagnostic capacity of the aquatic animal disease laboratory network (see CC II-1 A& B).

II-8. Food safety **A. Regulation, authorisation and inspection of establishments for production, processing and distribution of food of aquatic animal origin** *The authority and capability of the VS or AAHS to establish and enforce sanitary standards for establishments that produce, process and distribute food of aquatic animal origin.*	Levels of advancement
	1. Regulation, authorisation and inspection of relevant establishments are generally not undertaken in conformity with international standards.
	2.Regulation, authorisation and inspection of relevant establishments are undertaken in conformity with international standards in some of the major or selected premises (e.g. only at export premises).
	3.Regulation, authorisation and inspection of relevant establishments are undertaken in conformity with international standards in all premises supplying throughout the national market.
	4.Regulation, authorisation and inspection of relevant establishments (and coordination, as required) are undertaken in conformity with international standards for premises supplying national and local markets.
	5.Regulation, authorisation and inspection of relevant establishments (and coordination, as required) are undertaken in conformity with international standards at all premises (including on-farm establishments).

[Note: This critical competency primarily refers to inspection of processed animal products and raw products other than meat (e.g. milk, honey etc.). It may in some countries be undertaken by an agency other than the VS.]

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E6, H12, H14, H15, E19, P 18, P19, P21, P32, P37, P38.

Findings:

According to Article 30 of Law 5996 products for human consumption can only be released to the domestic market if they are produced in food premises holding a Business Approval Certificate and a Business Approval Number in accordance with the "Regulations on Registry and Approval of Food Enterprises".

An Export License is required in addition to the Business Approval Certificate and Business Approval Number for the enterprises wishing to export aquaculture products primarily to the European Union (EU), Russian Federation, People's Republic of China, and also to other countries.

Procedures that must be regarded by an enterprise for export licensing are included in "Instruction on Licensing, Inspecting Aquaculture Enterprises and Regulating Health Certificate for Products of these Enterprises and some Aquaculture Products".

Food enterprises must apply for license at the Provincial Directorate in the province at which it operates.

The number of fish product establishments under control of the GDFC is 2,377.

183 establishments are registered for export.

According to Article29 of Law 5996 food business operators, except those engaged in primary production, are responsible of implementing and maintaining food safety systems based on Hazard Analysis and Critical Control Point (HACCP) principles.

Regulation, authorisation and inspection for facilities within the remit of GDFC (Hatchery, feed mill, grow-out, processing, fishing vessels, transport, domestic market, retail) were found to be properly administered and controlled against regulations, well-coordinated and well managed by authorised GDFC officers.

Licencing of aquaculture operations follows a comprehensive regulated and systematic process based on legislation (reference to Law 5996). The licencing process also includes inter-governmental institutions, such as Ministries with responsibility for the environment. Farms are inspected/audited twice per year for licence renewal. Official veterinarians also

visit establishments on an “as needs” basis for health certification or when government AAHS are requested by the establishment or if AAH issues arise in the region.

There are no AAH requirements directly linked to licencing of aquaculture facilities. For example; the capacity to meet compulsory biosecurity and health management protocols are not assessed as part of the registration process. However, AAH requirements must be met following registration, such as; movement control, mortality reporting, access to a contracted veterinarian, prescription and use of medicines including compulsory vaccination, health certification, inspection and sampling for disease and residues etc.

GDFC is currently working on an aquaculture census to update the national database for long-term strategic industry planning purposes.

Two processors registered for export were visited during the mission in Isparta and Izmir provinces for trout and sea bass/bream respectively. Good application of HACCP procedures (existence of control plan, high hygienic level for workers and visitors etc.).Sampling programmes were in place and verified for all listed diseases and food safety. Processors are registered and under active audit and regulatory control of the GDFC.

The Team visited the Fish Market in Izmir allowed only for the national market. All staff and market workers are inspected every six months to ensure standards are maintained. People can enter Fish Market without proper hygienic precautions. There is no microbiological testing conducted in the market or for fresh fish submitted for sale at the domestic level. HACCP procedures are not properly applied.

Strengths:

- The food safety system is efficiently managed and functions effectively.
- Corporate governance for food safety systems is satisfactory.
- Establishments registered for export have a high hygienic standard level.

Weaknesses:

- Not all establishments meet best practice standards particularly in hygienic precautions.
- HACCP procedures are not properly applied in all premises supplying domestic market.

Recommendations:

- The food safety system for the domestic fish market should be upgraded/improved to meet the highest export standards.

B.Inspection of collection, slaughter, processing and distribution of products of aquatic animal origin *The authority and capability of the VS or AAHS to inspect, manage, implement and coordinate aquatic animal production and food safety in relation to the collection, slaughter, processing and distribution of products of aquatic animals.*	Levels of advancement
	1. Inspection, management, implementation and coordination (as appropriate) are generally not undertaken in conformity with international standards, including collection of disease information.
	2.Inspection, management, implementation and coordination (as appropriate) are generally undertaken in conformity with international standards only for export purposes, including collection of disease information.
	3.Inspection, management, implementation and coordination (as appropriate) are generally undertaken in conformity with international standards only for export purposes and for products that are distributed throughout the national market, including collection of disease information.
	4.Inspection, management, implementation and coordination (as appropriate) are generally undertaken in conformity with international standards for export purposes and for products that are distributed throughout the national and local markets, including collection of disease information.
	5.Inspection, management, implementation and coordination (as appropriate) are undertaken in full conformity with international standards for products at all levels of distribution (including national and local markets and direct sales), including collection of disease information.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E6, H12, H14,H15, E19,P 18,P19, P21, P32, P37, P38.

Findings:

The food safety system including inspection, management, implementation and coordination is efficiently managed and functions effectively.

Continual improvement to update the food safety support laboratory and associated infrastructure and operations to meet future growth demands was evidenced in Izmir (largest aquatic animal production province).

The two processors visited during the mission in Isparta and Izmir provinces (see CC II-8 A) are registered and under active audit and regulatory control of the GDFC. Sampling programmes were in place and verified for all listed diseases and food safety

HACCP programmes were current and verified during the visit.

Aquaculture Engineers (AAHP's) were employed by the processors visited to perform necessary self-regulated general health checks during processing (including use of on-site laboratories). AAHP's were interviewed and were found to be fully trained regarding the health requirements for export and the AAH regulations applied to their facility, such as: sampling collection, submission, reporting and compliance protocols.

In the Fish Market visited, roles and responsibilities of AAHP include: inspection for banned fish, general administration, movement control, fish quality (fit for human consumption inspection), and fishing regulations (e.g. fish size limits, licences, quotas, banned fish).

Regulation and inspection concerning hygiene standards and organoleptic testing at the domestic level are not always satisfactory. Inspections are carried out every day for contamination including containers and Vessel Disinfection Certificates.

Fish health issues are inspected during the general daily fish quality inspection. Samples are taken if notifiable diseases or parasites are suspected or detected and sent to Bornova laboratory for identification if required. If the need arises to withhold/seize and destroy fish determined to be unsuitable for sale according to the regulations, fish are appropriately secured on-site and sent to the municipal solid waste disposal unit. Except for a small amount of imported fish (e.g. farmed salmon from Norway), fish passing through the domestic markets are caught or grown locally.

Containers used for the consignment of fresh fish to the market: small traditional-style wooden crates (5-10kg capacity) are used for wild catch and polystyrene containers used for aquaculture fish.

Rudimentary waste water treatment (secondary municipal treatment) at processors geographically located within the growing region may represent an unacceptable disease exposure risk to wild and farmed animals and may require risk analysis to determine domestic risk.

Wooden crates were seen to be re-used.

Microbiological testing was not performed at the domestic fish market.

There was no full application of HACCP in the domestic fish market.

Strengths:

- The food safety system including inspection, management, implementation and coordination is efficiently managed and functions effectively.
- There is a continual improvement to update the food safety support laboratory and associated infrastructure and operations to meet future growth demands.
- The processors licensed for export are under active audit and regulatory control of the GDFC.

Weaknesses:

- There is not correct application of HACCP in the domestic fish market.
- Disinfection procedures were noted (e.g. wooden crates were seen to be re-used).
- There is, in some cases, a rudimentary wastewater treatment.

Recommendations:

- Sample and determine the hygiene standards of fish containers.
- Consider the development and implementation of a national standard fish crate system. For example: Standard sterilised crates are made available to all producers and fishermen on a pro-rata hire basis. The system is controlled by the GDFC at Provincial domestic market level. The system includes HACCP control for cleaning, distribution and collection of crates. The system should be compulsory for all producers except aquaculture producers using new (one use) polystyrene containers.
- Conduct risk analysis on the potential entry, exposure, establishment and spread of disease to wild and farmed fish associated with wastewater from processing plants.
- Strengthen aquatic animal disease inspection procedures at domestic fish markets by developing and implementing a work instruction (training) for market and processor inspectors regarding inspection for suspected diseases and produce a field guide (manual) to support field staff.
- Introduce microbiological testing and HACCP for containers, stands (equipment on which fish is placed for sale/auction), water, ice, personnel entry control etc.

II-9. Veterinary medicines and biologicals *The authority and capability of the VS or AAHS to regulate veterinary medicines and veterinary biologicals, in order to ensure their responsible and prudent use, i.e. the marketing authorisation, registration, import, manufacture, quality control, export, labelling, advertising, distribution, sale (includes dispensing) and use (includes prescribing) of these products.*	Levels of advancement
	1. The VS or AAHS cannot regulate veterinary medicines and veterinary biologicals.
	2.The VS or AAHS have some capability to exercise regulatory and administrative control over veterinary medicines and veterinary biologicals in order to ensure their responsible and prudent use.
	3.The VS or AAHS exercise regulatory and administrative control for most aspects related to the control over veterinary medicines and veterinary biologicals in order to ensure their responsible and prudent use.
	4.The VS or AAHS exercise comprehensive and effective regulatory and administrative control of veterinary medicines and veterinary biologicals.
	5.The control systems are regularly audited, tested and updated when necessary.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E6, P28, P31.

Findings:

In accordance with first paragraph of Article 12 of the Law 5996, control of veterinary drugs and biological products is carried out under coordination of the Department of Veterinary Health Products and Public Health of the GDFC, quality control for veterinary drugs is carried out by the relevant unit of the Directorate of Pendik Veterinary Institute, quality control for biological products is also carried out by Directorate of Pendik Veterinary Institute. However, field controls of veterinary medical products are carried out by 81 Provincial Directorates under coordination of the Directorate of Veterinary Health Products and Public Health.

Only veterinarians are permitted to prescribe veterinary medicines and veterinary biological products.

Forty-seven drugs are registered for use in aquaculture (available at: www.gkgm.gov.tr/vtu/).

Records of all registered drugs must be kept on premises. The records and stores are checked by provincial/district veterinarians during routine schedules inspections and samples are taken for residue testing for banned antimicrobials, dose limits (overuse) and compliance with withdrawal periods. The PVS team verified this during visits of the grow-out facilities.

The GDFC is directly involved in the EU rapid alert system for food and feed for the EU and therefore receive and submit notifications. Izmir province has not received alert notification for exported product tested by importing countries.

No evidence was available concerning the sale and distribution of banned veterinary medicines and veterinary biologicals.

No evidence was found regarding how or who decides what veterinary medicines and veterinary biologicals are needed for aquaculture, development of vaccines, limited use of new drugs for research or emergency purposes etc.

The Team performed a trace study at GDFC provincial headquarters, Izmir 7 April 2016. The team evaluated the sample, submission, testing, investigation, reporting and regulatory process. The regulated process appears on paper (see P28) to be thorough and well managed. The case study in question concerned a positive sample (routine) for a controlled disinfectant in sea bream farming (potassium permanganate [PP] also known as crystal violet). An affirmative result from the investigation was not determined despite the depth of the investigation. During the visit PP was observed (Isparta province) being used in a concrete raceway containing large trout broodstock. PP is only permitted for use as a

disinfectant in hatcheries for decontamination of equipment and is not permitted for direct exposure to animals.

Strengths:

- The reporting and regulatory frameworks are in place and are functional.
- Residue testing successfully meets EU export requirements.
- No alerts have been issued by the EU regarding positive test results associated with aquatic animal products from Turkey.

Weaknesses:

- There is no formal decision making framework for the GDFC, in collaboration with the aquaculture industry, to prioritise and fund the development of new veterinary medicines and veterinary biologicals or to de-register medicines and biologicals.
- Little is known about the illegal import trade in veterinary medicines and veterinary biologicals.

Recommendations:

- Investigate the risks of entry and distribution of banned veterinary medicines and veterinary biologicals.
- Develop a policy framework and procedures for consultation and evaluation of the need for new veterinary medicines and veterinary biologicals, including the controls required for the prudent use of all new (and existing) registered medicines.

II-10. Residue testing *The capability of the VS or AAHS to undertake residue testing programmes for veterinary medicines, chemicals, pesticides, radionuclides, metals, etc.*	Levels of advancement
	1. No residue testing programme for aquatic animal products exists in the country.
	2. Some residue testing programme is performed but only for selected aquatic animal products for export.
	3. A comprehensive residue testing programme is performed for all aquatic animal products for export and some for domestic consumption.
	4. A comprehensive residue testing programme is performed for all aquatic animal products for export and domestic consumption.
	5.The residue testing programme is subject to routine quality assurance and regular evaluation.

[Note: This critical competency may in some countries be undertaken by an agency or agencies other than the AAHS.]

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6):E1,H5,H16,E3,E12,E19,E22,P23,P24,P25,P26,P27,P28 and meetings with Provincial Directorates and visits to food control laboratories.

Findings:

The GDFC operate a National Residue Monitoring Programme (NRMP).

The objective of this NRMP is explained in the circular "Regulation on Measures to be Taken for Monitoring of Certain Substances and Their Residues in Live Animals and Animal Products",which determines the working procedures and principles of the competent centers, local authorities and competent laboratories which apply the residue monitoring plans implemented annually in live animals and animal products, the legal action to be performed in case of any negative detection and also the procedures and principles to be obeyed in the controls made during execution of these works.

The 2016 programme includes 2,354 samples for aquatic animals.

The NRMP programme includes:inorganic contaminants, synthetic and natural hormones, organochlorine, pesticides, dioxins, PCB's, nitrofurans, sulfamides, chloramfenicol, mycotoxin in stockfeeds, veterinary medicinal products (antibiotics, anthelmintics). For each molecule there is a clearly indicated method of analysis and maximum residue level (if it is the case).

GDFC makes a clear distribution of samples among the 81 Provincial Directorates. The OIE Team had clear evidence in a meeting with2 Provincial Directorates.

The Ankara National Food Safety Reference Laboratory and 11 other Provincial laboratories are accredited to perform tests under the NRMP. Sampling, sample submission, result controls, data warehousing standards and real-time access to data (LMS) are detailed and adequate to meet the accreditation standards of the Turkish Laboratory Accreditation Institute (TURKAK). A traceability study was performed at Izmir provincial laboratory on positive results and verified the adequacy of the system in place.

The GDFC monitoring programme for marine biotoxin is comprehensive for maximum allowable limits of biotoxin in molluscs and phytoplankton in seawater. Research, monitoring, algae typing and mapping of zones for risks currently being carried out. A public and industry alert system and harvest ban procedures are in place. Harvest bans are lifted when continued sampling results are clear.

GDFC NRMP 2016 and toxic algae monitoring programmes are comprehensive.

The GDFC reference laboratory and Provincial laboratory network have sufficient capacity for increased sampling as industry expands.

GDFC doesn't perform a quality assurance programme to routinely audit the 81 Provincial Directorates.

Strengths:

- A National Residue Monitoring Programme for aquatic animals is comprehensive and well performed.
- The GDFC reference laboratory and Provincial laboratory network have sufficient capacity for increased sampling as industry expands.

Weaknesses:

- The NRMP is not subject to routine quality assurance.

Recommendations:

- Ensure the programmes are audited to maintain and improve on the current level of advancement.

II-11. Aquatic animal feed safety *The authority and capability of the VS or AAHS to regulate aquatic animal feed safety e.g. processing, handling, storage, distribution and use of both commercial and on-farm produced aquatic animal feed and feed ingredients.*	Levels of advancement
	1.The VS or AAHS cannot regulate aquatic animal feed safety.
	2.The VS or AAHS have some capability to exercise regulatory and administrative control over aquatic animal feed safety.
	3.The VS or AAHS exercise regulatory and administrative control for most aspects of aquatic animal feed safety.
	4. The VS or AAHS exercise comprehensive and effective regulatory and administrative control of aquatic animal feed safety.
	5.The control systems are regularly audited, tested and updated when necessary.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E6, H2, H5, H6, H16, E22, E3, E15, P4, P11, P12, P13, P17, P23, P29.

Findings:

There are 27 registered fish feed manufacturing facilities in Turkey.

Feed producers are subject to registration according to Feed Hygiene Regulation of the Veterinary Services, Plant Health, Food and Feed Law No. 5996.

Feed manufacturing facilities producing medicated feed are subject to approval. The medicated feed approval procedure is conducted by GDFC, Department of Animal Feed. The Provincial Directorates conduct the registration procedure.

Feed producers are responsible for product quality, traceability and feed safety. Products are labeled in accordance with "Regulations on Supplying and Use of Feed" and with "Regulations on Feed Additives Used in Animal Nutrition". According to regulation labeling must be done in a clear and informative manner ensuring the users how to process, store and use feed and feed products.

Feed producers implement their own operation procedures (including QMS and HACCP) in order to meet the requirements specified in the "Good Manufacturing Practices and Feed Hygiene Manual for the Feed Industry". These include: control procedure, internal audit, recalling faulty product and complaints procedures.

The GDFC audit enterprises at least once a year to investigate whether or not these procedures are being implemented and for the purpose of auditing for hygiene. The enterprise is obliged to submit all the required documents and to apply procedures during the audit. In case of nonconformity, the enterprise is warned and given time to remedy the nonconformity. In case that the nonconformity is not addressed by the end of the designated time, legal procedure is initiated.

Food samples are taken from the producers and farms under the NRMP and label information is audited in terms of ingredients and undesirable substances, legal action is taken in the case of non-compliance.

The GDFC prepares and updates, when necessary, legislation dealing with all phases of regulation from production to consumption of the fish feed.

Aquatic animal diets produced locally typically contain; 25-40% fishmeal, 5-10% soymeal, 5-10 full-fat soya, 5-10% wheat flour,5-10% fish oil and vitamins/minerals. Fishmeal is imported from Morocco and Peru and anchovy meal is sourced locally from Turkey. The feed mill plant visited in Izmir does not use by-product from aquaculture to produce fishmeal. However, processors visited in Izmir confirm that they sell by-products generated from farmed aquatic animals for the production of fishmeal.

Feed mills producing products for aquaculture are adequately controlled.

Strengths:

- GDFC has adequate capacity to control and regulate feed producers.

Weaknesses:

- Control systems are not audited, reviewed or updated on a regular basis.

Recommendations:

- Review the Regulations on Feed Additives Used in Animal Nutrition and determine the risks associated with using by-products generated from farmed aquatic animals at processors to produce fishmeal for aquatic animal feed.
- Audit and test control systems on a routine basis.

II-12. Traceability **A. Aquatic animal movement control** *The authority and capability of the VS or AAHS, normally in coordination with producers and other interested parties, to trace their history, location and movement for the purpose of aquatic animal disease control, food safety, or trade.*	Levels of advancement
	1. The VS or AAHS do not have the authority or the capability to trace aquatic animals or control their movements.
	2.The VS or AAHS can trace some aquatic animals and control some movements, using traditional methods and/or actions designed and implemented to deal with a specific problem.
	3.The VS or AAHS implement procedures for aquatic animal traceability and movement control for specific aquatic animal subpopulations as required for disease control, in accordance with relevant international standards.
	4. The VS or AAHS implement all relevant aquatic animal traceability and movement control procedures, in accordance with relevant international standards.
	5.The VS or AAHS carry out periodic audits of the effectiveness of their traceability and movement control systems.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E6, E23, P5, P32, P33, P34.

Findings:

All farms are registered and recorded by the GDFC at the Provincial level and production is controlled to meet the sustainable carrying capacities for each district.

The same movement control system (see E23) is used for all livestock and aquatic animals in Turkey. Data is collected on the paper form template and transferred to electronic format only for chicken and beef for further analysis.

The compulsory movement control system (incorporating the health inspection form) is in place for live animals and animals harvested as aquatic animal products. Animals are approved by the provincial veterinarian prior to distribution to grow-out farms or processors. Movement control documents are only required for live animals or harvested animals moving from province to province.

Live animals and harvested animals moving within the province only require a Transport Declaration Document and Vessel Disinfection Document to accompany each shipment. Both of these documents must be approved by the district veterinarian. Any animals originating from outside the province must also be accompanied by the original province-to-province Movement Control Document (see P34).

Four types of documents constitute the movement control system: 1) Blue document for live animal movements. 2) White document for the transport disinfection declaration. 3) Green document for animal products (harvested animals destined for processing). 4) District transport declaration document.

Production is approved at hatchery level to meet the pre-determined carrying requirements of the district. Final yearly production figures for each province are estimated from the pre-determined maximum sustainable carrying capacity for each district and not from transport declaration documents or movement control (live and harvested) documents collected by the AAHS. District estimate production is not based on evidence data and is assumed to be running at full capacity.

Data is not collected electronically for aquatic animals, however, for traceability purposes, live aquatic animals can be effectively traced throughout the production chain (the farm registration number is the key identifier).

Strengths:

- All farms are registered and recorded by the GDFC at the Provincial level and production is controlled to meet the sustainable carrying capacities
- Aquatic animals and aquatic animal products can be effectively traced back to the farm and/or hatchery.

Weaknesses:

- The animal movement control programme is paper-based which is prone to gaps and is inefficient for use in outbreak investigations.
- The documents would benefit from an efficiency evaluation and update.
- GDFC has no programme of periodic audits of the effectiveness of their traceability and movement control systems.

Recommendations:

- Audit the paper-based aquatic animal movement control system for effectiveness and compliance with international standards.
- Record the aquatic animal movement control system electronically or consider the development of a secure electronic based system.

B.Traceability of products of aquatic animal origin *The authority and capability of the VS or AAHS, normally in coordination with producers and other interested parties, to trace products of aquatic animal origin for the purpose of food safety, aquatic animal health or trade.*	Levels of advancement
	1. The VS or AAHS do not have the authority or the capability to trace products of aquatic animal origin.
	2.The VS or AAHS can trace some products of aquatic animal origin to deal with a specific problem (e.g. products originating from farms affected by a disease outbreak).
	3.The VS or AAHS have implemented procedures to trace some products of aquatic animal origin for food safety, aquatic animal health and trade purposes, in accordance with relevant international standards.
	4.The VS or AAHS have implemented national programmes enabling them the tracing of all products of aquatic animal origin, in accordance with relevant international standards.
	5.The VS or AAHS periodically audit the effectiveness of their traceability procedures.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E6, E23, P5, P18, P19, P21, P30, P32, P34.

Findings:

All farms are registered and recorded by the GDFC at the Provincial level and production is controlled to meet the sustainable carrying capacities for each district.

According to Article 30 of Law 5996 products for human consumption can be only released to the domestic market if they are produced in food premises holding a Business Approval Certificate and a Business Approval Number in accordance with the "Regulations on Registry and Approval of Food Enterprises".

The number of fish product establishments under the control of the GDFC is 2,377.

The compulsory movement control system (incorporating the health inspection) is in place for aquatic animal products.

Final yearly production figures for each province are estimated from the pre-determined maximum sustainable carrying capacity for each district and not from transport declaration documents or movement control (live and harvested) documents collected by the AAHS. District production is not based on evidence and is assumed to be running at full capacity.

Strengths:

- The movement control system for animal products is in place and is effective and relatively easy to use.
- Aquatic animal products can be effectively traced from the retailer, back to the wholesale market and further back to the farm and/or hatchery.

Weaknesses:

- The aquatic animal products movement control programme is paper-based and not recorded in electronic format for easy analysis.
- The documents would benefit from an efficiency evaluation and update.
- The system is not audited.

Recommendations:

- Audit the paper-based aquatic animal product movement control system for effectiveness and compliance with international standards.
- Record the aquatic animal product movement control system electronically or consider the development of a secure electronic based system.

II-13. Welfare of farmed fish *The authority and capability of the VS or AAHS to implement the OIE standards for the welfare of farmed fish as published in the Aquatic Code.*	Levels of advancement
	1. There is no national legislation on welfare of farmed fish.
	2.There is national welfare of farmed fish legislation for some sectors.
	3. In conformity with OIE standards welfare of farmed fish is implemented for some sectors (e.g. for the export sector).
	4. Welfare of farmed fish is implemented in conformity with all relevant OIE standards.
	5. Welfare of farmed fish is implemented in conformity with all relevant OIE standardsand programmes are subjected to regular audits.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E30

Findings:

The OIE Team was informed that the legal reference to welfare is Article 21 Law 5996 part j) and Regulation 29 June 2004 number 25507 This was translated into English at the request of the OIE Team and states:"The procedures and principles related to the welfare of the fisheries is regulated with the Circular to be prepared by Ministerial Central Organization."

The OIE Team was not provided with a translation of the Circular and therefore cannot evaluate this critical competency. Notwithstanding the fact that no evidence was provided, the OIE Team believes it would be prudent to comment on this issue regardless.

Please note: While there are international guidelines in place (OIE Aquatic Code) for aquatic animal welfare, adoption of the guidelines, from a global perspective, are at very early and immature stage.

Strengths:

- The aquaculture industries visited throughout Turkey generally practice high animal welfare standards by default and generally without government intervention as part of best practice guidelines such as BAP and Global GAP. Therefore, future GDFC formal review and adoption of international welfare standards should not be difficult for the industry to meet.

Weaknesses:

- Legislation requires review to assess whether or not it meets international standards.

Recommendations:

- Review the legislation on the welfare of farmed fish in accordance with Section 7 of the OIE Aquatic Code (Latest English Version, 2015) and amend the legislation if necessary.

III.3 Fundamental component III: Interaction with interested parties

This component of the evaluation concerns the capability of the VS or AAHS to collaborate with and involve interested parties in the implementation of programmes and activities. It comprises eight critical competencies

Critical competencies:

Section III-1	**Communication**
Section III-2	**Consultation with interested parties**
Section III-3	**Official representation**
Section III-4	**Accreditation / Authorisation / Delegation**
Section III-5	**Veterinary Statutory Body (VSB) and other professional authorities**
	A. VSB authority
	B. VSB capacity
	C. Other professional authorities
Section III-6	**Participation of producers and other interested parties in joint programmes**

Aquatic Code Reference(s):

Points 6, 7, 9, and 13 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards / Communication.

Chapter 3.2. on Communication.

Terrestrial Code Reference(s):

Point 9 of Article 3.2.1. on General considerations.

Points 2 and 7 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services.

Sub-point b) of Point 2 of Article 3.2.6. on Administrative resources: Communications.

Article 3.2.11. on Participation on OIE activities.

Article 3.2.12. on Evaluation of the veterinary statutory body.

Points 4, 7 and Sub-point g) of Point 9 of Article 3.2.14. on Administration details / Animal health and veterinary public health controls / Sources of independent scientific expertise.

III-1. Communication	Levels of advancement
The capability of the VS or AAHS to keep interested parties informed, in a transparent, effective and timely manner, of VS or AAHS activities and programmes, and of developments in aquatic animal health and food safety. *This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas*	1. The VS or AAHS have no mechanism in place to inform interested parties of VS or AAHS activities and programmes. 2.The VS or AAHS have informal communication mechanisms. 3.The VS or AAHS maintain an official contact point for communication but it is not always up-to-date in providing information. 4.The VS or AAHS contact point for communication provides up-to-date information, accessible via the Internet and other appropriate channels, on activities and programmes. 5.The VS or AAHS have a well-developed communication plan, and actively and regularly circulate information to interested parties.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1,E4,H3,H4,E10,P1, and meetings with GDFC.

Findings:

GDFC communicate to all stakeholders on the Internet through their website. The website is available at http://www.tarim.gov.tr. The website is basic and contains information about the Ministry and it's roles and responsibilities, topics such as general agriculture and fisheries, legislation, the latest news and foreign affairs.

GDFC doesn't publish on the website a yearly report on activities carried out and outcomes obtained.

The website (English version) does not provide electronic access for conducting import and export activities, however, feasibility studies are being carried out to improvement the website to accommodate online access to client services.

GDFC are in consultation with the EU to ensure harmonisation and easy access for export trading partner countries

There is a list of national organisations (professionals, aquaculture establishment owners etc.) involved in aquatic animal production.

GDFC communication activities are regularly performed, especially with regard to amendment to legislation and draft legislation.

Strengths:

- GDFC communicate to all stakeholders on the Internet through their website.
- There is a list of national organisations involved in aquatic animal production.

Weaknesses:

- Internet website doesn't contain complete information on activities and outcomes regarding AAH
- GDFC website should be upgraded to be more interactive for clients.
- GDFC doesn't publish on the website an annual report on activities carried out and outcomes obtained in the field of AAH.

Recommendations:

- Prioritise the redevelopment of the GDFC website.
- Complete Internet website with information regarding activities and outcomes in AAH.
- Develop and publish on the website a yearly report on activities carried out and outcomes obtained in AAH

III-2. Consultation with interested parties *The capability of the VS or AAHS to consult effectively with interested parties on VS or AAHS activities and programmes, and on developments in aquatic animal health and food safety.* *This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas*	Levels of advancement
	1. The VS or AAHS have no mechanisms for consultation with interested parties.
	2.The VS or AAHS maintain informal channels of consultation with interested parties.
	3.The VS or AAHS maintain a formal consultation mechanism with interested parties.
	4.The VS or AAHS regularly hold workshops and meetings with interested parties.
	5.The VS or AAHS actively consult with and solicit feedback from interested parties regarding proposed and current activities and programmes, developments in aquatic animal health and food safety, interventions at the OIE (Codex Alimentarius Commission and WTO SPS Committee where applicable), and ways to improve their activities.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1,E4,H1,H3,H4,E10,P1,and meetings with GDFC.

Findings:

GDFC consult regularly with the Central Union of Aquaculture Producers (CUAP).

CUAP consists of 18 affiliate provincial member unions (minimum 16 unit members). The CUAP representation role includes consultation with the Ministry regarding aquaculture at Provincial and Central level.

CUAP members and peripheral stakeholders (universities, researchers, processors etc.) meet each year with GDFC for a strategic workshop to discuss new laws, amendments to law etc., and to plan the yearly agenda. Representing CUAP affiliates actively take a role in collaborative research with interested universities to develop vaccines and education programmes and to register veterinary medicines and biologicals.

CUAP representative opinions are submitted in writing for consideration by GDFC.

Consumer Rights Association (CRA) is harmonised with the largest CRA of Europe. They meet regularly nationally and internationally with government and NGO's to discuss on food and water safety issues. Collaboration with GDFC includes resolution of food safety issues such as the right to access secure food (food security).

CRA is involved in consultation on the GDFC 5 yearly development plans for food safety. However, the current consultation process is not satisfactory according to head of CRA. Water and aquatic animal product analysis are currently not sufficient to meet consumer demands, especially considering the planned expansion of fish farming and increase in per capita consumption of farmed fish.

The DG of Fisheries and Aquaculture formally collaborates with stakeholders. Formal consultation with stakeholders is routinely carried out with interested parties such as; fisheries, aquaculture, agriculture and unions, particularly in relation to draft legislation, draft policy and standard of services.

GDFC at Central level are functional, but are dispersed throughout the various branches and not adequately coordinated according to strategic planning, including a formal stakeholder consultation process.

Consultation with consumer associations occurs on an *ad hoc* basis. This is due to budget restrictions

GDFC consistently attend OIE meetings (General Assembly, Workshops of the European Region etc.) and CODEX Commission meetings.

CODEX Fishery Committee meetings are not attended on a regular basis due to budget restrictions.

Strengths:

- Formal consultation with stakeholders is routinely carried out with interested parties such as fisheries, aquaculture, agriculture and unions, particularly in relation to draft legislation, draft policy and standard of services.
- GDFC structure includes OIE focal points and CODEX focal point.

Weaknesses:

- GDFC at Central level are functional, but are dispersed throughout the various branches and not adequately coordinated according to strategic planning including a formal stakeholder consultation process.
- Consultation with the CRA occurs only on an *ad hoc* basis.
- CODEX Fishery Committee meetings are not attended on a regular basis.

Recommendations:

- GDFC regularly hold workshops and meetings with all interested parties.
- Regularly participate in meetings with international standard setting bodies.

III-3. Official representation	Levels of advancement
The capability of the VS or AAHS to regularly and actively participate in, coordinate and provide follow-up on relevant meetings of regional and international organisations including the OIE (and Codex Alimentarius Commission and WTO SPS Committee where applicable).	1.The VS or AAHS do not participate in or follow up on relevant meetings of regional or international organisations.
	2.The VS or AAHS sporadically participate in relevant meetings and/or make a limited contribution.
	3.The VS or AAHS actively participate in the majority of relevant meetings.
	4.The VS or AAHS consult with interested parties and take into consideration their opinions in providing papers and making interventions in relevant meetings.
	5.The VS or AAHS consult with interested parties to ensure that strategic issues are identified, to provide leadership and to ensure coordination among national delegations as part of their participation in relevant meetings.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6):E1, E25, H17, and meetings with GDFC.

Findings:

GDFC structure includes OIE focal points and CODEX focal point.

GDFC consistently attend OIE meetings (General Assembly, Workshops of the European Region etc.) and actively consult internally (within government) to draft propose modifications to the OIE Codes.

GDFC attend CODEX Commission meetings on regular basis. CODEX Fishery Committee meetings are not attended on a regular basis due to budget restrictions.

Consultation with interested parties on the relevant proposals regarding Aquatic Animal Health Code and/or Codex Alimentarius standards for fishery products are not assured.

SPS notification is routinely performed by the GDFC as required.

Strengths:

- GDFC have OIE and Codex focal points in place.
- GDFC regularly attend OIE meetings.

Weaknesses:

- CODEX Fishery Committee meetings are not attended on a regular basis.
- No regular consultation of stakeholder on relevant proposals regarding Aquatic Animal Health Code and/or Codex Alimentarius standards for fishery products.

Recommendations:

- Regularly participate in meetings with international standard setting bodies.
- Regularly consult with interested parties on relevant proposals of modifications of international standards related to aquaculture animal health and aquaculture products.

III-4. Accreditation/authorisation/delegation *The authority and capability of the public sector of the VS or AAHS to accredit / authorise / delegate the private sector (e.g. private veterinarians, aquatic animal health professionals and laboratories), to carry out official tasks on its behalf.*	Levels of advancement
	1.The public sector of the VS or AAHS has neither the authority nor the capability to accredit / authorise / delegate the private sector to carry out official tasks.
	2.The public sector of the VS or AAHS has the authority and capability to accredit / authorise / delegate to the private sector, but there are no current accreditation / authorisation / delegation activities.
	3.The public sector of the VS or AAHS develops accreditation / authorisation / delegation programmes for certain tasks, but these are not routinely reviewed.
	4.The public sector of the VS or AAHS develops and implements accreditation / authorisation / delegation programmes, and these are routinely reviewed.
	5.The public sector of the VS or AAHS carries out audits of its accreditation / authorisation / delegation programmes, in order to maintain the trust of their trading partners and interested parties.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1.

Findings:

The GDFC has sufficient personnel to carry out official tasks without the need to accredit, authorise or delegate the private sector with the exception of private food safety laboratories delegated to do some limited food safety analysis for import and export purposes. This occurs particularly in low production regions in the Eastern sector of Turkey.

This is regulated by Law 5996 and regulation dated 29th December 2012 number 28157 “food control laboratories, establishment, task, responsibilities and determination of working principles” which provides rules about establishment, responsibilities and tasks of public and private laboratories.

Authorization and approval of private laboratories are under some requirements to perform testing for food safety issues, official control for import and export issues for feed, vegetable and animal products. They are inspected at least once every two years according to the regulatory framework and the inspection instruction specific to laboratories.

92 private laboratories are currently approved by the GDFC and are mandatorily participating to proficiency testing once a year.

Strengths:

- The GDFC have the capability to delegate official functions to private veterinarians and laboratories, if the need arises.

Weaknesses:

- Delegation is only for import/export activities and for limited food safety analysis.
- This delegation is not routinely reviewed.
- Lacking of legislation regarding possible delegation for other VS/AAH needs such food safety and feed control.

Recommendations:

- Draft legislation regarding Memorandum of Understanding, deeds of agreement, contracts, service agreements, and other legal and official agreements for other VS/AAH needs such food safety and feed control.

III-5. Veterinary Statutory Body (VSB) and other professional authorities **A.VSB authority** *The VSB is an autonomous regulatory body for veterinarians. Its role is defined in the Terrestrial Code.*	Levels of advancement
	1.There is no legislation establishing a VSB.
	2.The VSB regulates veterinarians only within certain sectors of the veterinary profession and/or does not systematically apply disciplinary measures.
	3.The VSB regulates veterinarians in all relevant sectors of the veterinary profession and applies disciplinary measures.
	4.The VSB regulates functions and competencies of veterinarians in all relevant sectors and veterinary para-professionals according to needs.
	5.The VSB regulates and applies disciplinary measures to veterinarians and veterinary para-professionals in all sectors throughout the country.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E9, E11, E20, E24, E25, P1 and meeting with TVMA.

Findings:

The Turkey Veterinary Medical Association and Chambers (TVMA) are an association representing the interests of veterinarians.

The TVMA are aware of problems regarding employment of veterinarians in aquaculture.

Historically, there were three veterinary faculties providing education in AAH in veterinary undergraduate degrees at university level. But following the coup-d'état in Turkey in 1980 they were shut down. TVMA have identified that aquaculture engineers have very little training as AAHP's, even though they are responsible for AAH at establishment level.

There are no veterinarian qualifications specific to aquatic animals and no continual education for AAH. TVMA consider current training across Faculties is sufficient to meet Day 1 competencies for aquatic animal health.

The number of private veterinarians employed full-time directly by aquaculture establishments in the private sector (April 2016) total 6 FTE. However, all licenced aquaculture establishments must hold a private veterinarian contact point for access to a registered veterinarian drugs or biologics when required. Public veterinarians at Provincial level also provide veterinarian services and other AAHS to meet current needs. TVMA would like to increase the number of private veterinarians to meet growing demands for veterinarians in aquaculture. TVMA understand that the risk of disease is expected to rise as intensive production increases. Establishments producing 500-1000 tons have controls carried out by public veterinarians, but would like to see more private veterinarians to assist in carrying out controls. However, a recurring theme encountered during meetings attended during the mission was that establishments prefer aquaculture engineers (AAHP's) carry out health controls due to lower remuneration compared to veterinarians.

The TVMA core request is to ensure veterinarians carry out (or direct) all activities related to AAHS.

Private veterinarians are able to practice upon graduation and must register with TVMA. TVMA consists of a central association with provincial chambers.

Public veterinarians do not need registration with TVMA; however, they are able to prescribe medicines provided they are employed by the civil service. If private veterinarian services are not immediately available, public veterinarians are able to prescribe medicines as a secondary emergency service without remuneration.

Remuneration and working conditions for AAHS/VS staff is generally considered to be average and commensurate with qualifications and experience. Staff are not permitted to

undertake extra-curricular paid work activities associated with their profession. Staff turnover is regarded as higher than average.

Public veterinarians are primarily responsible for inspection, monitoring and outbreaks etc., and may prescribe medicines for these services as required.

Some disciplinary measures are taken against private veterinarians by the Provincial Directorate of GDFC when a non-compliance is observed.

Strengths:

- TVMA is widely implemented throughout the whole country.
- Registration with the TVMA is mandatory for all practicing private veterinarians including practising aquatic veterinarians.

Weaknesses:

- The TVMA has no authority to regulate veterinarians and para-veterinarians in the AAH sector.
- Public veterinarians do not need registration with TVMA; however, they are able to prescribe medicines provided they are employed by the civil service.
- Some disciplinary measures are taken against private veterinarians by the provincial level of GDFC when non-compliance is observed.

Recommendations:

- TVMA can remain as a representative association; however, a real VSB must be officially established and have legislated authority to regulate veterinary professionals and para-professionals working in AAHS in compliance with OIE standards.
- Draft policy determining a clear distinction between the responsibilities of a veterinarians and aquaculture engineers (AAHP's) with regards to all aquatic animal health activities.
- All veterinary practice related activities including diagnosis, surveillance, disease treatment and prevention, and health advice should be regulated by the VSB in order to ensure compliance with international standards.
- A somewhat conflict of interest does exist under the actual 1954 law for this kind of statutory body definitions and missions according to OIE standards. A VSB should not be dealing with professional financial issues, but as a priority with the regulation of the daily work of veterinarians and AAHP's according to the state of the veterinary science and art.
- Increase the TVMA role in veterinary continued education.

B.VSB capacity *The capacity of the VSB to implement its functions and objectives in conformity with OIE standards.*	Levels of advancement
	1.The VSB has no capacity to implement its functions and objectives.
	2.The VSB has the functional capacity to implement its main objectives.
	3.The VSB is an independent representative organisation with the functional capacity to implement all of its objectives.
	4.The VSB has a transparent process of decision making and conforms to OIE standards.
	5.The financial and institutional management of the VSB is submitted to external auditing.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1.

Findings:

The current TVMA is a combination of some VSB missions (registration) and a professional union looking after the material interest of veterinarians.

The TVMA has no authority to regulate professionals and para-professionals in the AAH sector.

Strengths:

- Private veterinarians hold mandatory membership of the TVMA and pay fees.

Weaknesses:

- TVMA is not totally independent in its decisions according to its status because its objective is also a union representing veterinarians.

Recommendations:

- Create a VSB according to OIE standards regulating the VS, AAHP's and para-professionals.
- The VSB must draft policy determining a clear distinction between the responsibilities of a veterinarians and aquaculture engineers (AHP's) with regards to all aquatic animal health activities.
- The VSB should have the legal responsibility to regulate veterinary profession with the authority to enforce non-compliance. It should also identify and report non-compliance in veterinary matters by non-members that require engagement of enforcement authorities.

C. Other professional authorities *Other professional authorities with the responsibility, authority and capacity for the regulation of aquatic animal health professionals.*	Levels of advancement
	1. There is no legislation establishing other professional authorities and no capacity to implement its functions and objectives.
	2. The other professional authority has functional capacity to implement its main objectives. It regulates aquatic animal health professionals within certain sectors of the AAH profession and/or does not systematically apply disciplinary measures.
	3. The other professional authority is an independent representative organisation with the functional capacity to implement all of its objectives. It regulates aquatic animal health professionals within all aquatic animal health sectors and applies disciplinary measures.
	4. The other professional authority has a transparent process of decision making. It regulates functions and competencies of aquatic animal health professionals in all relevant sectors according to needs.
	5. The other professional authority's financial and institution management is submitted to external auditing. It regulates and applies disciplinary measures to aquatic animal health professionals in all sectors throughout the country.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, E2, E6, E7, E11, E24, E25, P1.

Findings:

There is no authority regulating AAHP's and para-professionals according to OIE standards.

Aquaculture engineers (including specialist AAHP's) receive undergraduate level training for AAH. However, there are no authorities other than GDFC with the authority to regulate AAHP's.

Aquaculture Engineers (which includes AAHP's) are represented by the Turkish Association of Aquaculture' Engineers. However, this association does not have regulatory authority over its members.

Weaknesses:

- Actual para-professionals and other aquaculture engineers are not regulated.

Recommendations:

- Improve the regulatory framework to clearly segregate the health management role of veterinarians and the husbandry role for non-veterinarians with regards to aquatic animals.
- .A regulatory framework must be established for AAHPs and paraprofessionals in the AAH with a clear distinction from veterinary responsibilities in compliance with OIE standards.

III-6. Participation of producers and other interested parties in joint programmes *The capability of the VS or AAHS and producers and interested parties to formulate and implement joint programmes in regard to aquatic animal health and food safety.* *This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas*	Levels of advancement
	1.Producers and other interested parties only comply and do not actively participate in programmes.
	2.Producers and other interested parties are informed of programmes and assist the VS or AAHS to deliver the programme in the field.
	3.Producers and other interested parties are trained to participate in programmes and advise of needed improvements, and participate in early detection of diseases.
	4.Representatives of producers and other interested parties negotiate with the VS or AAHS on the organisation and delivery of programmes.
	5.Producers and other interested parties are formally organised to participate in developing programmes in close collaboration with the VS or AAHS.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1, H1,H3, and meetings with stakeholders.

Findings:

GDFC communicate to all stakeholders on the Internet through their website.

GDFC are currently developing biosecurity manuals, including training workshops for AAHPs and producers.

Industry extension programmes are not in place, however, one programme is in the development phase.

No other evidence was found relating to extension activities.

There are no joint programmes with the Ministry representing the environment for aquaculture planning or development of Harmful Algae Bloom (HAB) early warning systems for aquaculture.

Strengths:

- GDFC communicate to all stakeholders on the Internet through their website.
- Formal consultation with stakeholders is routinely carried out particularly in relation to draft legislation, draft policy and standard of services.

Weaknesses:

- GDFC have very limited programme development with stakeholders.
- Producers and other interested parties are not trained to participate in programmes and don't participate in early detection of diseases.

Recommendations:

- Prioritise development of Biosecurity manuals and training workshops with producers.
- Develop public awareness programmes, including a hotline for public reporting of wild fish kills.
- Develop programme with Ministry of Environment for developing a national HAB warning system for aquaculture and other water users.
- Improve the communication skills of the AAHS in order to be more visible in their mission and improve awareness of initiatives and joint programmes to interest parties.

III.4 Fundamental component IV: Access to markets

This component of the evaluation concerns the authority and capability of the VS or AAHS to provide support in order to access, expand and retain regional and international markets for animals and animal products. It comprises eight critical competencies.

Critical competencies:

Section IV-1	**Preparation of legislation and regulations**
Section IV-2	**Implementation of legislation and regulations and compliance thereof**
Section IV-3	**International harmonisation**
Section IV-4	**International certification**
Section IV-5	**Equivalence and other types of sanitary agreements**
Section IV-6	**Transparency**
Section IV-7	**Zoning**
Section IV-8	**Compartmentalisation**

Aquatic Code Reference(s):

Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards.

Chapter 4.1. on Zoning and compartmentalisation.

Chapter 4.2. on Application of compartmentalisation.

Chapter 5.1. on General obligations related to certification.

Chapter 5.2. on Certification procedures.

Article 2.1.2. on The Agreement on the Application of Sanitary and Phytosanitary Measures and role and responsibility of the OIE.

Chapter 5.10. on Model health certificates for international trade in live aquatic animals and products of aquatic animal origin.

Terrestrial Code Reference(s):

Points 1 and 2 of Article 3.2.7. on Legislation and functional capabilities: Animal health, animal welfare and veterinary public health / Export/import inspection.

Points 1 and 3 of Article 3.2.8. on Animal health controls: Animal health status / National animal disease reporting systems.

Sub-point g) of Point 4 of Article 3.2.10. on Veterinary Services administration: Trade performance history.

Article 3.2.11. on Participation in OIE activities.

Points 6 and 10 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities / Membership of the OIE.

IV-1. Preparation of legislation and regulations *The authority and capability of the VS or AAHS to actively participate in the preparation of national legislation and regulations in domains that are under their mandate, in order to guarantee its quality with respect to principles of legal drafting and legal issues (internal quality) and its accessibility, acceptability, and technical, social and economical applicability (external quality).* *This competency includes collaboration with relevant authorities, including other ministries and Competent Authorities, national agencies and decentralised institutions that share authority or have mutual interest in relevant areas*	Levels of advancement
	1.The VS or AAHS have neither the authority nor the capability to participate in the preparation of national legislation and regulations, which result in legislation that is lacking or is out-dated or of poor quality in most fields of VS or AAHS activity.
	2.The VS or AAHS have the authority and the capability to participate in the preparation of national legislation and regulations and can largely ensure their internal quality, but the legislation and regulations are often lacking in external quality.
	3.The VS or AAHS have the authority and the capability to participate in the preparation of national legislation and regulations, with adequate internal and external quality in some fields of activity, but lack formal methodology to develop adequate national legislation and regulations regularly in all domains.
	4.The VS or AAHS have the authority and the capability to participate in the preparation of national legislation and regulations, with a relevant formal methodology to ensure adequate internal and external quality, involving participation of interested parties in most fields of activity.
	5.The VS or AAHS regularly evaluate and update their legislation and regulations to maintain relevance to evolving national and international contexts.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6):E1,E4,E6, and meetings with GDFC.

Findings:

GDFC have the authority and capability to participate in the preparation of national legislation and regulations with relevant formal processes.

Fisheries and aquaculture law 1882-1971 were amended 7 times since 1971 (Law 1380 of 1971). Inclusion of aquaculture regulations came into force in 2004 (R.G. No 25507). Revision of Law 1380 is currently in draft and undergoing stakeholder consultation and submission to the Turkish Grand Assembly for publication scheduled for 2017. Laws are communicated to all stakeholders through publications.

Changes to decrees, regulations and laws are carried out by the GDFC in consultation with stakeholders following the initial drafting. Stakeholders include producer associations, universities and other relevant Ministries.

Following consultation and taking stakeholder feedback into account, the legislation is redrafted. The draft legislation is then submitted to the Turkish Ministerial Legal Consultancy Service. Decrees are sent to the Minister for final approval. Regulations are sent to other relevant Ministries for final approval, requests are then taken into account and the draft amended as necessary. The final draft regulation is then sent to Prime Minister for final approval.

Laws stemming from Government initiative follow a similar process to regulation and are approved/amended by Parliament.

Strengths:

- GDFC have the authority and the capability to participate in the preparation of national legislation and regulations, with a relevant formal process to ensure adequate internal and external quality.

Weaknesses:

- Regulations are not regularly reviewed and updated as evidenced by the out-dated national list of notifiable aquatic animal diseases.

Recommendations:

- Regularly review and update the national list of notifiable aquatic animal diseases to improve planning for AAHS and to meet reporting obligations. National list review activities should be scheduled to follow the regular meetings and determinations made by the OIE.
- Review and amend legislation on the welfare of farmed fish in accordance with the Aquatic Code.

IV-2. Implementation of legislation and regulations and compliance thereof *The authority and capability of the VS or AAHS to ensure compliance with legislation and regulations under the VS or AAHS mandate.*	Levels of advancement
	1.The VS or AAHS have no or very limited programmes or activities to ensure compliance with relevant legislation and regulations.
	2.The VS or AAHS implement a programme or activities comprising inspection and verification of compliance with legislation and regulations and recording instances of non-compliance, but generally cannot or do not take further action in most relevant fields of activity.
	3.Relevant legislation is generally implemented. As required, the VS or AAHS have a power to take legal action / initiate prosecution in instances of non-compliance in most relevant fields of activity.
	4.Relevant legislation is implemented in all domains of competence and the VS or AAHS work to minimise instances of non-compliance.
	5.The compliance programme is regularly subjected to audit by the VS or AAHS or external agencies.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6):E1,E6 and meetings with GDFC Central and Provincial Directorates.

Findings:

According to Law 5996 all aquaculture production establishments are required to be licenced.

Aquaculture production establishments are visited by the personnel of Provincial/District Directorates 4 times per year for:

- Monitoring and sampling for disease presence.
- Sampling for the National Residue Monitoring Programme.
- Verification of ongoing production.
- Conditions are met for maintaining incentives.

There is no legal requirement in Turkey to have an on-farm private veterinarian.

Larger establishments usually have an on-farm veterinarian; smaller establishments generally do not employ private veterinarians and only call for a private veterinarian when services are required.

Smaller establishments must maintain the contact details of a private veterinarian whose work is checked by the public veterinarian during scheduled inspection visits.

Generally, disease incidence in provinces is considered low and veterinarians are not used for health issues that are easily resolved, for example, routine disinfection of fertilized eggs with formaldehyde

For disease diagnosis, prescription and treatment at all establishments, prescription and drug use records must be kept for inspection by a public veterinarian during a compliance inspection visit or whenever necessary, for example, as part of an investigation concerning positive samples from residue monitoring indicating illegal activities, such as the use of banned medicines (e.g. use of malachite green in fresh water farms and hatcheries).

Food processing establishments are subject to approval and registration. In case official control from Central GDFC or Provincial Directorates determines that a business is non-compliant with the requirement as specified in the relevant legislation it stops the activity and temporarily suspends the approval.

Non-compliance rates in aquaculture generally are estimated to be around 4-5%. These are mostly concerned with aquaculture production and non-compliance related to health issues are rarely recorded; for example, Isparta province has 85 licenced trout production facilities

and has not recorded non-compliance issues related to health even though non-compliance issues were witnessed by the Team (use of PP on trout broodstock). Therefore, non-compliance is not rigorously inspected or enforced at production level.

When non-compliance for a controlled substance is detected following sampling and testing, harvest restrictions are applied during the corrective action period and sampling is increased according to GDFC regulation policy and procedure.

Relevant legislation is not implemented in all domains of competence as evidenced by the incorrect application of HACCP in the domestic fish market.

Strengths:

- Relevant legislation is generally implemented.
- GDFC (Central, Provincial and District Level) have the power to take legal action and initiate prosecution in instances of non-compliance.
- Provincial and District Directorates regularly inspect production establishments.

Weaknesses:

- Non-compliance is not rigorously enforced at production level.
- Relevant legislation is not implemented in all domains of competence (see CC II-8A).
- The compliance programme is not regularly subjected to audit.

Recommendations:

- Relevant legislation must be implemented in all domains of competence.
- The compliance programme should be regularly subjected to audit by the Central GDFC.
- Non-compliances have to be rigorously enforced at production level.

IV-3. International harmonisation *The authority and capability of the VS or AAHS to be active in the international harmonisation of regulations and sanitary measures and to ensure that the national legislation and regulations under their mandate take account of relevant international standards, as appropriate.*	Levels of advancement
	1.National legislation, regulations and sanitary measures under the mandate of the VS or AAHS do not take account of international standards.
	2.The VS or AAHS are aware of gaps, inconsistencies or non-conformities in national legislation, regulations and sanitary measures as compared to international standards, but do not have the capability or authority to rectify the problems.
	3.The VS or AAHS monitor the establishment of new and revised international standards, and periodically review national legislation, regulations and sanitary measures with the aim of harmonising them, as appropriate, with international standards, but do not actively comment on the draft standards of relevant intergovernmental organisations.
	4.The VS or AAHS are active in reviewing and commenting on the draft standards of relevant intergovernmental organisations.
	5.The VS or AAHS actively and regularly participate at the international level in the formulation, negotiation and adoption of international standards[7], and use the standards to harmonise national legislation, regulations and sanitary measures.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): E1,E6,P14,P15,P16, and meetings with GDFC.

Findings:

The overarching policy of the GDFC is to harmonise animal health and food and feed safety policy with the EU as the main trading partner as much as possible in order to meet EU requirements.

GDFCcollaborate with the European Medicines Agency and the European Directorate for Quality of Medicines, to follow up the regulations and to ensure coordination within the GDFC and Ministry of Health. GDFC also routinely participate in the European Pharmacopoeia Commission.

GDFC consistently attend OIE meetings (General Assembly, Workshops of the European Region etc.) and actively consult internally (within government) to draft propose modifications to the OIE Codes.

There is not consistent participation in the drafting of proposals regarding *Codex Alimentarius* standards for fishery products.

The national list of notifiable aquatic animal diseases is aligned with diseases listed by the OIE and EU, but was last updated in 2007. The OIE list has since been updated and the national list is no longer aligned with the OIE listed diseases.

The OIE Team requested information regarding the national list, but were informed by the GDFC that there is no policy framework or procedure for routinely reviewing and updating the national list with exotic and endemic diseases of environmental or economic concern, including emerging diseases.

GDFC need to increase participation in international harmonisation and standard setting activities in order to influence favourable negotiation outcomes relating to the safe trade of aquatic animals and aquatic animal products.

[7] A country could be active in international standard setting without actively pursuing national changes. The importance of this element is to promote national change.

Strengths:

- GDFC consistently attend OIE meetings and actively consult internally (within government) to draft propose modifications to the OIE Codes.

Weaknesses:

- Weak representation in international harmonisation and standard setting activities mainly in *Codex Alimentarius* activities related to fishery products.

Recommendations

- Regularly review and update the national list of notifiable aquatic animal disease to improve planning for AAHS and to meet reporting obligations.
- Create a Secretariat to coordinate the drafting of responses for all international harmonisation and standard setting activities.

IV-4. International certification[8] *The authority and capability of the VS or AAHS to certify aquatic animals, aquatic animal products, services and processes under their mandate, in accordance with the national legislation and regulations, and international standards.*	Levels of advancement
	1.The VS or AAHS have neither the authority nor the capability to certify aquatic animals, aquatic animal products, services or processes.
	2.The VS or AAHS have the authority to certify certain aquatic animals, aquatic animal products, services and processes, but are not always in compliance with the national legislation and regulations and international standards.
	3.The VS or AAHS develop and carry out certification programmes for certain aquatic animals, aquatic animal products, services and processes under their mandate in compliance with international standards.
	4.The VS or AAHS develop and carry out all relevant certification programmes for any aquatic animals, aquatic animal products, services and processes under their mandate in compliance with international standards.
	5.The VS or AAHS carry out audits of their certification programmes, in order to maintain national and international confidence in their system.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6):E1,E6,E16,H9,H10 and meetings with GDFC.

Findings:

GDFC list all export health certificates for aquatic animals and aquatic animal products on the publicly available website.

Model agreed health certificates are negotiated on a case-by-case basis with bi-lateral trading partners in accordance with international standards.

GDFC Central administration keeps records of all veterinarians authorised to sign export health certificates (276 veterinarians).

The veterinarians are trained to issue health certificates.

The GDFC health certification system is functional and adequately and efficiently meets export demands.

Strengths:

- Model agreed health certificates for aquatic animals and aquatic animal products are in accordance with international standards.
- The GDFC health certification system is functional and adequately and efficiently meets export demands.

Weaknesses:

- GDFC doesn't carry out audits of their certification programmes and system in order to document performance and demonstrate meeting national and international standards.
- Export documentation and certification is a paper-based system.

Recommendations:

- The health certification programme should be audited with the aim to check the effectiveness of the system and maintain confidence in the system for trading partners.
- Transfer export control documents from a paper-based system to an electronic-b system with secure online access and adequate query and summary capabilities to assist authorities.

[8] Certification procedures should be based on relevant OIE and *Codex Alimentarius* standards.

IV-5. Equivalence and other types of sanitary agreements *The authority and capability of the VS or AAHS to negotiate, implement and maintain equivalence and other types of sanitary agreements with trading partners.*	Levels of advancement
	1.The VS or AAHS have neither the authority nor the capability to negotiate or approve equivalence or other types of sanitary agreements with other countries.
	2.The VS or AAHS have the authority to negotiate and approve equivalence and other types of sanitary agreements with trading partners, but no such agreements have been implemented.
	3.The VS or AAHS have implemented equivalence and other types of sanitary agreements with trading partners on selected aquatic animals, aquatic animal products and processes.
	4.The VS or AAHS actively pursue the development, implementation and maintenance of equivalence and other types of sanitary agreements with trading partners on all matters relevant to aquatic animals, aquatic animal products and processes under their mandate.
	5.The VS orAAHS actively work with interested parties and take account of developments in international standards, in pursuing equivalence and other types of sanitary agreements with trading partners.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6):E1,E6,E16,H9,H10, and meetings with GDFC.

Findings:

GDFC have the authority to negotiate and approve equivalence and other types of sanitary agreements with trading partners.

GDFC have implemented sanitary agreements with trading partners on selected aquatic animals, aquatic animal products and processes. These sanitary agreements consist of export health certificates publicly available on website.

Export health certificates are “compliance-based” and not “ equivalence-based”.

No equivalence agreements have been implemented to date.

Strengths:

- GDFC have a strong mandate and policy to undertake sanitary agreements.

Weaknesses:

- No equivalence agreements or equivalence-based health certificates have been implemented to date.

Recommendations:

- Conduct assessment with importing countries to identify feasible equivalence programmes. For example: develop bi-lateral and formally recognised (agreed) pre-export equivalent risk management measures of major trading partners and apply those equivalent measures in Turkey prior to export.

IV-6. Transparency *The authority and capability of the VS to notify the OIE of their sanitary status and other relevant matters (and to notify the WTO SPS Committee where applicable), in accordance with established procedures.*	Levels of advancement
	1.The VS do not notify.
	2.The VS occasionally notify.
	3.The VS notify in compliance with the procedures established by these organisations.
	4.The VS regularly informs interested parties of changes in their regulations and decisions on the control of relevant diseases and of the country's sanitary status, and of changes in the regulations and sanitary status of other countries.
	5.The VS, in cooperation with their interested parties, carry out audits of their transparency procedures.

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6): H17.

Findings:

GDFC do not regularly notify aquatic animal diseases to the OIE. The last notification was 2007 for VHS.

GDFC have designated Focal Points for OIE and Codex Alimentarius.

GDFC personnel regularly participate in OIE meetings and workshops.

The national list of notifiable aquatic animal diseases is aligned with diseases listed by the OIE and was last updated in 2007. The OIE list has since been updated and the national list is no longer aligned with the OIE listed diseases. There is no policy framework or procedure for reviewing and updating the national list with exotic and endemic diseases of environmental or economic concern, including emerging diseases.

Strengths:

- GDFC have OIE focal points, *Codex Alimentarius* focal point, SPS focal point.

Weaknesses:

- The national list of notifiable aquatic animal diseases is out of date and there is no routine review to update the list for planning and reporting purposes.
- GDFC cannot update the training of AAHP's until the national list of notifiable aquatic animal diseases is reviewed and updated to meet international standards.

Recommendations:

- Regularly review and update the national list of notifiable aquatic animal disease to improve planning for AAHPs and to meet reporting obligations.
- National list review activities should be scheduled to follow the regular meetings and determinations made by the OIE.

IV-7. Zoning *The authority and capability of the VS or AAHS to establish and maintain disease free zones, as necessary and in accordance with the criteria established by the OIE (and by the WTO SPS Agreement where applicable).*	Levels of advancement
	1.The VS or AAHS cannot establish disease free zones.[9]
	2.As necessary, the VS or AAHS can identify aquatic animal sub-populations with distinct health status suitable for zoning.
	3.The VS or AAHS have implemented biosecurity measures that enable it to establish and maintain disease free zones for selected aquatic animals and aquatic animal products, as necessary.
	4.The VS or AAHS collaborate with producers and other interested partiesto define responsibilities and execute actions that enable it to establish and maintain disease free zones for selected aquatic animals and aquatic animal products, as necessary.
	5.The VS or AAHS can demonstrate the scientific basis for any disease free zones and can gain recognition by trading partners that they meet the criteria established by the OIE (and by the WTO SPS Agreement where applicable).

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6):E6, E8.

Findings:

According to Article 4 of Law 5996 (2010) *on Veterinary Services, Plant Health, Food, and Feed* the GDFC is authorized to take any measure to prevent the spread of the diseases, including the establishment of protection and surveillance zones. The Ministry may establish special isolated zones for certain animal species and in these isolated zones it may impose prohibitions or restrictions on the entry or breeding of certain animal species.

There is no structured mechanism in place for creating disease-free or disease-managed zones.

There are no existing zones for aquatic animal diseases.

There are some non-dedicated scientific programmes to support zoning.

GDFC have the authority and capacity for creating disease-free zones, however, there is no structured policy development framework specifically for this purpose.

Strengths:

- GDFC have the authority and capacity for creating disease-free zones.

Weaknesses:

- There is no structured policy development framework specifically for creating disease-free zones.

Recommendations:

- As a foundation for future planning for possible disease-free zones, facilitate applied health research to understand (and quantify) the risk of pathogen transmission and clinical disease expression in aquatic animal species raised in Turkey.
- Implementation of effective and targeted AAHS will allow for the collection of the information required for future long-term strategic planning for zoning. Therefore, the recommendation here is to consider the possibility of zoning in long-term strategic plans and only commence projects once the evidence has been gathered to support and justify the need for zoning.

[9] If the VS or AAHS has the authority and capability but chooses not to implement zoning, this CC should be recorded as “not applicable at this stage”.

IV-8. Compartmentalisation	Levels of advancement
The authority and capability of the VS or AAHS to establish and maintain disease free compartments as necessary and in accordance with the criteria established by the OIE (and by the WTO SPS Agreement where applicable).	1.The VS or AAHS cannot establish disease free compartments[10]
	2.As necessary, the VS or AAHS can identify aquatic animal sub-populations with a distinct health status suitable for compartmentalisation.
	3.The VS or AAHS ensure that biosecurity measures to be implemented to enable it to establish and maintain disease free compartments for selected aquatic animals and aquatic animal products, as necessary.
	4.The VS or AAHS collaborate with producers and other interested parties to define responsibilities and execute actions that enable it to establish and maintain disease free compartments for selected aquatic animals and aquatic animal products, as necessary.
	5.The VS or AAHS can demonstrate the scientific basis for any disease free compartments and can gain recognition by other countries that they meet the criteria established by the OIE (and by the WTO SPS Agreement where applicable).

Terrestrial and Aquatic Code reference(s): Annexe 1

Evidence (listed in Appendix 6):E6,E8.

Findings:

According to Article 4 of the Law 5996 (2010) *on Veterinary Services, Plant Health, Food, and Feed* the GDFC is authorized to take any measure to prevent the spread of animal diseases, including the establishment of protection and surveillance zones. The Ministry may establish special isolated zones for certain animal species and in these isolated zones it may impose prohibitions or restrictions on the entry or breeding of certain animal species.

There is no structured mechanism in place for creating disease-free or disease-managed compartments.

There are no existing compartments for aquatic animal diseases.

GDFC have the authority and capacity for creating disease-free compartments, however, there is no structured policy development framework specifically for this purpose.

Strengths:

- GDFC have the authority and capacity for creating disease-free compartments.

Weaknesses:

- There is no structured policy development framework specifically for creating disease-free compartments.

Recommendations:

- As a foundation for future planning for possible disease free compartments, facilitate applied health research to understand (and quantify) the risk of pathogen transmission and clinical disease expression in aquatic animal species raised in Turkey.
- Implementation of effective and targeted AAHS will allow for the collection of the information required for future long-term strategic planning for compartmentalisation. Therefore, the recommendation here is to consider the possibility of compartmentalisation in long-term strategic plans and only commence projects once the evidence has been gathered to support and justify the need for compartmentalisation.

[10] If the VS or AAHS has the authority and capability but chooses not to implement compartmentalization, this CC should be recorded as “not applicable at this stage”.

PART IV: CONCLUSIONS

The MFAL target to double the aquaculture production and reach 500,000 tons with a value of around $1 billion by 2023calls for continuous upgrading of GDFC's skills and efficacies to meet production, import and export standards and provide appropriate and professional health management capable of meeting needs of rapidly expanding production.

While GDFC organisational structure, roles and responsibilities are well organised, there is the need of a dedicated branch (task force or similar group) at Central level for AAHS planning, leadership and direction, especially for the development of a seven-year national strategic plan to meet the needs of the 2023 production target.

GDFC would benefit by strengthening Day 1 competencies for veterinarians working in AAHS through improved university level curricula, specialist training for aquatic animal health and an improved continual education programme.

GDFC personnel at the operational level would also benefit from instructions confirming a clear distinction between the roles and responsibilities of veterinarians and aquaculture engineers, especially within the private production sector. To this end, it is recommended that a real Veterinary Statutory Body is set up to regulate professionals and para-professionals working in AAHS in compliance with OIE standards, as the Turkish Veterinary Medical Association is only a representative association and not a VSB.

GDFC has adequate capacity to conduct passive and targeted surveillance activities and has the physical and human resources capable to perform actions to prevent, control or eradicate OIE listed diseases, but there is a need to put in place policy (and plan) for prioritising, planning and resourcing active surveillance activities.

National reference laboratories and the AAHS laboratory network throughout Turkey are appropriately accredited to meet international standards, but there is a lack of support from the Bornova reference laboratory toward the animal health laboratory network for performing standard diagnostic procedures for aquatic animal disease.

Although quarantine and border security organisational structure and operations adequately meets international standards, routine testing of all imported live aquatic animals for diseases of concern and for banned therapeutic substances would enhance effectiveness.

GDFC has the authority and capability to approve, inspect and regulate all establishments related to food and animal feed safety even if there remains the need to improve effective monitoring of food safety for the domestic fish market to meet the safety expected for the highest export standards.

The national list of notifiable aquatic animal diseases has to be constantly aligned with diseases listed by the OIE Aquatic Code.

The aquatic animal health control system would greatly benefit from the production of biosecurity plans (for all types of facilities including hatcheries, feed mills, grow-out, processors) and ongoing training that includes a national aquatic animal disease field guide for veterinarians, aquaculture engineers and technicians, working in aquaculture.

PART V: APPENDICES

Appendix 1: Terrestrial Code references for critical competencies

Critical Competences	Terrestrial Code references	Aquatic Code reference
I-1.A **I-1.B** **I-2.A** **I-2.B**	Article 3.2.5. on Evaluation criteria for human resources. Article 3.2.12. on Evaluation of the veterinary statutory body. Points 1-2 and 5 of Article 3.2.14. on Organisation and structure of Veterinary Services / National information on human resources / Laboratory services.	Points 1-7, 9 and 14 of Article 3.1.2. on Fundamental principles of quality: Professional judgement / Independence / Impartiality / Integrity / Objectivity / Aquatic animal health legislation and regulations / General organisation / Procedures and standards / Human and financial resources.
I-3	Article 3.2.5. on Evaluation criteria for human resources. Sub-point d) of Point 4 of Article 3.2.10. on Veterinary Services administration: In-service training and development programme for staff. Point 9 of Article 3.2.14. on Performance assessment and audit programmes.	Points 1, 7 and 14 of Article 3.1.2. on Fundamental principles of quality: Professional judgement / General organisation / Human and financial resources.
I-4		Point 2 of Article 3.1.2. on Fundamental principles of quality: Independence.
I-5	Point 1 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 9 of Article 3.2.14. on Performance assessment and audit programmes.	
I-6.A **I-6.B**	Article 3.2.2. on Scope. Points 1 and 2 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 4 of Article 3.2.10 on Performance assessment and audit programmes.	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulation / General organisation / Procedures and standards.
I-7	Point 2 of Article 3.2.4. on Evaluation criteria for quality system: "Where the Veterinary Services undergoing evaluation… than on the resource and infrastructural components of the services". Points 2 and 3 of Article 3.2.6. on Evaluation criteria for material resources: Administrative / Technical. Point 3 of Article 3.2.10. on Performance assessment and audit programmes: Compliance. Point 4 of Article 3.2.14. on Administration details.	
I-8 **I-9** **I-10**	Point 1 of Article 3.2.6. on Evaluation criteria for material resources: Financial. Point 3 of Article 3.2.14. on Financial management information.	Points 6 and 14 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / Human and financial resources.
I-11	Point 4 of Article 3.2.1. on General considerations. Point 1 of Article 3.2.2. on Scope. Article 3.2.6. on Evaluation criteria for material resources. Article 3.2.10. on Performance assessment and audit programmes	Points 7, 11 and 14 of Article 3.1.2. on Fundamental principles of quality: General organisation / Documentation / Human and financial resources.
II-1.A **II-1.B** **II-2**	Point 1 of Article 3.2.4. on Evaluation criteria for quality systems. Point 3 of Article 3.2.6. on Evaluation criteria for material resources: Technical. Point 5 of Article 3.2.14. on Laboratory services.	Point 9 of Article 3.1.2. on Fundamental principles of quality: Procedures and standards.
II-3		Section 2 on Risk analysis.
II-4	Point 2 of Article 3.2.7. on Legislation and functional capabilities: Export/import inspection. Points 6 and 7 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities / Animal health and veterinary public health controls.	Points 6 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / Procedures and standards.
II-5.A **II-5.B** **II-6** **II-7**	Points 1-3 of Article 3.2.8. on Animal health controls: Animal health status / Animal health control / National animal disease reporting systems. Sub-points a) i), ii) and iii) of Point 7 of Article 3.2.14. on Animal health: Description of and sample reference data from any national animal disease reporting system controlled and operated or	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards. Chapter 1.4. on Aquatic animal health surveillance. Chapter 4.6. on Handling, disposal and treatment of aquatic animal waste.

	coordinated by the Veterinary Services / Description of and sample reference data from other national animal disease reporting systems controlled and operated by other organisations which make data and results available to Veterinary Services / Description and relevant data of current official control programmes including:… or eradication programmes for specific diseases.	
II-8.A **II-8.B**	Points 1-5 of Article 3.2.9. on Veterinary public health controls: Food hygiene / Zoonoses / Chemical residue testing programmes / Veterinary medicines/ Integration between animal health controls and veterinary public health. Points 2, 6 and 7 of Article 3.2.14. on National information on human resources / Veterinary legislation, regulations and functional capabilities / Animal health and veterinary public health controls.	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards. Codex Alimentarius Commission standards: General Principles of Food Hygiene (CAC/RCP 1-1969). Code of practice for fish and fishery products (CAC/RCP 52-2003).
II-9	Points 3 and 4 of Article 3.2.9. on Veterinary public health controls: Chemical residue testing programmes / Veterinary medicines. Sub-point a) ii) of Point 6 of Article 3.2.14.	Points 6 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / Procedures and standards. Chapter 6.2. on Introduction to the recommendations for controlling antimicrobial resistance. Chapter 6.3. on Principles for responsible and prudent use of antimicrobial agents in aquatic animals. Chapter 6.4. on Monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals. Chapter 6.5. on Development and harmonisation of national antimicrobial resistance surveillance and monitoring programmes for aquatic animals.
II-10		Points 3 and 4 of Article 3.2.9. on Veterinary public health controls: Chemical residue testing programmes / Veterinary medicines. Sub-points b) iii) and iv) of Point 7 of Article 3.2.14. on Veterinary public health: Chemical residue testing programmes / Veterinary medicines.
II-11		Chapter 6.1. on Control of hazards in aquatic animal feed.
II-12.A **II-12.B**		Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards.
II-13		Chapter 7.1. on Introduction to recommendations for the welfare of farmed fish. Chapter 7.2. on Welfare of farmed fish during transport. Chapter 7.3. on Welfare aspects of stunning and killing of farmed fish for human consumption. Chapter 7.4. on Killing of farmed fish for disease control purposes.
III-1		Point 13 of Article 3.1.2. on Fundamental principles of quality: Communication. Chapter 3.2. on Communication Sub-point b) of Point 2 of Article 3.2.6. on Administrative resources: Communications. Point 4 of Article 3.2.14. on Administration details.
III-2	Point 2 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services. Point 4 and Sub-point g) of Point 9 of Article 3.2.14. on Administration details and on Sources of independent scientific expertise.	Point 13 of Article 3.1.2. on Fundamental principles of quality: Communication. Chapter 3.2. on Communication.
III-3	Article 3.2.11. on Participation on OIE activities. Point 4 of Article 3.2.14. on Administration details.	
III-4	Point 7 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary Services.	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards.
III-5.A **III-5.B** **III-5.C**	Point 6 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation. Point 9 of Article 3.2.1. on General considerations. Article 3.2.12. on Evaluation of the veterinary statutory body.	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards.
III-6	Points 2 and 7 of Article 3.2.3. on Evaluation criteria for the organisational structure of the Veterinary	Points 6 and 13 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation

	Services. Point 7 of Article 3.2.14. on Animal health and veterinary public health controls.	and regulations / Communication.
IV-1 **IV-2**	Points 1 and 2 of Article 3.2.7. on Legislation and functional capabilities: Animal health, animal welfare and veterinary public health / Export/import inspection. Point 6 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities. Chapter 3.4.	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards.
IV-3	Article 3.2.11. on Participation in OIE activities. Points 6 and 10 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities / Membership of the OIE.	Point 6 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations.
IV-4	Point 2 of Article 3.2.7. on Legislation and functional capabilities: Export/import inspection. Sub-point b) of Point 6 of Article 3.2.14. on Veterinary legislation, regulations and functional capabilities: Export/import inspection.	Points 6, 7 and 9 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation / Procedures and standards. Chapter 5.2. on Certification procedures. Chapter 5.10. on Model health certificates for international trade in live aquatic animals and products of aquatic animal origin.
IV-5	Sub-point g) of Point 4 of Article 3.2.10. on Veterinary Services administration: Trade performance history.	Points 6 and 7 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations / General organisation. Article 2.1.2. on The Agreement on the Application of Sanitary and Phytosanitary Measures and role and responsibility of the OIE.
IV-6	Points 1 and 3 of Article 3.2.8. on Animal health controls: Animal health status / National animal disease reporting systems.	Point 6 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations. Chapter 5.1. on General obligations related to certification.
IV-7		Point 6 of Article 3.1.2. on Fundamental principles of quality: Aquatic animal health legislation and regulations. Chapter 4.1. on Zoning and compartmentalisation. Chapter 4.2. on Application of compartmentalisation.

Appendix 2: Glossary of terms

Terms defined in the Aquatic Animal Health Code that are used in this publication are reprinted here for ease of reference.

Aquatic Animal Health Services

means the governmental and non-governmental organisations that implement animal health and welfare measures and other standards and recommendations in the Aquatic Code in the territory. The Aquatic Animal Health Services are under the overall control and direction of the Competent Authority. Private sector organisations, veterinarians, aquatic animal health professionals or veterinary paraprofessionals are normally accredited or approved by the Competent Authority to deliver the delegated functions.

Aquatic animal health status

means the status of a country, zone or compartment with respect to an aquatic animal disease, according to the criteria listed in the relevant chapter of the Aquatic Code dealing with the disease.

Aquatic animal products

means non-viable aquatic animals and products from aquatic animals.

Aquatic animals

means all life stages (including eggs and gametes) of fish, molluscs, crustaceans and amphibians originating from aquaculture establishments or removed from the wild, for farming purposes, for release into the environment, for human consumption or for ornamental purposes.

Aquatic Code

means the OIE Aquatic Animal Health Code.

Certifying official

means a person authorised by the Competent Authority to sign health certificates for aquatic animals.

Compartment

means one or more aquaculture establishments under a common biosecurity management system containing an aquatic animal population with a distinct health status with respect to a specific disease or diseases for which required surveillance and control measures are applied and basic biosecurity conditions are met for the purpose of international trade. Such compartments must be clearly documented by the Competent Authority(ies).

Competent Authority

means the Veterinary Authority or other Governmental Authority of a Member having the responsibility and competence for ensuring or supervising the implementation of aquatic animal health and welfare measures, international health certification and other standards and recommendations in the Aquatic Code in the whole territory.

Contingency plan

means a documented work plan designed to ensure that all needed actions, requirements and resources are provided in order to eradicate or bring under control outbreaks of specified diseases of aquatic animals.

Disease

means clinical or non-clinical infection with one or more aetiological agents.

Emerging disease

means a newly recognised infection resulting from the evolution or change of an existing pathogenic agent, a known infection spreading to a new geographic area or population, or a previously unrecognised pathogenic agent or a disease diagnosed for the first time and which has a significant impact on aquatic animal or public health

International aquatic animal health certificate

means a certificate, issued in conformity with the provisions of Chapter 5.10., describing the aquatic animal health and/or public health requirements that should be fulfilled prior to export of commodity.

Listed diseases

Means diseases that are referred to in Chapter 1.3.of the Aquatic Code. (Synonym: diseases listed by the OIE.)

Notification

means the procedure by which:

a) the Veterinary Authority informs the Headquarters,

b) the Headquarters inform Veterinary Authorities of Members

of the occurrence of a disease, according to the provisions of Chapter 1.1.of the Aquatic Code.

Risk analysis

means the complete process composed of hazard identification, risk assessment, risk management and risk communication.

Risk management

means the process of identifying, selecting and implementing measures that can be applied to reduce the level of risk.

Sanitary measure

means a measure, such as those described in various chapters of the Aquatic Code, destined to protect aquatic animal or human health or life within the territory of the OIE Member from risks arising from the entry, establishment and/or spread of a hazard.

Surveillance

means a systematic series of investigations of a given population of aquatic animals to detect the occurrence of disease for control purposes, and which may involve testing samples of a population.

Terrestrial Code

means the OIE Terrestrial Animal Health Code.

Veterinarian

means a person registered or licensed by the relevant veterinary statutory body of a country to practise veterinary medicine/science in that country.

Veterinary Authority

means the Governmental Authority of an OIE Member, comprising veterinarians, other professionalsand para-professionals, having the responsibility and competence for ensuring or supervising the implementation of aquatic animal health and welfare

measures, international aquatic animal health certification and other standards and recommendations in the Aquatic Code in the whole territory.

Veterinary statutory body

means an autonomous authority regulating veterinarians and veterinary para-professionals.

Zone

means a portion of one or more countries comprising:

a) an entire water catchment from the source of a waterway to the estuary or lake, or

b) more than one water catchment, or

c) part of a water catchment from the source of a waterway to a barrier that prevents the introduction of a specific disease or diseases, or

d) part of a coastal area with a precise geographical delimitation, or

e) an estuary with a precise geographical delimitation,

that consists of a contiguous hydrological system with a distinct health status with respect to a specific disease or diseases. The zones must be clearly documented (e.g. by a map or other precise locators such as GPS co-ordinates) by the Competent Authority(ies).

Appendix3. List of persons met or interviewed

Opening meeting (4 April 2016)

Name	Position	Institution	Electronic mail
Nihat Pakdil	Deputy Undersecretary and CVO	Ministry of Food, Agriculture and Livestock	nihat.pakdil@tarim.gov.tr
Dr Visal Kayacık	Veterinarian	Animal health and quarantine	visal.kayacik@tarim.gov.tr
Tülay Kurt	Member of Board	Turkish Veterinary Medical Association	tulay.kurt@tarim.gov.tr
E. DeryaTayfun	Head of Department	GDFC Department of Border Control of Animal and Animal Products	derya.tayfun@tarim.gov.tr
Dr SevalÜnalan	Coordinator	GDFC Head of Department of Feed	seval.unalan@tarim.gov.tr
Dr Özhan Türkyılmaz	Head of Department	GDFC Animal Health of Quarantine	ozhan.turkyilmaz@tarim.gov.tr
MelihEr	Coordinator	General Directorate of the Fisheries and Aquaculture	melih.er@tarim.gov.tr
Dr M. AltuğAtalay	Head of Department	General Directorate of the Fisheries and Aquaculture	altug.atalay@tarim.gov.tr
Mehmet EminTurgut	Head of Department	GDFC Head of Department of Feed	mehmetemin.turgut@tarim.gov.tr
Süleyman Aslan	Deputy Director	GDFC	suleyman.aslan@tarim.gov.tr
DrNeslihanAlper	GDFC Head of Department	GDFC Department of Food Control and Laboratories	neslihan.alper@tarim.gov.tr
Erhan Yedikardaş	GDFC Engineer	GDFC Department of Food Control and	erhan.yedikardas@tarim.gov.tr

		Laboratories	
Cihangir G. Gümüştepe	GDFC coordinator	GDFC Animal Health of Quarantine	cihangir.gumustepe@tarim.gov.tr
Derya Çelik	GDFC coordinator	GDFC Department of Border Control of Animal and Animal Products	derya.celik@tarim.gov.tr
Ali Emre Canıtez	Veterinarian	GDFC DBCAAP	aliemre.canitez@tarim.gov.tr
İlkay Demirhan	Veterinarian	GDFC Animal Health of Quarantine	ilkay.demirhan@tarim.gov.tr
Ömer Faruk Bilgiç	Veterinarian	Department of Veterinary Health Product and Public Health	omer.bilgic@tarim.gov.tr

Closing meeting (14 April 2016)

Name	Position	Institution	Electronic mail
İlkay Demirhan	GDFC	GDFC Animal Health of Quarantine	ilkay.demirhan@tarim.gov.tr
Tülay Kurt	Member of Board	Turkish Veterinary Medical Association	tulay.kurt@tarim.gov.tr
EmrecanÖzeler	Expert (interpreter)	General Directorate Of European Union And Foreign Affairs	emrecan.ozeler@tarim.gov.tr
Dr SevalÜnalan	Coordinator	GDFC Head of Department of Feed	seval.unalan@tarim.gov.tr
Özerdemmaltaş	Engineer	General Directorate of the Fisheries and Aquaculture	ozerdem.maltas@tarim.gov.tr
Dr M AltuğAtalay	Head of Department	General Directorate of the Fisheries and Aquaculture	altug.atalay@tarim.gov.tr

Mehmet EminTurgut	**Head of Department**	**GDFC Head of Department of Feed**	mehmetemin.turgut@tarim.gov.tr
Cihangir G Gümüştepe	**GDFC coordinator**	**GDFC Animal Health of Quarantine**	cihangir.gumustepe@tarim.gov.tr
Ali EmreCanıtez	**Veterinarian**	**GDFC DBCAAP**	aliemre.canitez@tarim.gov.tr

Other meetings and visits: see E29.

Appendix 4: Timetable of the mission and sites/ facilities visited by

Drs Facelli (PGF), Bouzghaia (HB) and Grossel (GG)

Date	Assessor	Time	Location	Activities
April 4	All	AM	Ministry of Food Agriculture and Livestock (GDFC)	Meeting with the Chief Veterinary Officer – Deputy Undersecretary.
April 4	All	PM	GDFC	Entry meeting – presentation of the mission.
April 5	All	AM	GDFC	Meeting with the General Directorate of Fishery and Aquaculture; Central Union of Aquaculture Producers; Turkish Veterinary Medical Association; National Consumer Association.
April 5	All	PM	ANKARA	Meeting with Ankara Directorate of Provincial Food, Agriculture and Livestock;
April 5	All	PM	ANKARA	Visit to National Food Reference Laboratory;
April 5	All	PM	ANKARA	Visit to Ankara University Veterinary Faculty.
April 6	All	PM	ISPARTA	Visit to Trout Production Plant (BaysallarAlabalıkÇiftliğiÇandarSütçülerIsparta);
April 6	All	PM	ISPARTA	Meeting with Isparta Directorate of Provincial Food Agriculture and Livestock;
April 6	All	PM	ISPARTA	Visit to Fishery Product Processing Plant (Şahlanlar Gıda San.ve Tic. Ltd. Şti. EğirdirYoluÜzeri Asker HastanesiKarşısıMerkezIsparta).
April 7	All	PM	IZMIR	Meeting with İzmir Directorate of Provincial Food Agriculture and Livestock;
April 7	All	PM	IZMIR	Meeting with Directorate of District Food Agriculture and Livestock;
April 7	All	PM	IZMIR	Visit to İzmir Food Control Laboratory Directorate.
April 8	All	AM	IZMIR	Meetings with Urla and Çeşme Directorates of District Food Agriculture and Livestock.
April 8	All	PM	IZMIR	Visit to Sea Bass and Sea Bream Production Plant (ÇamlıYemBesicilik San. Tic. A.Ş. IldırKöyüÇeşme-İzmir.
April 9	All	AM	IZMIR	Visit to Fish Market;
April 9	All	AM	IZMIR	Visit to Fishing Vessels (ŞahinBalıkçılıkSan.Tic. Şti. Karaburun İzmir).
April 11	All	AM	IZMIR	Meeting with Veterinary Border Inspection Directorate (Port BIP);
April 11	All	AM	IZMIR	Meeting with İzmir Custom Directorate.
April 11	All	PM	IZMIR	Meeting with Border Inspection Point in airport in İzmir;
April 11	All	PM	IZMIR	Visit to Fishery Product Processing Plant (ErtuğBalıkÜretimTesisi A.Ş. İzmir).
April 12	All	AM	IZMIR	Visit to Bornova Veterinary Control Institute.
April 12	All	PM	IZMIR	Visit to Aquatic Animal Feed Plant (ÇamlıYemBesicilik San. Tic. A.Ş. Pınarbaşı-

				İzmir).
April 13	All	AM	GDFC	Interviews of several Departments in the General Directorate for Food and Control
April 14	All	AM	GDFC	Closing meeting – presentation and discussion of thesummary of preliminary findings.
April 14	All	PM	GDFC	Departure of the experts.

Appendix 5: Air travel itinerary

ASSESSOR	DATE	From	To	Flight No.	Departure	Arrival
Piergiuseppe Facelli	3 April 2016	Rome	Istanbul	TK1862	10:30	14:05
	3 April 2016	Istanbul	Ankara	TK2162	16:00	17:10
	14 April 2016	Ankara	Istanbul	TK2163	18:15	19:30
	14 April 2016	Istanbul	Rome	TK1361	22:20	23:55
Hichem Bouzghaia	3 April 2016	Tunis	Istanbul	TK 0662	10:55	15:40
		Istanbul	Ankara	TK2174	19:00	20:10
	14 April 2016	Ankara	Istanbul	TK2147	14:05	15:25
	17 April 2016	Istanbul	Tunis	TK0663	15:05	16:05
Geoff Grossel	2 April 2016	Canberra	Sydney	VA0669	18:30	19:30
		Sydney	Doha	QR0909	22:25	5:05
	3 April 2016	Doha	Ankara	QR0255	7:15	11:15
	15 April 2016	Ankara	Doha	QR0258	21:20	01:00
	16 April 2016	Doha	Dubai	QR1032	02:30	04:40
		Dubai	Sydney	QF0002	09:15	05:10
	17 April 2016	Sidney	Canberra	QF1463	07:30	08:25

Appendix 6:List of documents used in the Aquatic PVS evaluation

E = Electronic version H = Hard copy version P= Digital picture

Ref	Title	Author / Date / ISBN / Web	Related critical competences
	PRE-MISSION DOCUMENTS		
E1	*Baseline document from GDFC*	GDFC	**All**
E2	*GDP for agriculture, forestry and fishing*	GDFC	**All**
E24	*Population of Provinces 2007_2014*	GDFC	**All**
E25	*www.tarim.gov.tr*	GDFC	**All**
	MISSION DOCUMENTS		
H1	*Pamphlet of the Central Union of Aquaculture Producers.*	CUAP	**III-2**
H2	*Pamphlet of the National Food Reference Laboratory*	GDFC	**II-1, II-8, II-10, II-11**
H3	*Pamphlet for Fisheries (recreational and general)*	GDFC	**III-1, III-2, III-6**
H4	*Pamphlet for the Professional Fishing Industry*	GDFC	**III-1, III-2, III-6**
H5	*Booklet for Bornova Veterinary Control Institute*	GDFC	**II-1, II-2, II-5, II-8, II-10, II-11**
H6	*Label for aquaculture feed (trout)*	Camli (feed mill)	**II-11**
H7	*List of personnel employed by the GDFC (veterinarians, experts and technical staff)*	GDFC	**I-1**
H8	*EU decision 743/2013 Import conditions for mussels*	EU (obtained from GDFC)	**IV-4, IV-5**
H9	*AAH model export health certificate (Turkey to Canada)*	GDFC	**IV-4, IV-5**
H10	*Work Instruction (issuing of health certificate to EU)*	GDFC	**IV-4, IV-5**
H11	*AAH model import health certificate*	GDFC	**II-4**
H12	*Fish Market submission volume document*	GDFC	**II-8**
H13	*HACCP form EK-3 for water (processors)*	GDFC	**II-8**
H14	*Fish processor inspection form EK-1*	GDFC	**II-8**
H15	*Fish retailer inspection form EK-2*	GDFC	**II-8**
H16	*National Residue Management Plan 2016*	GDFC	**II-10**
H17	*Answers*	GDFC	**Multiple**
E3	*Aquaculture product toxicological sample results 2010-15*	GDFC Izmir food safety laboratory	**II-1, II-2, II-10**
E4	*Presentation General Directorate of Fisheries and Aquaculture*	GDFC	**I-1, I-7, II-8**
E5	*Presentation Provincial Directorate*	GDFC	**I-7**

	of Ankara		**and others**
E6	*Law 5996 (2010) Law on Veterinary Services, Plant Health, Food, and Feed*	GDFC	**All**
E7	*Population of Provinces 2007-15*	GDFC	**All**
E8	*Survey studies 2004-16*		
E9	*Presentation TMVA*	TVMA	**III-5**
E10	*2023 Aquaculture Targets (Turkish)*	GDFC	**I-7 And others**
E11	*Map of Turkish Provinces*	GDFC	**All**
E12	*Presentation Bornova Reference Laboratory for aquatic animal diseases*	GDFC	**I-4, II-1, II-2, II-5, II-7, II-10**
E13	*Circular on Combatting Animal Diseases (Turkish)*	GDFC	**I-6, II-6, II-7, II-12**
E14	*Directive on Tasks and Responsibilities (Turkish)*	GDFC	**I-1, I-4, I-5**
E15	*Instruction Information for Food Control Laboratories (Turkish)*	GDFC	**I-1, II-1**
E16	*Instruction for Export Health Certification (Turkish and English)*	GDFC	**IV-4, IV-5**
E17	*Presentation Provincial Directorate of Izmir*	GDFC	**I-7 and others**
E18	*Instruction to destroy illegal animals (Turkish)*	GDFC	**II-6, II-7**
E19	*Izmir food control analysis samples and results 2015*	GDFC	**II-8, II-10**
E20	*Law 6343 (1954) Law for the performance of Veterinary Professionals (Turkish)*	GDFC	**III-5**
E21	*List of personnel employed by the GDFC (veterinarians, experts and technical staff) see also H7*	GDFC	**I-1**
E22	*National Residue Management Plan 2015*	GDFC	**II-10**
E23	*Animal Movement Control Program 2016 (Turkish)*	GDFC	**II-7. II-12**
E26	*Department of Food Establishments and Codex duties*	GDFC	**I-1**
E27	*Duties and responsibilities of the risk assessment Department*	GDFC	**I-1**
E28	*Law 6343 on TVMA(En)*	GDFC	**III-5**
E29	*Attendance list*	GDFC	**All**
E30	*Regulation of aquatic animal farming*	GDCF	**II-13**
P1	*2016 Action plan of GDFC*	GDFC	**All**
P2	*Analysis report from National Reference Laboratory Mudurlugu*	*National Reference Laboratory Mudurlugu*	**II-1 A-B, II-2**
P3	*Bacteriology laboratory procedures manual*	BVCI	**II-1 A-B, II-2, II-8 A- B,**
P4	*Feed samples*	BIP Port of IZMIR	**II-4, II-11**
P5	*Fish destruction report*	Fish Market of IZMIR	**II-8 A-B, II-12 B**

P6	*Health certificate for fish import pag.1*	BIP Port of IZMIR	**II-4**
P7	*Health certificate for fish import pag. 2*	BIP Port of IZMIR	**II-4**
P8	*Inspection form for retailers of veterinary products*	BIP Port of IZMIR	**II-9**
P9	*Infrastructure of BIP 1*	BIP Port of IZMIR	**II-4**
P10	*Infrastructure of BIP 2*	BIP Port of IZMIR	**II-4**
P11	*Feed sealed samples 1*	BIP Port of IZMIR	**II-4, II-11**
P12	*Feed sealed samples 2*	BIP Port of IZMIR	**II-4, II-11**
P13	*Feed sealed samples 3*	BIP Port of IZMIR	**II-4, II-11**
P14	*Health certificate for fish import from Spain*	BIP Port of IZMIR	**II-4, IV-5**
P15	*Health certificate for fish import from Spain*	BIP Port of IZMIR	**II-4,IV-5**
P16	*Health certificate for import of live tuna from Egypt*	BIP Port of IZMIR	**II-4,IV-5**
P17	*Laboratory procedures manual*	?	**II-1 A-B, II-2**
P18	*Log book of fishing vessel 1*	Fishing vessel –Sahin Balikcilik San. Tic. Karaburun	**II-8, II-12 B**
P19	*Log book of fishing vessel 2*	Fishing vessel –Sahin Balikcilik San. Tic. Karaburun	**II-8, II-12 B**
P20	*Minute of cease of non compliant product*	Fish Market of IZMIR	**II-8 B, II-12**
P21	*Non compliance identification report*	Fish Market of IZMIR	**II-8 A-B, II-12 B**
P22	*Pathology laboratory procedures manual*	VCRI (Bornova)	**II-1 A-B, II-2, II-8 A- B,**
P23	*Pharmacology and toxicology laboratory procedures manual*	VCRI (Bornova)	**II-1 A-B, II-2, II-8 A- B, II-10**
P24	*Residue monitoring sampling programme for provincial Aquaculture product*	Provincial Directorate of Isparta	**II-10**
P25	*Residue monitoring and control form-1□2*	Provincial Directorate of IZMIR	**II-10**
P26	*Residue monitoring and control form-filling form Guidelines*	Provincial Directorate of IZMIR	**II-10**
P27	*Result of inspection of private veterinarian-antibiotics out of use*	Provincial Directorate of Isparta	**II-10**
P28	*Sample submission and result*	Provincial Directorate of Isparta	**II-10**
P29	*Sampling form from trout feed for RCP*	Trout production plant of Baysallar	**II-11**
P30	*Transport document for aquaculture product issued by cooperatives*	Trout production plant of Baysallar	**II-12 B**
P31	*Private veterinarian prescription*	Trout production plant of Baysallar	**II-9**
P32	*Vehicle disinfection document*	Fishing vessel –Sahin Balikcilik San. Tic. Karaburun Izmir	**II-8 A-B**

P33	*Veterinary health report for live animal transportation*	Provincial Directorate of Isparta	**II-12 A**
P34	*Veterinary health report for live animal-animalproduct transportation*	Provincial Directorate of Isparta	**II-12 B**
P35	*Veterinary health report-Tansport of live animals*	Provincial Directorate of Isparta	**II-12 A**
P35	*Virology laboratory procedures manual*	VCRI (Bornova)	**II-1 A-B, II-2, II-5, II-6,II-7**
P36	*National distribution of VS Professional and paraprofessional*	GDFC	**I-1 A-B**
P37	*Fish Market 1*	Izmir	**II-8 A-B**
P38	*Fish Market 2*	Izmir	**II-8 A-B**

Appendix 7: Organisation of the AquaticPVS evaluation of the VS/AAHS of Turkey

Assessors Team:

- Team leader: Dr Piergiuseppe Facelli
- Technical expert: Dr Hichem Bouzghaia
- Technical expert: Dr Geoff Grossel

References and Guidelines:

- Terrestrial Animal Health Code (especially Chapters 3.1. and 3.2.)
- Aquatic Animal Health Code
- OIEPVS Tool for the Evaluation of Performance of AAHS
  - → Human, financial and physical resources,
  - → Technical capability and authority,
  - → Interaction with interested parties,
  - → Access to markets.

Dates: 4-14 April 2016

Language of the audit and reports: English

Subject of the evaluation: AAHS as defined in the Aquatic Animal Health Code

- Included in the country's VS
- Inclusive of other institutions / ministries responsible for activities of VS

Activities to be analysed: All activities related to animal and veterinary public health:

- Field activities:
  - → Aquatic animal health (epidemiological surveillance, early detection, disease control, etc)
  - → quarantine (country borders),
  - → veterinary public health (food safety, veterinary medicines and biological, residues, etc)
  - → control and inspection,
- Data and communication
- Laboratory diagnostic
- Research
- Initial and continuous training
- Organisation and finance

Persons to be present: see Appendix 3

Sites to be visited: see Appendix 4

Procedures:

- Consultation of data and documents
- Comprehensive field trips
- Interviews and meetings with VS/AAHS staff and interested parties,
- Analyse of practical processes

Provision of assistance by the evaluated country

- Completion of missing data as possible
- Translation of relevant document if required
- Administrative authorisation to visit designated sites
- Logistical support

Reports:

- a fact sheet or MS PowerPoint will be presented at the closing session
- a report will be sent to the OIE for peer-review no later than one month after the mission
- the current levels of advancement with strengths, weaknesses and references for each critical competence will be described,
- general recommendations may be made in agreement with the VS/AAHS.

Confidentiality and publishing of results

The results of the evaluation are confidential between the country and the OIE and may only be published with the written agreement of the evaluated country.