



ATELIER RÉGIONAL SUR LA RÉSISTANCE ET L'UTILISATION DES ANTIMICROBIENS EN AQUACULTURE POUR L'AFRIQUE FRANCOPHONE



7 - 9 juillet 2026



Tunis, Tunisie



The
Fleming Fund



Organisation mondiale
de la santé animale



Outil PVS Aquatique – Compétences Critiques pour une gestion optimisée de la Résistance aux Antimicrobiens



7 - 9 juillet 2026



Tunis, Tunisie

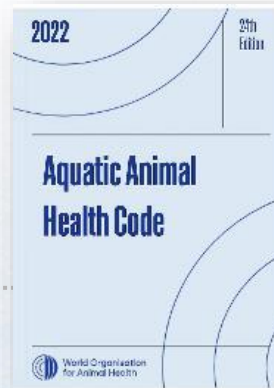


The
Fleming Fund

NORMES INTERNATIONALES OMSA

CODES

- Terrestre
- Aquatique



MANUELS

- Terrestre
- Aquatique

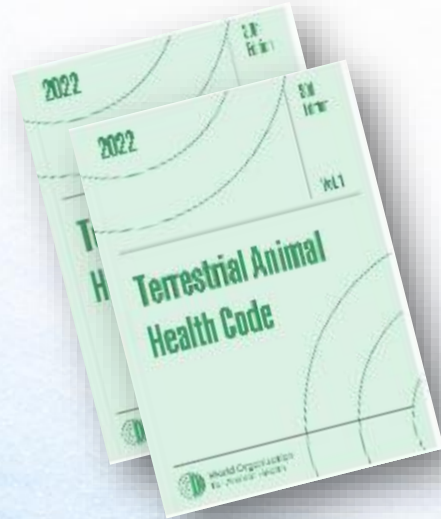


Englobe les normes pour améliorer la santé et le bien-être des animaux,
et la santé publique vétérinaire



L'outil PVS de l'OMSA

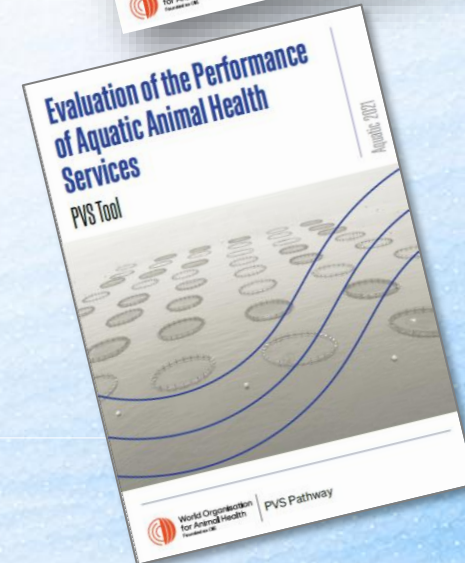
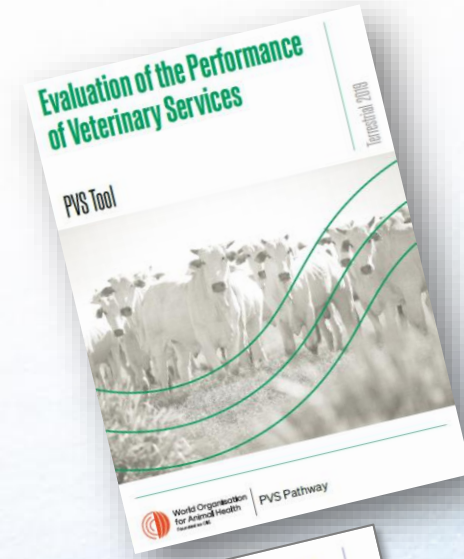
Un outil pour la bonne gouvernance des
Services Vétérinaires / Services de Santé
des animaux aquatiques



Code Aquatique, Chapitre 3.1. Qualité des services Sanitaires des Animaux Aquatiques, Articles 3.1.1. and 3.1.2

Qualité des Services
vétérinaires

Qualité des Services
chargés de la santé des
animaux aquatiques



Le parcours PVS



- Opinion externe et **indépendante** émise par des experts du PVS
- Fondé sur **des faits et des preuves**
- Identifie les **faiblesses** et les points **forts** en matière de conformité aux normes de l'OMSA
- Formule des **recommandations** visant à améliorer les performances du VS et de l'AAHS



Base permettant de mettre en place un **mécanisme de suivi** et de **contrôle régulier** du **niveau global de performance** au fil du temps



Le parcours PVS

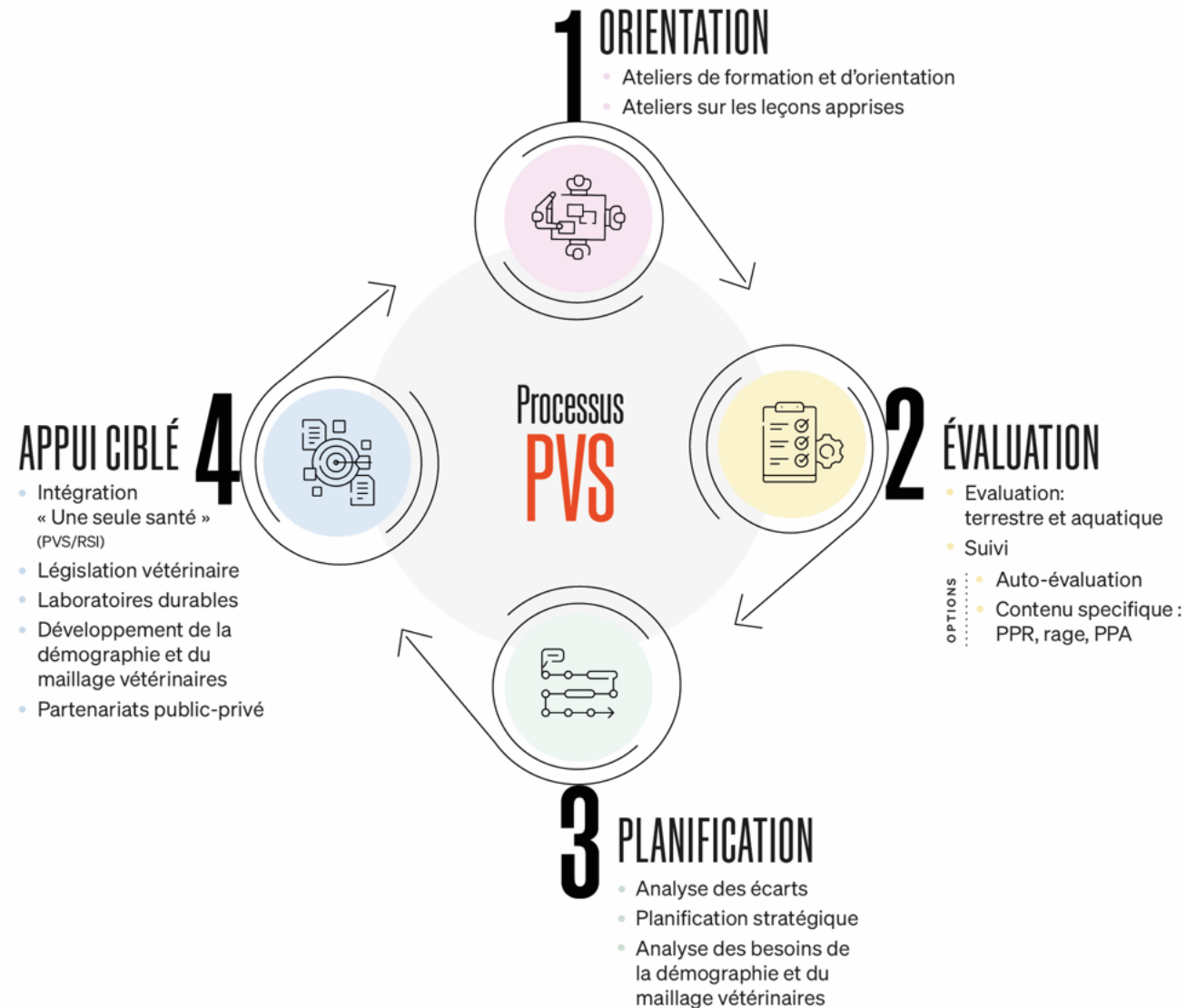
Plus qu'un simple outil de diagnostic, l'outil PVS favorise une culture de **sensibilisation, d'amélioration continue** et **de bonne gouvernance**.

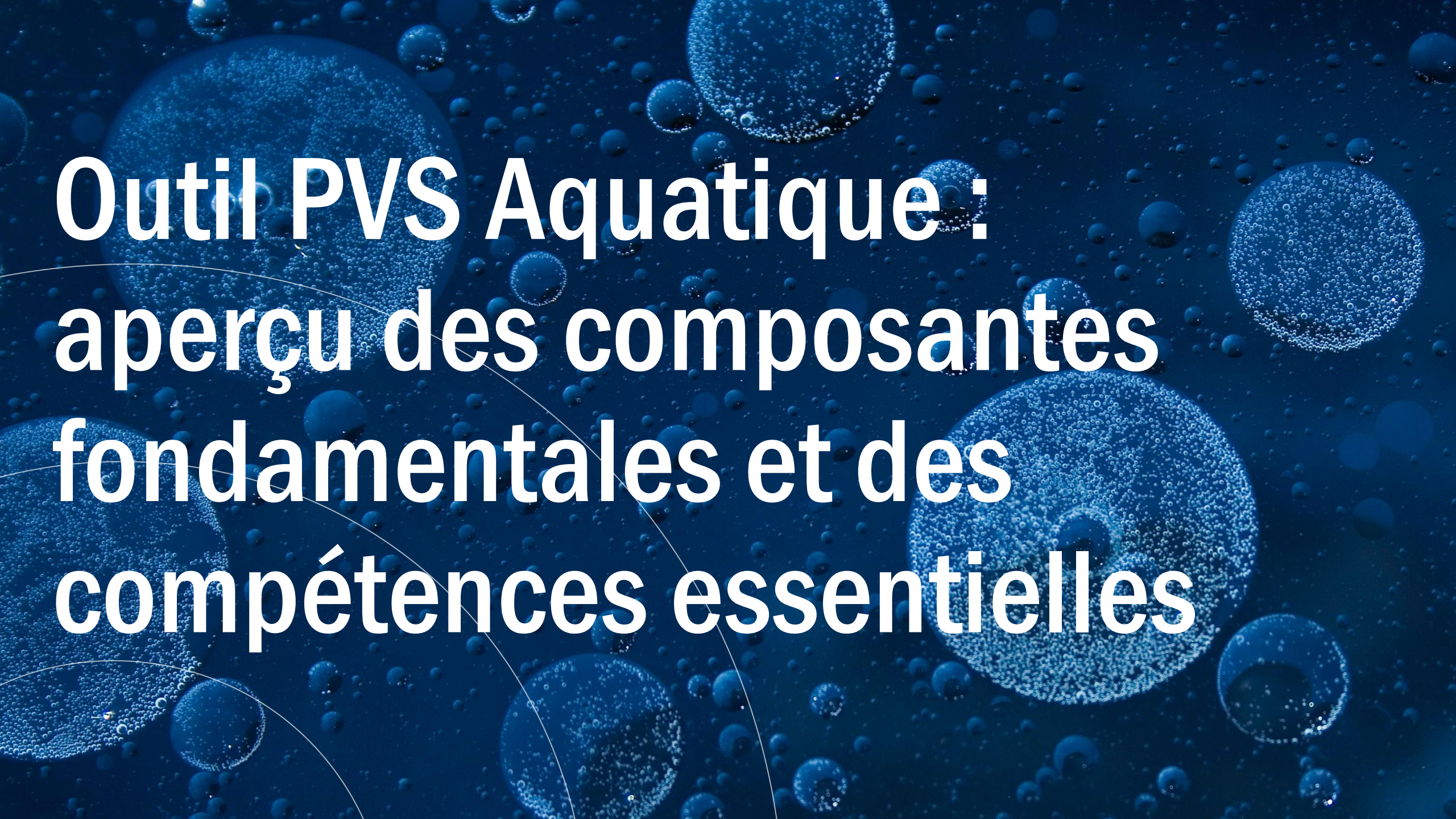


- Améliorer **la compréhension de l'ensemble** des secteurs, y compris les autres administrations.
- Élaborer **des plans stratégiques nationaux** relatifs au Services Vétérinaires / Services Sanitaires des Animaux Aquatiques, définir les **priorités** et obtenir **l'engagement des secteurs public et privé**.



Le processus d'amélioration continue de l'évaluation PVS de l'OMSA

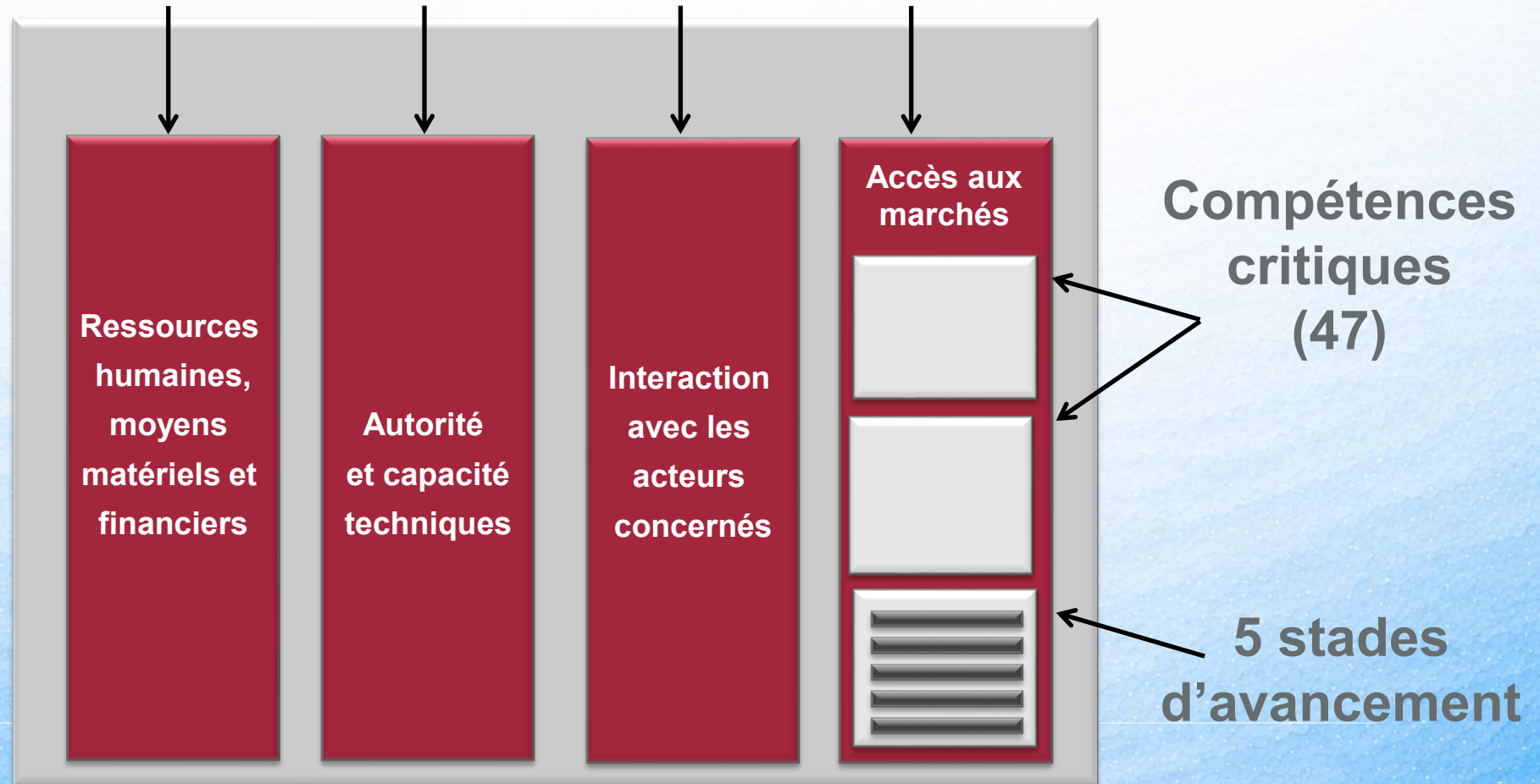




Outil PVS Aquatique : aperçu des composantes fondamentales et des compétences essentielles

Structure de l'outil PVS de l'OMSA

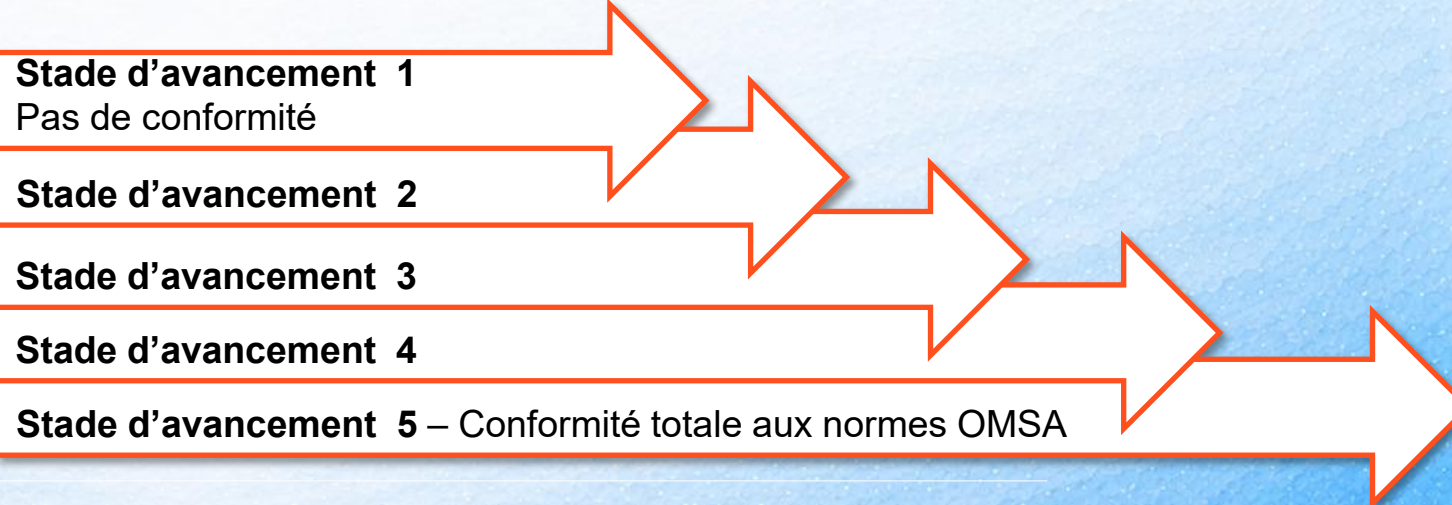
4 composantes fondamentales



Evaluation PVS

- Pour chaque compétence critique :
- Niveau d'avancement / Notation de 1 à 5
- Informations progressives et complémentaires relatives au respect des normes de l'OMSA. Un niveau supérieur implique le respect de tous les niveaux précédents.
- Constatations
- Points forts/points faibles
- Recommandations
- Missions de suivi de l'évaluation du PVS pour suivre les progrès au fil du temps.

I-1. Composition du personnel scientifique et technique des SV ou des SSAA <i>Composition du personnel adaptée à l'exercice réel et efficace des fonctions vétérinaires et techniques des SV ou des SSAA.</i> A. Vétérinaires ou professionnels en santé des animaux aquatiques (qualifications universitaires)	Stades d'avancement
	1. La plupart des postes relevant des sciences vétérinaires et des disciplines traitant de la santé des animaux aquatiques ne sont pas occupés par du personnel suffisamment qualifié
	2. La plupart des postes relevant des sciences vétérinaires et des disciplines traitant de la santé des animaux aquatiques sont occupés par du personnel suffisamment qualifié aux niveaux central et étatique / provincial
	3. La plupart des postes relevant des sciences vétérinaires et des disciplines traitant de la santé des animaux aquatiques sont occupés par du personnel suffisamment qualifié au niveau local (sur le terrain).
	4. Les postes de vétérinaires et de professionnels en santé des animaux aquatiques font systématiquement l'objet d'une définition de fonctions et de procédures de nomination officielles.
	5. Il existe des procédures de gestion efficaces pour évaluer les performances des vétérinaires et des professionnels en santé des animaux aquatiques.
Référence(s) au Code terrestre et au Code aquatique : annexe 1	



B. Professionnels en santé des animaux aquatiques et autre personnel technique (absence de qualification universitaire)	Stades d'avancement
	1. La plupart des postes relevant des disciplines traitant de la santé des animaux aquatiques et des postes techniques ne sont pas occupés par du personnel détenant les qualifications appropriées.
	2. La plupart des postes relevant des disciplines traitant de la santé des animaux aquatiques et des postes techniques aux niveaux central et étatique ou provincial sont occupés par du personnel détenant les qualifications appropriées.
	3. La plupart des postes relevant des disciplines traitant de la santé des animaux aquatiques et des postes techniques aux niveaux central et étatique ou provincial sont occupés par du personnel détenant les qualifications appropriées.
	4. La plupart des postes relevant des disciplines traitant de la santé des animaux aquatiques et des postes techniques aux niveaux central et étatique ou provincial sont occupés par du personnel détenant les qualifications appropriées.
	5. Il est difficile d'évaluer l'impact des actions de supervision technique sur la santé des animaux aquatiques.

Points forts :

- Bon réseau de techniciens sur une partie du territoire.
- Supervision directe par les DR.

Points faibles :

- Absence de supervision directe des DR par la DSV ou la DAP.

Recommandations :

- Recenser complètement les techniciens en poste et adapter leur nombre au regard des besoins.
- Mettre à jour les fiches de poste et revoir les modalités de supervision.

Référence(s) au Code terrestre et à

Éléments justificatifs (annexe 5) :

Idem CC. I.1.A.

Constatations :

Il y a un réseau de techniciens diplômés dans les régions, dans lesquelles l'aquaculture s'est surtout développée, comme Daloa, Abidjan, San Pedro et Abengourou, qui regroupent 86,7% des établissements d'aquaculture. Leur supervision technique est cependant limitée.

La mission n'ayant pas eu accès aux tableaux des effectifs pour les différentes structures centrales et déconcentrées, il est difficile de dire si leur nombre est suffisant ou non. A Bouaké cependant, le nombre d'agents « aquacoles » (deux) paraît suffisant pour la supervision des 30 petits pisciculteurs de la région.



- 2. Composante fondamentale II : Autorité et capacité techniques

Contents

Glossary	6
Introduction	13
Scope of the PVS Evaluation	14
PVS Tool – Aquatic	15
Applying the PVS Tool - Aquatic	15
The PVS Pathway	17
Chapter I Human, physical and financial resources	19
I-1 Professional and technical staffing of the Aquatic Animal Health Services (AAHS)	20
I-2 Competencies and education of veterinarians or aquatic animal health professionals, and other technical personnel	22
I-3 Continuing education	24
I-4 Technical independence	25
I-5 Planning, sustainability and management of policies and programmes	26
I-6 Coordination capability of the Aquatic Animal Health Services	27
I-7 Physical resources and capital investment	29
I-8 Operational funding	30
I-9 Emergency funding	31
Chapter II Technical authority and capability	33
II-1 Laboratory diagnosis	35
II-2 Risk analysis and epidemiology	38
II-3 Quarantine and border security	39
II-4 Surveillance and early detection	40
II-5 Emergency preparedness and response	41
II-6 Disease prevention, control and eradication	43
II-7 Aquatic animal production food safety	45
II-8 Veterinary medicines and biologicals for aquatic animals	47
II-9 Antimicrobial resistance (AMR) and antimicrobial use (AMU)	48
II-10 Residue testing, monitoring and management	49
II-11 Aquatic animal feed safety	50
II-12 Identification, traceability and movement control	51
II-13 Welfare of farmed fish	53
Chapter III Interaction with stakeholders	55
III-1 Communication	56
III-2 Consultation with stakeholders	57
III-3 Official representation and international collaboration	58
III-4 Accreditation/authorisation/delegation	59
III-5 Veterinary Statutory Body (VSB)	60
III-6 Participation of producers and other stakeholders in joint programmes	62
III-7 Aquatic animal health management and clinical services	63
Chapter IV Access to markets	65
IV-1 Aquatic animal health legislation	66
IV-2 International harmonisation	68
IV-3 International certification	69
IV-4 Equivalence and other types of sanitary agreements	70
IV-5 Transparency	71
IV-6 Zoning	72
IV-7 Compartmentalisation	73

2. Autorité et capacité techniques

Contents

Glossary	6
Introduction	13
Scope of the PVS Evaluation	14
PVS Tool – Aquatic	15
Applying the PVS Tool – Aquatic	15
The PVS Pathway	17
Chapter I Human, physical and financial resources	19
I-1 Professional and technical staffing of the Aquatic Animal Health Services (AAHS)	20
I-2 Competencies and education of veterinarians or aquatic animal health professionals, and other technical personnel	22
I-3 Continuing education	24
I-4 Technical independence	25
I-5 Planning, sustainability and management of policies and programmes	26
I-6 Coordination capability of the Aquatic Animal Health Services	27
I-7 Physical resources and capital investment	29
I-8 Operational funding	30
I-9 Emergency funding	31
Chapter II Technical authority and capability	33
II-1 Laboratory diagnosis	35
II-2 Risk analysis and epidemiology	38
II-3 Quarantine and border security	39
II-4 Surveillance and early detection	40
II-5 Emergency preparedness and response	41
II-6 Disease prevention, control and eradication	43
II-7 Aquatic animal production food safety	45
II-8 Veterinary medicines and biologicals for aquatic animals	47
II-9 Antimicrobial resistance (AMR) and antimicrobial use (AMU)	48
II-10 Residue testing, monitoring and management	49
II-11 Aquatic animal feed safety	50
II-12 Identification, traceability and movement control	51
II-13 Welfare of farmed fish	53
Chapter III Interaction with stakeholders	55
III-1 Communication	56
III-2 Consultation with stakeholders	57
III-3 Official representation and international collaboration	58
III-4 Accreditation/authorisation/delegation	59
III-5 Veterinary Statutory Body (VSB)	60
III-6 Participation of producers and other stakeholders in joint programmes	62
III-7 Aquatic animal health management and clinical services	63
Chapter IV Access to markets	65
IV-1 Aquatic animal health legislation	66
IV-2 International harmonisation	68
IV-3 International certification	69
IV-4 Equivalence and other types of sanitary agreements	70
IV-5 Transparency	71
IV-6 Zoning	72
IV-7 Compartmentalisation	73

II-8. VETERINARY MEDICINES AND BIOLOGICALS FOR AQUATIC ANIMALS

DEFINITION

The authority and capability of the AAHS to regulate veterinary medicines and biologicals, to ensure their quality and safety, as well as their responsible and prudent use, including as medicated feed.

This includes 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 AAHS cannot regulate veterinary medicines and biologicals for aquatic animals.
2. The AAHS have some capability to exercise regulatory and administrative control over the import, manufacture and market authorisation (registration) of veterinary medicines and veterinary biologicals to ensure their quality and safety, but cannot ensure their responsible and prudent use for aquatic animals in the field.
3. The AAHS exercise effective regulatory and administrative control over the market authorisation of veterinary medicines and biologicals and have some capacity to regulate these to ensure their responsible and prudent use for aquatic animals in the field, including reducing the risk from illegal imports.¹⁷
4. The AAHS exercise comprehensive and effective regulatory and administrative control of veterinary medicines and biologicals, including market authorisation, responsible and prudent use for aquatic animals in the field, and reducing the risks of illegal distribution and use.
5. The control systems for veterinary medicines and biologicals for aquatic animals are regularly audited, tested and updated when necessary, including via an effective pharmacovigilance programme.

[Note: This Critical Competency may in some countries be undertaken by an authority other than the AAHS.]

¹⁷ Illegal veterinary medicines and biologicals importation and use covers risks from online drug sales and the import and/or sale of counterfeit or sub-standard drugs.

Aquatic Code references:

Points 6 and 9 of Article 3.1.2. on Fundamental principles of quality: Veterinary legislation and regulations/Procedures and standards.

Terrestrial Code references:

Article 3.2.3. on Policy and management.
Article 3.2.8. on Animal production food safety.
Article 3.2.9. on Veterinary medicinal products.
Article 3.2.11. on Animal welfare.

2. Autorité et capacité techniques

Contents

Glossary	6
Introduction	13
Scope of the PVS Evaluation	14
PVS Tool – Aquatic	15
Applying the PVS Tool – Aquatic	15
The PVS Pathway	17
Chapter I Human, physical and financial resources	19
I-1 Professional and technical staffing of the Aquatic Animal Health Services (AAHS)	20
I-2 Competencies and education of veterinarians or aquatic animal health professionals, and other technical personnel	22
I-3 Continuing education	24
I-4 Technical independence	25
I-5 Planning, sustainability and management of policies and programmes	26
I-6 Coordination capability of the Aquatic Animal Health Services	27
I-7 Physical resources and capital investment	29
I-8 Operational funding	30
I-9 Emergency funding	31
Chapter II Technical authority and capability	33
II-1 Laboratory diagnosis	35
II-2 Risk analysis and epidemiology	38
II-3 Quarantine and border security	39
II-4 Surveillance and early detection	40
II-5 Emergency preparedness and response	41
II-6 Disease prevention, control and eradication	43
II-7 Aquatic animal production food safety	45
II-8 Veterinary medicines and biologicals for aquatic animals	47
II-9 Antimicrobial resistance (AMR) and antimicrobial use (AMU)	48
II-10 Residue testing, monitoring and management	49
II-11 Aquatic animal feed safety	50
II-12 Identification, traceability and movement control	51
II-13 Welfare of farmed fish	53
Chapter III Interaction with stakeholders	55
III-1 Communication	56
III-2 Consultation with stakeholders	57
III-3 Official representation and international collaboration	58
III-4 Accreditation/authorisation/delegation	59
III-5 Veterinary Statutory Body (VSB)	60
III-6 Participation of producers and other stakeholders in joint programmes	62
III-7 Aquatic animal health management and clinical services	63
Chapter IV Access to markets	65
IV-1 Aquatic animal health legislation	66
IV-2 International harmonisation	68
IV-3 International certification	69
IV-4 Equivalence and other types of sanitary agreements	70
IV-5 Transparency	71
IV-6 Zoning	72
IV-7 Compartmentalisation	73

II-9. ANTIMICROBIAL RESISTANCE (AMR) AND ANTIMICROBIAL USE (AMU)

DEFINITION

The authority and capability of the AAHS to manage AMU and AMR, and to undertake *surveillance* and control of the development and spread of AMR pathogens in *aquatic animal production* and *aquatic animal products*, as well as *aquatic animal production environments*, via a One Health approach.¹⁸

LEVELS OF ADVANCEMENT

1. The AAHS cannot regulate AMU and AMR and have not developed or contributed to an AMR action plan covering the *aquatic animal health domain*.
2. The AAHS are contributing or have contributed to a national AMR action plan. The action plan has initiated some activities to collect AMU/AMR data or control AMR, e.g. awareness campaigns targeting *veterinarians/aquatic animal health professionals* or farmers on the prudent use of *antimicrobial agents in aquatic animals*. The use of antimicrobials for growth promotion and indiscriminate prophylaxis for disease prevention is discouraged.
3. The AAHS have defined a national AMR action plan in coordination with the public health authorities and other stakeholders and are implementing some AMU/AMR *surveillance* and regulations. The use of *antimicrobial agents* for growth promotion and indiscriminate prophylaxis for disease prevention is prohibited.
4. The AAHS are implementing a comprehensive AMR action plan based on *risk*, including AMR *surveillance* of the most important *pathogenic agents for aquatic animal health or foodborne diseases*, the *monitoring* of AMU, and the prudent use of *antimicrobial agents in aquatic animals* (especially the use of critically important antimicrobials). The use of *antimicrobial agents* for growth promotion and indiscriminate prophylaxis for disease prevention does not occur.
5. An effective national AMR action plan covering the *aquatic animal health domain* is regularly audited, reviewed and updated by the AAHS with public health authorities and other stakeholders, using the results of AMU/AMR *surveillance*. The scale and type of antimicrobial use in *aquatic animals* poses minimal *risk* of AMR and alternative solutions for the control of *diseases in aquatic animals* are being implemented.

¹⁸ Recommended reading:
WHO Global Action Plan (2015) at: <https://www.who.int/publications/i/item/9789241509763> and WOAHS Strategy on Antimicrobial Resistance and the Prudent Use of Antimicrobials (2016) at: https://www.woah.org/fileadmin/Home/eng/Media_Center/docs/pdf/Portal/AMR/EN_OIE-AMRstrategy.pdf

Aquatic Code references:

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

Section 6. on Antimicrobial use in aquatic animals.

Terrestrial Code references:

Chapter 6.7. on Introduction to the recommendations for controlling antimicrobial resistance.

Chapter 6.8. on Harmonisation of national antimicrobial resistance surveillance and monitoring programmes.

Chapter 6.9. on Monitoring of the quantities and usage patterns of antimicrobial agents used in food-producing animals.

Chapter 6.10. on Responsible and prudent use of antimicrobial agents in veterinary medicine.

Chapter 6.11. on Risk analysis for antimicrobial resistance arising from the use of antimicrobial agents in animals.

References to Codex Alimentarius Commission Standards:

Guidelines for Risk Analysis of Foodborne Antimicrobial Resistance (CAC/GL 77-2011).
Code of Practice to Minimize and Contain Antimicrobial Resistance (CAC/RCP 61-2005).

2. Autorité et capacité techniques

Contents

Glossary	6
Introduction	13
Scope of the PVS Evaluation	14
PVS Tool – Aquatic	15
Applying the PVS Tool – Aquatic	15
The PVS Pathway	17
Chapter I Human, physical and financial resources	19
I-1 Professional and technical staffing of the Aquatic Animal Health Services (AAHS)	20
I-2 Competencies and education of veterinarians or aquatic animal health professionals, and other technical personnel	22
I-3 Continuing education	24
I-4 Technical independence	25
I-5 Planning, sustainability and management of policies and programmes	26
I-6 Coordination capability of the Aquatic Animal Health Services	27
I-7 Physical resources and capital investment	29
I-8 Operational funding	30
I-9 Emergency funding	31
Chapter II Technical authority and capability	33
II-1 Laboratory diagnosis	35
II-2 Risk analysis and epidemiology	38
II-3 Quarantine and border security	39
II-4 Surveillance and early detection	40
II-5 Emergency preparedness and response	41
II-6 Disease prevention, control and eradication	43
II-7 Aquatic animal production food safety	45
II-8 Veterinary medicines and biologicals for aquatic animals	47
II-9 Antimicrobial resistance (AMR) and antimicrobial use (AMU)	48
II-10 Residue testing, monitoring and management	49
II-11 Aquatic animal feed safety	50
II-12 Identification, traceability and movement control	51
II-13 Welfare of farmed fish	53
Chapter III Interaction with stakeholders	55
III-1 Communication	56
III-2 Consultation with stakeholders	57
III-3 Official representation and international collaboration	58
III-4 Accreditation/authorisation/delegation	59
III-5 Veterinary Statutory Body (VSB)	60
III-6 Participation of producers and other stakeholders in joint programmes	62
III-7 Aquatic animal health management and clinical services	63
Chapter IV Access to markets	65
IV-1 Aquatic animal health legislation	66
IV-2 International harmonisation	68
IV-3 International certification	69
IV-4 Equivalence and other types of sanitary agreements	70
IV-5 Transparency	71
IV-6 Zoning	72
IV-7 Compartmentalisation	73

II-10. RESIDUE TESTING, MONITORING AND MANAGEMENT

DEFINITION

The capability of the AAHS to undertake residue testing and *monitoring* programmes for veterinary medicines (e.g. *antimicrobials* and hormones), chemicals, pesticides, radionuclides, heavy metals, toxins, etc. and respond appropriately to adverse findings.

LEVELS OF ADVANCEMENT

1. No residue testing for aquatic animal products is being undertaken.
2. Some residue testing is being undertaken, such as for research or pilot purposes, and/or is conducted only on specific aquatic animal products for export.
3. A comprehensive residue monitoring programme is conducted for all aquatic animal products for export and some for domestic consumption, based on limited risk analysis. Documented protocols exist for preventing residue risks (e.g. withholding periods for veterinary drugs) and for responding to breaches of Maximum Residue Limits.
4. A comprehensive residue monitoring programme is conducted for all aquatic animal products for export and domestic consumption based on risk analysis. Effective protocols both reduce residue risks and respond to breaches of Maximum Residue Limits, including traceback and follow up.
5. The residue monitoring and risk management programme is subject to routine quality assurance and regular evaluation/audit.

[Note: This Critical Competency may in some countries be undertaken by an authority other than the AAHS.]

Terrestrial Code References:

Chapter 2.2. on Criteria applied by WOAHS for assessing the safety of commodities.

Article 3.2.8. on Animal production food safety.

Article 3.2.9. on Veterinary medicinal products.

References to Codex Alimentarius

Commission Standards:

Guidelines for the Design and Implementation of National Regulatory Food Safety Assurance Programmes Associated with the Use of Veterinary Drugs in Food Producing Animals (CAC/GL 71-2009).

Glossary of Terms and Definitions (Residues of Veterinary Drugs in Foods) (CAC/MISC 5-1993).

Maximum Residue Limits (MRLs) and Risk Management Recommendations (RMRs) for Residues of Veterinary Drugs in Foods (CAC/MRL 2).

General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995).

Code of Practice Concerning Source Directed Measures to Reduce Contamination of Foods with Chemicals (CAC/RCP 49-2001).

Guidelines for Risk Analysis of Foodborne Antimicrobial Resistance (CAC/GL 77-2011).

Code of Practice to Minimize and Contain Antimicrobial Resistance (CAC/RCP 61-2005).

2. Autorité et capacité techniques

Résumé sur la gestion des antimicrobiens selon l'outil PVS Animaux Aquatiques:

A. Posséder une **législation adaptée** aux spécificités d'usage des antimicrobiens pour les animaux aquatiques

B. Contrôler les entrées de principes actifs et/ou préparations dans le pays:

1. Avoir une **liste autorisée des antimicrobiens autorisés** dans le pays pour **les animaux aquatiques**, voire par **espèce**
2. Avoir un **contrôle** des **importateurs et distributeurs** autorisés
3. Avoir un « contrôle matière » sur les quantités importées destinées aux filières aquacoles

C. Avoir obligatoirement un **prescripteur** pour **l'utilisation de ces produits**, qui contrôle :

1. la **justification** du traitement (pathogène sensible au traitement préconisé), uniquement **curative**,
2. le respect des **protocoles d'administration** (dose, fréquence, forme galénique adaptée, etc.),
3. les **délais d'attente** avant pêche sacrifice.

D. Avoir un **Plan RAM**, un **suivi des résidus** dans les produits issus d'animaux aquatiques, ainsi qu'une recherche systématique des **souches résistantes**.

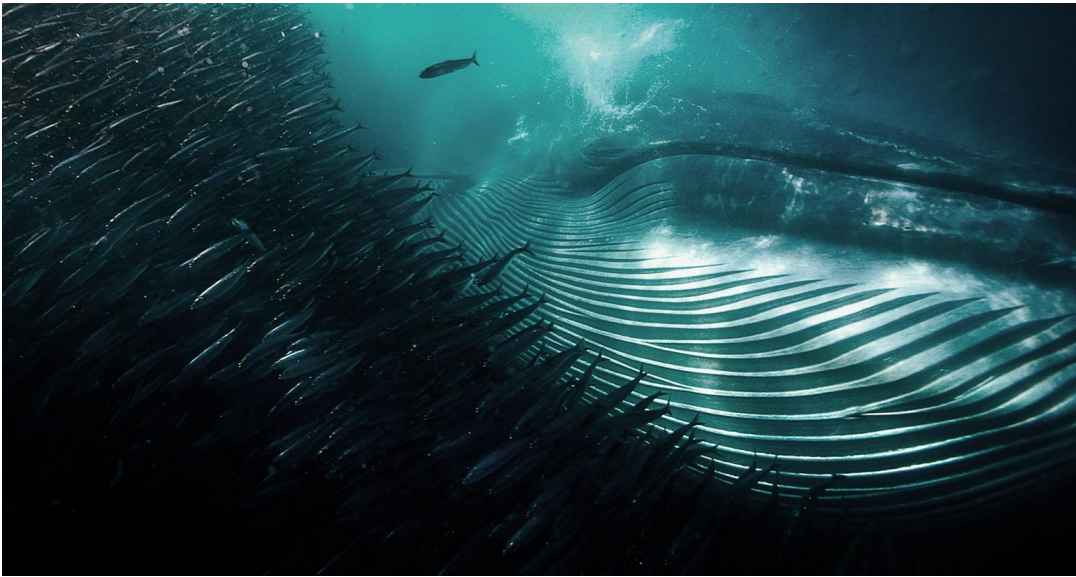
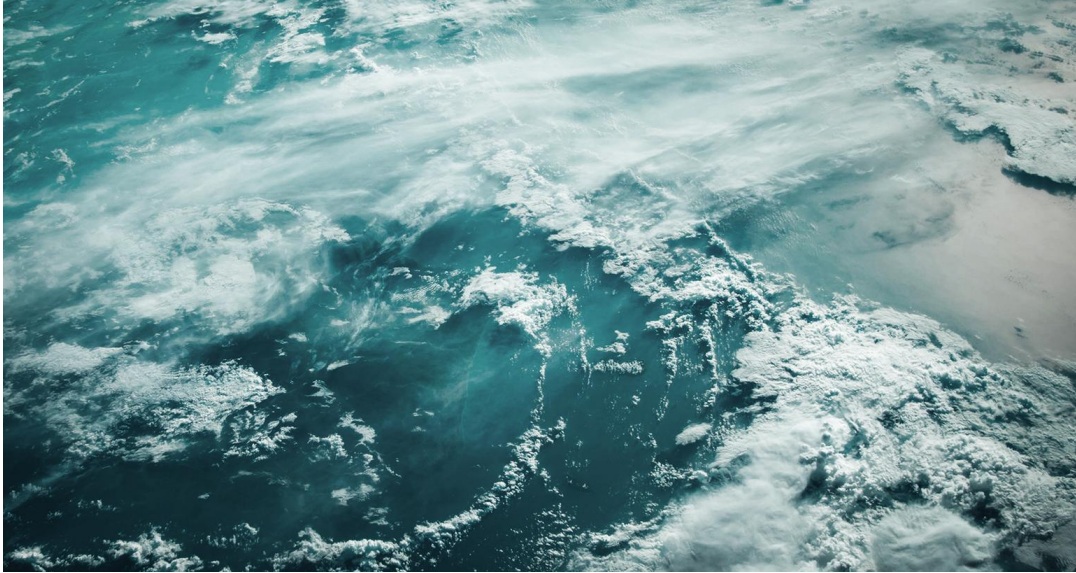
E. Contribuer à **ANIMUSE** et à la **lutte mondiale contre l'antibiorésistance** (Approche One Health)

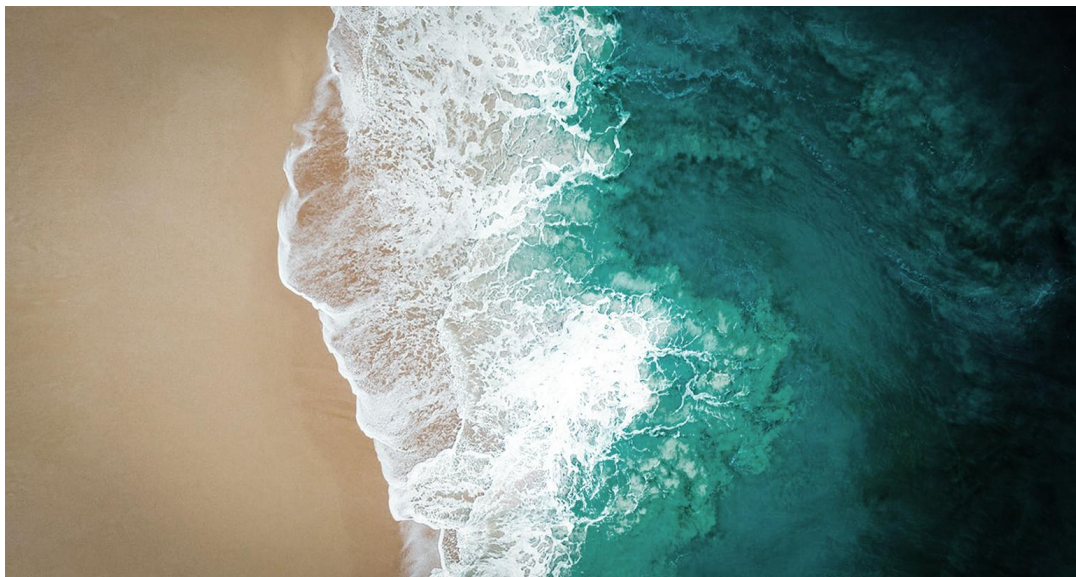
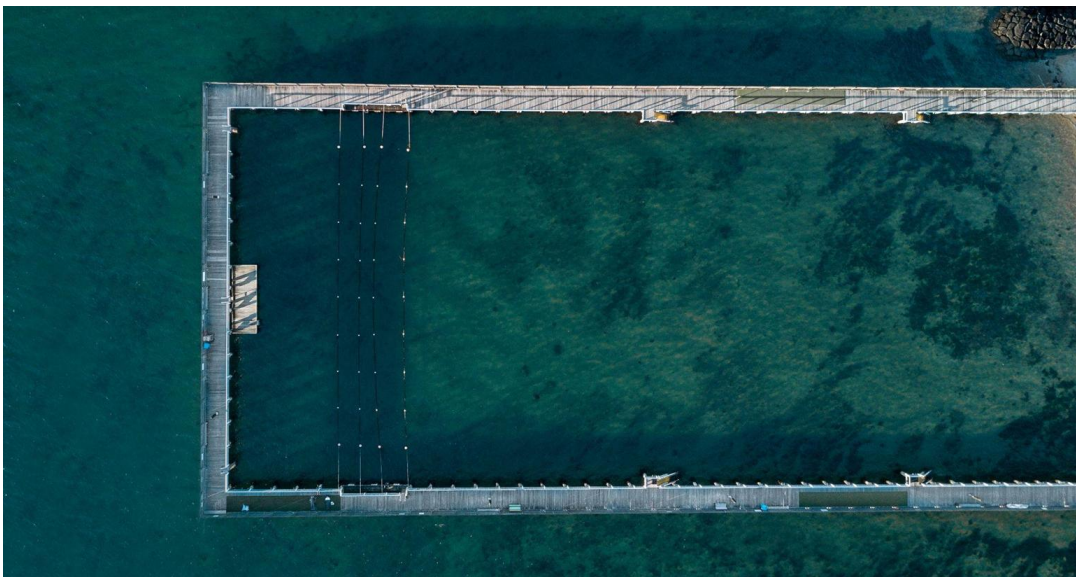
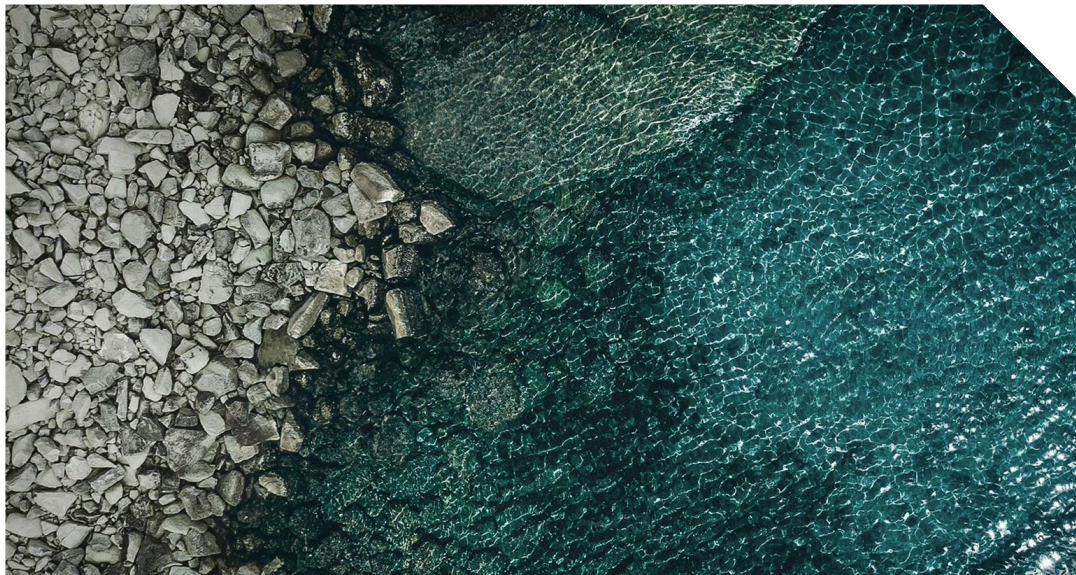
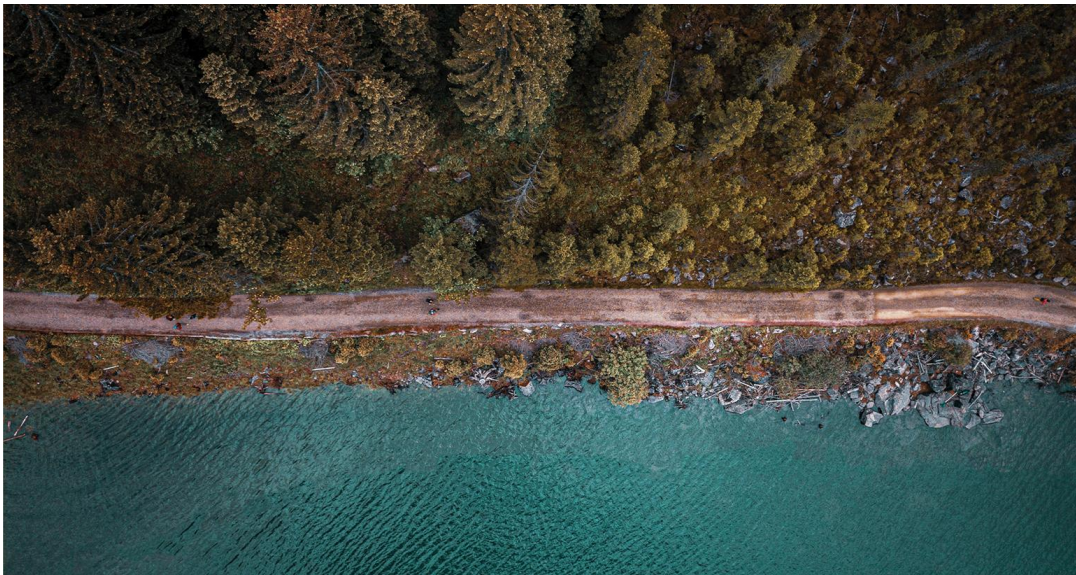
CONCLUSION

Utiliser l'outil PVS Animaux Aquatiques permet de:

- ☐ Faire un **point d'étape** sur le dispositif de **gestion des antimicrobiens** dans le pays.
- ☐ Identifier les **axes d'amélioration** de la gestion des antimicrobiens dans **les filières aquacoles**.
- ☐ **Planifier** les actions à mettre en œuvre pour atteindre les niveaux 4 voire 5 des **Compétences Critiques** spécifiques à la **gestion des antimicrobiens**.
- ☐ Recevoir de **l'aide de l'OMSA** voire de centres spécialisés, et obtenir des **financements** des bailleurs de fonds pour mettre en œuvre les améliorations préconisées, sur la base du rapport PVS aquatique.









World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

Merci Beaucoup !

www.woah.org woah@woah.org

