OCEAN CONSERVATION ADMINISTRATION
OCEAN AFFAIRS COUNCIL

Guidelines for the Display of Live Protected Cetaceans

February 2026

Ocean Conservation Administration, Ocean Affairs Council — English Version
This English translation is provided for reference purposes only. In the event of any discrepancy between the English and Chinese versions, the Chinese version shall prevail.

I. Introduction

Odontocetes, including dolphins and belugas (hereinafter collectively referred to as “cetaceans”), are highly intelligent and strongly social marine mammals. Their natural behavioral repertoire is rich and diverse, with each behavior reflecting important survival needs and social interactions.

In response to evolving international conservation trends and concepts of animal welfare, Taiwan's management of cetaceans under human care is moving toward gradual reduction and transformation. Because protected species require special conservation, overexploitation should be avoided, and animal welfare and interests must not be compromised. During this transitional period, due consideration should be given to the welfare of existing animals. Appropriate display practices should be adopted to enhance the welfare of cetaceans under human care, facilitate scientific research, and communicate accurate concepts concerning marine ecological conservation.

To enhance the educational quality and conservation value of cetacean displays, the Ocean Conservation Administration established the “Cetacean Display Guidance Task Force” in 2024. The task force brings together central and local competent authorities, experts and scholars, and animal-protection organizations to jointly deliberate on relevant issues and provide guidance on current cetacean display, husbandry, and management practices. Its primary areas of focus include reviewing the appropriateness of educational activities, improving captive environments and management measures, and facilitating the transformation of display practices. These Guidelines, advisory in nature, are intended to serve as a reference for competent authorities in their review and guidance activities and as a basis for self-assessment by institutions housing cetaceans when planning display and educational content.

The display of live protected cetaceans should prioritize respect for species-specific characteristics and the maintenance of their physical and psychological welfare, while also taking into account veterinary care, conservation education, and societal expectations. Accordingly, these Guidelines have been established as a reference for planning and implementing cetacean displays and for strengthening public understanding and support for marine conservation.

II. Legal Basis

Display activities involving protected wildlife shall prioritize animal welfare and comply with applicable laws and regulations. Pursuant to Article 6-1, Paragraph 5 of the Animal Protection Act, the Regulations Governing Animal Performances were promulgated. Article 6, Paragraph 2 of the Regulations (amended and promulgated on July 29, 2024) provides that, where an animal used in an exhibition or performance is subject to approval by the competent authority under the Act on Wildlife Conservation, the exhibition or performance methods specified in Subparagraph 4 of the preceding paragraph shall be limited to the content approved by that competent authority for exhibition or display. Accordingly, where protected wildlife is involved, the method of display must remain within the scope approved by the competent authority under the Act on Wildlife Conservation and may neither contravene nor exceed the scope permitted under that Act.

Article 35, Paragraph 1 of the Act on Wildlife Conservation further provides that protected wildlife and their products may not be traded, exhibited, or displayed in public places without the approval of the competent authority. The exhibition and display of protected wildlife shall place animal welfare at the core of all considerations, prioritize conservation education and research, and provide nature-education value so that the public can understand the species' ecological characteristics, behavioral patterns, and conservation value. Although no specific restrictions have been imposed on the particular types or formats of display for which approval may be sought, all proposed content and formats must comply with applicable laws and regulations and are subject to review and approval by the competent authority.

III. Basic Principles

A. Prioritizing Animal Welfare

1. All permitted display and interactive activities shall prioritize maintaining cetaceans in good physical condition and safeguarding their emotional and psychological well-being.
2. Display content shall be designed on the basis of a sound understanding and professional assessment of species characteristics, individual differences, age structure, and social dynamics.
3. Institutions housing cetaceans shall implement scientifically informed husbandry and environmental enrichment measures and provide appropriate sensory and cognitive stimulation to promote the physical and psychological well-being of cetaceans under human care, effectively reduce stress responses, and prevent the occurrence of stereotypic behavior.
4. Given that captive environments remain limited compared with natural habitats and cannot readily replicate the social structures required by highly social species, institutions housing cetaceans shall incorporate the duration of daily training sessions between caretakers and cetaceans, the frequency of their interactions, and interaction protocols into routine and essential management practices.
5. Institutions shall assess and increase opportunities for free foraging or provide a diverse range of foraging enrichment devices.
6. Except for behavioral enrichment interactions or medical training conducted by keepers to enhance cetacean welfare, visitor-cetacean interaction may only be conducted where necessary and within a limited scope, under continuous supervision and with comprehensive educational interpretation. For example, interactions may be limited to poolside activities, with entry into the water strictly prohibited. The following conditions shall also be met:
   (1) Retreat areas and choice: Adequate retreat areas shall be provided for both personnel and animals so that cetaceans may choose at any time whether to participate or withdraw.
   (2) Number of participants and staffing: The number of participants and trainers assigned to each session shall be adjusted flexibly according to the number of animals, spatial conditions, and activity content, with animal welfare as the overriding priority. A participant who fails to follow on-site instructions or creates a safety concern shall immediately cease participation; the entire activity may be terminated if necessary.

(3) Prohibited conduct: Visitors are strictly prohibited from touching cetaceans in any manner during activities. High levels of noise, intense lighting, or any other form of disturbance are also prohibited to minimize startle and stress in the animals.

(4) Rings, watches, mobile phones, and other items prone to being dropped shall be properly secured in advance to prevent them from falling into the pool.

7. Static display areas shall prominently display warning notices reminding visitors not to strike or tap on viewing windows. Appropriate educational signage shall also be installed and displayed to minimize disturbance to the animals and strengthen public awareness of animal welfare and appropriate visitor conduct.
8. Institutions housing cetaceans shall establish a comprehensive cetacean-welfare assessment and monitoring mechanism. Through continuous individual behavioral and health monitoring, institutions shall regularly assess physiological indicators, behavioral performance, stress responses, and abnormal conditions, as well as establish reporting and response procedures. All individual cetaceans under human care shall be assessed in accordance with the Cetacean Animal Welfare Assessment prescribed by the central competent authority (see Appendix I) at least once every quarter. Results shall be submitted to the local competent authority and used as an important basis for improving internal management, adjusting display content, and continuously enhancing individual care.
9. Cetaceans shall be guaranteed at least 10 consecutive hours of rest each day during which they are not required to interact with the public.
10. Institutions housing cetaceans shall develop alternative display plans. When animal welfare cannot be adequately maintained, such as when an individual cetacean is in unsuitable physical or psychological condition, educational displays shall instead be provided through non-disruptive means, such as video presentations or virtual reality.

B. Educational and Conservation Value

1. Display content shall focus on enhancing public understanding and support for the welfare of cetaceans under human care, marine ecology, and cetacean conservation, and shall further encourage visitors to undertake tangible conservation actions and adopt environmentally responsible consumption practices.
2. Display activities shall be designed primarily to present the natural characteristics and behavioral patterns of cetaceans. Appropriate, scientifically based activities shall be arranged to encourage behaviors such as foraging, exploration, social interaction, cognition, and play. Where necessary and for educational purposes, visitors may also be provided with appropriate explanations of keeper-cetacean interactions, training procedures, the purposes of training, and environmental enrichment measures. Such explanations should help the public understand the professional practices required for the management of cetaceans under human care and the associated animal welfare considerations.
3. Specific behaviors exhibited by cetaceans under human care for the purposes of health maintenance, medical training, or examinations—such as jumping on cue, rapid swimming, or accepting veterinary care—shall be clearly explained through educational interpretation provided

either on-site or in advance, preventing visitors from mistaking such behaviors as natural behaviors exhibited in the wild.

4. Entertainment-oriented displays or performances that violate the physical or psychological welfare of cetaceans or are unnatural in nature are prohibited. Such behaviors include, but are not limited to, tail-standing, carrying people, balancing balls, spinning hula hoops, kissing humans, and waving.
5. Display content shall deepen visitors' comprehensive understanding of cetacean species characteristics, life histories, and the conservation risks they face. Interpretation or exhibits may introduce cetacean species commonly found in waters surrounding Taiwan, including their morphology, external features, ecological roles, activity ranges, and population conservation status. It may also address threats faced by wild cetaceans, such as marine debris, noise disturbance, and conflicts with fisheries, and connect these issues with conservation actions that visitors can practice in daily life—for example, linking marine-debris issues with plastic reduction—to promote the translation of knowledge into concrete action.
6. Institutions housing cetaceans shall commission experts to assess educational effectiveness and, in conjunction with the review of animal-performance permits, submit the assessments to the local competent authority for record. Institutions shall also cooperate with external research and evaluation mechanisms of government agencies or relevant organizations to continuously improve the formats, methods, and content of educational displays.

C. Compliance with Ethical and Moral Standards

1. Activities shall be designed with respect for cetaceans' natural habits and individual willingness to participate. Cetaceans shall retain autonomy to choose whether to participate and shall not be forced to take part in display or interactive activities in any form.
2. All animal training shall use positive reinforcement and be based on voluntary participation by cetaceans and positive rewards. Any coercive, forced, or punitive training method is strictly prohibited.
3. Institutions are encouraged to provide information on individual dolphins, including their background stories and preferences, as well as information on their habitats, animal welfare, and environmental protection, thereby enhancing visitors' understanding of animal-friendly practices and relevant conservation issues and encouraging positive civic action.

D. Ensuring Safety

1. All display activities shall be conducted on the premise of ensuring the safety of cetaceans, staff, and visitors and shall include necessary risk assessment and management measures.
2. Environmental-enrichment tools, equipment, and activity formats shall undergo prior safety assessment to confirm that their materials, design, methods of use, and operating procedures will not cause physical injury, psychological stress, or behavioral risks to cetaceans.
3. To reduce the risk of zoonotic disease transmission, facilities shall take necessary preventive measures. Persons with open wounds on their body shall be prohibited from approaching pools or participating in interactive activities.

E. Promotion of Scientific Research and Rescue of Wild Cetaceans

Institutions housing cetaceans shall actively participate in or support cetacean-related scientific research, rescue of wild cetaceans, stranding response, and other conservation activities, and shall feed relevant results back into conservation practice and policy development to facilitate continuous improvements in cetacean conservation and animal welfare.

F. Other Matters

1. Music and other sounds within display areas shall be monitored and adjusted with reference to scientific assessments and relevant literature and maintained at the lowest reasonable volume that still allows visitors to hear educational interpretation clearly without causing stress to the animals.
2. Information concerning cetacean welfare shall be made publicly available in a transparent manner. Institutions shall regularly disclose information on the species and number of individuals held, display or interactive activities, animal welfare policies, and environmental and health monitoring to enhance social trust and facilitate public oversight.
3. Where necessary on a case-by-case basis, the competent authority may use these Guidelines as an important basis for discussion in permit reviews, inspections, or guidance activities and may assist operators in developing phased improvement plans.
4. Violations of these Guidelines may be handled in accordance with the Act on Wildlife Conservation, the Animal Protection Act, and other applicable laws and regulations.

Appendix I. Instructions for Use of the Cetacean Animal Welfare Assessment

A. Purpose

The purpose of animal-welfare assessment is to use a systematic approach to evaluate the quality of the environment and care provided to animals under human care, thereby ensuring that animals live in comfort and with an appropriate degree of freedom, thereby safeguarding basic animal welfare and facilitating further improvements. This assessment form is designed to evaluate whether animals' physiological, psychological, and behavioral needs are being met and whether living conditions—such as habitat, husbandry methods, and nutritional status—meet appropriate standards. By completing the form, users can objectively evaluate and quantify the animals' welfare status and propose improvement measures and recommendations based on the results.

B. Assessment Standards and Implementation

The assessment form enables the objective evaluation and documentation of the resources available to animals and their husbandry and management conditions, while also allowing their psychological state to be assessed on the basis of behavioral indicators. The form is based on the Five Domains Model and assesses welfare across five domains: nutrition, environment, health, behavior, and mental state.

1. Each assessment shall evaluate an individual. Each assessor shall independently complete a separate form for each assessment.
2. All individuals shall be subject to monitoring. Assessments shall be conducted at least once per quarter, with a minimum of two assessors participating in each assessment.
3. The maximum total score is 150 points across 30 categories. Each category is scored from 1 (poor condition) to 5 (good condition), using the descriptions in the table as the scoring criteria.
4. Assessors shall set aside emotional attachment to the animals and remain as objective as possible.
5. Before filling out the form, the keeper and area supervisor shall explain the animal's current condition. Assessors shall not discuss scores during the assessment. After all individual assessments are completed, results should be consolidated and recorded. The supervisor responsible for the animal's area and the veterinarian shall then review and confirm the assessment and sign it.
6. Improvement strategies shall be established based on the assessment results. The area supervisor shall oversee and implement these strategies; keepers shall carry out the work and record improvement status. The area supervisor and supervising manager shall review records from time to time and adjust these strategies as needed.
7. A total score below 100 indicates poor animal welfare and requires active improvement. Where an animal ethics committee exists, committee members may be invited to assist with welfare improvements.

8. A score of 1 or 2 for any single item indicates a serious problem in that area. The reason for the score shall be recorded on the assessment form and an improvement plan shall be proposed. If an item cannot be observed or is not applicable, this shall be noted in the scoring field.
9. Compiled assessment data shall be properly retained and made available for review and inspection when necessary.

Cetacean Animal Welfare Assessment

Taiwan Society of Animal Welfare Science (TSAWS)

Date Recorded		**Species**	
Assessor Name		**Individual Name/ID**	
Facility/Unit		**Type of Housing Area**	☐ Display area only ☐ Back-of-house + display area ☐ Back-of-house only
Recommendations			

No.	Domain	Factor	Parameters (select the more serious condition)	1	2	3	4	5
1	Nutrition	Diet	• Is the diet (including nutritional value, quantity, vitamin supplementation) appropriate considering the individual's life stage, sex, health status, social conditions, and breeding season? • Is the diet diverse? • Is there variation in food presentation method? • Is the diet reviewed regularly?	The animal shows signs of malnutrition or poor health; diet must be adjusted immediately.	The animal is unhealthy and the diet is inappropriate, although sufficient to sustain life. The diet is not regularly reviewed or adjusted to individual needs/preferences.	The diet is sufficient to maintain health. Food variety is limited. The diet is adjusted according to the individual's nutritional needs when health issues arise.	The diet is sufficient to maintain health. The diet is diverse, or daily feeding quantity varies. The diet is reviewed regularly, although it may not always be adjusted according to individual needs/preferences.	The diet is sufficient to maintain health. Food is diverse and the individual has opportunities to choose; the quantity provided at each feeding varies, some food is provided through enrichment, or free foraging is possible. Diet is regularly reviewed and adjusted according to individual needs or preferences.
2	Nutrition	Food Preparation	• How hygienically is food prepared, including the hygiene conditions of the animal food-preparation area? • How fresh is food provided to each individual, calculated from the time food preparation is completed in the relevant facility area?	Food preparation is unhygienic. Food is spoiled or rancid by the time it is distributed, including food repeatedly thawed and refrozen.	Food preparation is unhygienic. Food is distributed more than 4 hours after thawing or preparation.	Food preparation is hygienic. Food is distributed within 4 hours after thawing or preparation.	Food preparation is hygienic. Food is distributed within 1 hour after thawing or preparation.	Food preparation is hygienic. Food is distributed immediately after thawing or preparation.
3	Nutrition	Adequacy of Hydration	• Is each individual adequately hydrated, as may be assessed through indicators such as mucosal moisture or capillary refill time? • Are blood parameters indicative of hydration status, such as hematocrit and creatinine, within normal ranges? • How clean is the supplemental water provided?	The animal shows obvious signs of severe dehydration. Supplemental water is contaminated to a degree that adversely affects animal health.	Blood parameters indicative of hydration status deviate from the normal range by more than 10%. Supplemental water is mildly contaminated.	Blood parameters indicative of hydration status deviate from the normal range by no more than 10%. Supplemental water is clean.	Blood parameters indicative of hydration status are within the normal range. Supplemental water is clean, and the animal has two different ways to obtain water.	Blood parameters indicative of hydration status are within the normal range. Supplemental water is clean, and the animal has two different ways to obtain water. The animal has choice and control over at least one of those means.
4	Environment	Environmental Complexity	• Complexity and variability of the physical features in the animal's living environment. • Can environmental features provide enrichment, stimulation, challenges, or opportunities for choice and control? • Facilities or structures that increase environmental complexity may include substrate, vegetation, landscaping, artificial rockwork, and interactive installations.	No facilities or structures are provided to increase environmental complexity. The environment is monotonous and lacks stimulation or change.	Only one facility or structure is provided to increase environmental complexity. Environmental complexity and stimulation are limited.	Two facilities or structures are provided to increase environmental complexity. The environment provides a basic level of complexity and stimulation.	Three or more facilities or structures are provided to increase environmental complexity. The environment is complex and provides a variety of exploratory opportunities.	Three or more facilities or structures are provided to increase environmental complexity. The environment is highly complex, offers diverse exploratory opportunities, continuously provides challenges, and affords choice, and control.
5	Environment	Social Group Management	• Is any individual forcibly isolated from the group?	During the past 3 months, the individual was completely	During the past 3 months, the individual experienced	During the past 3 months, the individual has been partially	During the past 3 months, the individual has been isolated	During the past 3 months, the individual has continuously lived

				housed alone and isolated from the group.	prolonged isolation (>1 hour/day).	separated but has been able to maintain indirect contact with others through barriers such as mesh.	only briefly (<1 hour/day) for medical emergencies or research needs.	in a group setting without isolation.
6	Environment	Activity Space	• How much usable space is available to each individual? • Is stocking density appropriate? • Can the animal exercise adequately and express natural behavior, such as fast swimming and jumping? • Does the animal have space to avoid conspecifics? • Note: Scoring shall be based on the space actually available to the animal.	Space is extremely inadequate. Stocking density poses a risk to the individual. The animal cannot turn around. The animal has no space to avoid conspecifics.	Space is limited. Stocking density is poor. The animal can exercise only to a limited extent. The animal has no space to avoid conspecifics.	Space is adequate. Stocking density is acceptable. The animal can exercise appropriately. The animal has space to avoid conspecifics.	Space is sufficient. Stocking density is appropriate. The animal can move freely. The animal has space to avoid conspecifics.	Display and activity areas are extremely spacious, allowing individuals to express a wide range of natural behaviors, including fast swimming, jumping, social behavior, and synchronous swimming. The animal has space to avoid conspecifics.
7	Environment	Environmental Safety	• Are pool design and facilities safe for each individual? • Is there a risk of ingesting foreign objects? • Is environmental safety reviewed regularly? • Is the life-support system inspected regularly?	During the past 3 months, poor pool design and facilities have harmed the animal, with recorded injuries. During the past 3 months, there has been a recorded incident of foreign-object ingestion. No life-support system is installed.	Risk of injury is high. Risk of foreign-object ingestion is high. A life-support system exists but is not inspected.	Risk of injury is low. Risk of foreign-object ingestion is low. A life-support system exists and is regularly inspected.	The environment is safe. There is no risk of foreign-object ingestion. Regular safety reviews are not conducted. A life-support system exists and is regularly inspected.	The environment is safe. There is no risk of foreign-object ingestion. Environmental safety risk factors are regularly reviewed, managed, and eliminated. A life-support system exists and is regularly inspected.
8	Environment	Water Quality	• Are water-quality data within the required standard ranges? • Parameters tested shall include, but are not limited to, salinity, pH, chlorine concentration, and *Escherichia coli* counts. •How frequently is water quality tested?	Water quality data fall outside standard ranges and have seriously harmed animal health. Water quality has never been tested.	Water quality data fall outside standard ranges but have not yet caused evident harm to animal health. Water quality is not tested regularly.	Water quality data comply with standard ranges. Water quality is tested monthly.	Water quality data comply with standard ranges. Water quality is tested weekly, and microbiological parameters are tested every two weeks.	Water quality data comply with standard ranges. Water quality is tested daily, and microbiological parameters are tested weekly.
9	Environment	Water Temperature	• Is the pool temperature within the range the animal would experience in its natural habitat? • Is there appropriate temperature variation?	Pool temperature falls outside the appropriate range and has seriously harmed animal health.	Pool temperature falls outside the appropriate range but has not yet clearly harmed animal health.	Pool temperature is within the appropriate range. No appropriate temperature variation is provided.	Pool temperature is within the appropriate range. Appropriate temperature variation is provided.	Pool temperature corresponds to temperatures in the species' original habitat and is adjusted in accordance with seasonal variations in that habitat.
10	Environment	Lighting	• Is appropriate shade available? • Pool walls should not be highly reflective.	No shade is provided. Pool walls are highly reflective.	No shade is provided. Pool walls are made of light-colored reflective material.	Partial shade is provided, but it does not provide all-day coverage. Pool walls are made of non-reflective material.	Appropriate all-day shade is provided. Pool walls are made of non-reflective material.	Suitable all-day shade is available and sufficient for all individuals to use simultaneously. Pool walls are made of non-reflective material and have been specifically treated to suppress glare.
11	Environment	Environmental Stressors	• Is the ambient noise appropriate for the individual animal in terms of volume and frequency, as determined in part by observing whether the animal exhibits noise-avoidance behavior? • Is the animal exposed to inappropriate noise? • Is the individual exposed to irritating light sources, such as camera flashes or flashlights?	Environmental stress is extremely high. Exposure is prolonged and frequent. Harm is caused.	Environmental stress is high. Exposure is prolonged or frequent.	Environmental stress is moderate. Exposure is brief or infrequent.	Environmental stress is low. Exposure is brief and infrequent.	Environmental stress is low. Exposure rarely occurs. The animal can freely choose to move toward or away from areas associated with environmental stressors.
12	Health	Weight Monitoring	• Is each individual's weight monitored regularly, at an appropriate frequency? • Are weight records reviewed? • Is average body weight/body condition normal?	No monitoring. Records are lacking. Very poor, BCS 1 or 5.	Monitoring is irregular/insufficient. No record review. Poor, BCS 1.5 or 4.5.	Regular monitoring at the same frequency for all individuals. Weight or BCS records are kept. Acceptable, BCS 2 or 4.	Regular monitoring with increased frequency according to individual condition. Weight or BCS records are kept. Normal, BCS 2.5 or 3.5.	Regular monitoring with frequency adapted to individual condition. Weight/BCS records are actively reviewed and action

			• If weighing is not used, body condition scoring (BCS) may be used.					is taken when necessary. Good, BCS 3.
13	Health	Mobility	• Does the individual have normal buoyancy and mobility? • Examine movement and range of motion of both pectoral fins, deformities (e.g., scoliosis), persistent body tilt, and injuries/scars that may affect movement or buoyancy. • Have any abnormalities been recorded during the past three months?	Severe abnormalities are present in appearance, buoyancy, and mobility.	Obvious abnormalities are present in appearance, buoyancy, and mobility.	Abnormalities in appearance are present, but basic buoyancy and mobility are maintained.	At the time of assessment, appearance, buoyancy, and mobility are normal. Abnormalities have been recorded during the past 3 months.	At the time of assessment, appearance, buoyancy, and mobility are normal. No abnormalities have been recorded during the past 3 months.
14	Health	Eye Examination	• Does the individual have ocular lesions? • Do both eyes respond normally to visual signals? • Have any abnormalities been recorded during the past three months?	Severe ocular lesions are present. Neither eye responds to visual signals.	Obvious ocular lesions are present. The eyes respond abnormally to visual signals.	Mild chronic ocular lesions are present. The eyes respond normally to visual signals.	No ocular lesions are present. Both eyes respond normally to visual signals. Abnormalities have been recorded during the past 3 months.	No ocular lesions are present. Both eyes respond normally to visual signals. No abnormalities have been recorded during the past 3 months.
15	Health	Oral Cavity & Gastrointestinal Tract	• Are there lesions or painful areas in the mouth or teeth? • Are there abnormalities of the gastrointestinal tract or feces? • Have any abnormalities been recorded during the past three months?	Severe abnormalities in the mouth, teeth, gastrointestinal tract, or feces that affect appetite.	Abnormalities are present in the mouth, teeth, gastrointestinal tract, or feces.	Oral or dental defects are present, but normal function is maintained. Gastrointestinal or fecal abnormalities occur occasionally.	No abnormalities are present in the mouth, teeth, gastrointestinal tract, or feces. Abnormalities have been recorded during the past 3 months.	No abnormalities are present in the mouth, teeth, gastrointestinal tract, or feces. No abnormalities have been recorded during the past 3 months.
16	Health	Respiratory Condition	• Are the respiratory physical examination findings, including blowhole examination and respiratory performance tests, normal? • Have any abnormalities been recorded during the past three months?	Severe respiratory abnormalities or acute infection are present and interfere with normal breathing.	Respiratory abnormalities are present.	Respiratory abnormalities are present, but normal daily function is maintained.	No respiratory abnormalities are present. Abnormalities have been recorded during the past 3 months.	No respiratory abnormalities are present. No abnormalities have been recorded during the past 3 months.
17	Health	Systemic Disease Examination	• Does the physical examination reveal signs of disease? This includes overall skin condition (color, number and severity of viral lesions, wounds, fissures, peeling, scars, thermal ischemic necrosis; excluding tooth-rake marks), genital slit (discharge, mucosal color, and mucosal lesions), ears (discharge, pain on touch, protrusion), and rostrum (wounds/hyperkeratosis). • Are blood test results normal? • Are there any other known diseases? • Have any abnormalities been recorded during the past three months?	Physical examination findings are abnormal and seriously interfere with normal behavior. Blood test results are abnormal and seriously interfere with normal behavior. The animal has a life-threatening or highly contagious disease.	Physical examination findings are abnormal and mildly interfere with normal behavior. Blood test results are abnormal and mildly interfere with normal behavior. The animal has a severe acute or chronic disease.	Mild physical abnormalities are present but do not interfere with normal behavior. Mild blood test abnormalities are present but do not interfere with normal behavior. The animal has a mild chronic disease.	Physical examination reveals only non-disease-related imperfections that do not affect normal behavior. Blood test results are normal. Abnormalities have been recorded during the past 3 months.	Physical examination findings are normal. Blood test results are normal. No abnormalities have been recorded during the past 3 months.
18	Health	Biosecurity & Preventive Medicine	• Are appropriate biosecurity measures (e.g., disinfectant footbaths, routine disinfection, quarantine) in place, and are they effective? • Does the preventive medical plan (e.g., vaccination, deworming, contraception) meet individual needs? • Note: Life stage, sex, health, social dynamics, and reproduction shall be taken into account.	No protective measures are in place. No biosecurity SOP is available. No medical plan is in place.	Minimal protective measures are in place. No biosecurity SOP is available. All individuals are covered by the same basic medical plan.	Moderate protective measures are in place. A biosecurity SOP exists. All individuals are covered by the same comprehensive medical plan.	Extensive protective measures are in place. A biosecurity SOP is available and is properly implemented and documented. Individualized basic medical plans are provided.	Relevant measures prevent opportunities for pathogen transmission. A comprehensive biosecurity SOP is available and is properly implemented, documented, and continuously improved. Comprehensive individualized medical plans are provided.
19	Behavior	Behavioral Enrichment	• Is enrichment provided daily? • How effective is enrichment (frequency and duration of use)? • Are different types provided (e.g., olfactory, tactile, food-based, and cognitive)? • Does the animal show exploratory behavior? • Are enrichment activities documented?	No enrichment is implemented, or enrichment has no effect. No relevant records.	Enrichment is implemented but not daily. Poor effect. Only one type. No exploratory behavior. Only brief records.	Daily enrichment. Some effect but design goals are not achieved. Only one type. No exploratory behavior. Records are inconsistent but retained.	Daily enrichment. Good effect and expected outcomes achieved. Diverse types. No exploratory behavior. Detailed records are properly retained.	Daily enrichment. Good effect with continuous modification and updating. Diverse types including cognitive enrichment. Exploratory behavior is shown. Detailed records are stored electronically.

20	Behavior	Animal Training	• Is there an animal-training plan? • Is training conducted regularly? • Are outcomes regularly assessed and training content adjusted? • Training includes desensitization, voluntary transfer, routine physical examinations, veterinary treatment, and restraint.	Training is absent or causes physical/psychological harm. Training records are lacking.	Only an oral plan; no written record. Training is irregular. Training has no effect.	Written records exist but are not continuously adjusted. Training is regular and shows some effectiveness.	Written records are maintained and adjusted as needed. Individuals receive regular training and some training goals are achieved.	Written records are maintained and adjusted as needed. Individuals receive regular training; training is highly effective and goals are achieved. Individuals frequently volunteer for training or retain choice during training.
21	Behavior	Affiliative Behavior	• Does the individual show affiliative behavior indicative of good welfare? • Examples include swimming in pair and mutual flipper rubbing.	No affiliative behavior is observed at all.	No affiliative behavior is displayed during the observation period. Affiliative behavior has been observed within the past week.	Affiliative behavior is observed during the observation period.	At least one type of affiliative behavior is often observed during the observation period.	Multiple types of affiliative behavior are frequently observed during the observation period.
22	Behavior	Play Behavior	• Does the individual show play behavior indicative of good welfare? • Examples include social play, bubble-ring play, object play.	No play behavior is observed at all.	No play behavior is displayed during the observation period. Play behavior has been observed within the past week.	Play behavior is observed during the observation period.	At least one type of play behavior is often observed during the observation period.	Multiple types of play behavior are frequently observed during the observation period.
23	Behavior	Sexual Interactions and Mother–Calf Behavior	• Does the individual show socio-sexual behavior indicative of good welfare, including sexual interaction with objects? • Examples include touching or bumping involving sexual behavior or genitalia with objects, the environment, or other individuals. • Optional for nursing females/calves: Does the individual show mother–calf behavior? • Examples include echelon swimming and maternal behavior such as nursing.	No sexual interaction is observed. No mother–calf behavior is observed (optional).	No sexual interaction is observed during observation. Mother–calf behavior occurs but below expectation (optional).	Sexual interaction is observed during observation. Mother–calf behavior is observed (optional).	At least two types of sexual interaction are often observed during observation. Mother–calf behavior is observed with frequent interaction between the pair (optional).	Multiple types of sexual interaction are frequently observed. Mother–calf behavior is observed with frequent interaction (optional).
24	Behavior	Social Isolation	• Does the individual interact well with other animals, or show social isolation? • Does the individual continuously avoid specific pool areas for any reason?	Presence of other animals causes continuous avoidance of certain pool areas over the past 3 months. For an individually housed animal, management staff do not provide a dedicated interaction period each day. Continuous avoidance of specific pool areas for other reasons is also present.	Presence of other animals causes frequent avoidance of some pool areas over the past 3 months. Frequent avoidance of specific pool areas for other reasons is also present.	No social isolation is observed. For an individually housed animal, management staff provide a special daily interaction period. Occasional avoidance of specific pool areas for other reasons.	Good social interaction with other animals. No avoidance of specific pool areas.	Active and positive social interaction with other animals. No avoidance of specific pool areas.
25	Behavior	Receiving Aggression	• Is the animal attacked, or does it have new or old tooth-rake marks? Scoring is based on the percentage of body surface area affected.	Continuously attacked during observation. >30% new tooth-rake marks.	Attacked during observation. >20% new tooth-rake marks.	Not attacked during observation. 15%–20% new tooth-rake marks and old injuries >30%.	Not attacked during observation. 0%–15% new tooth-rake marks and old injuries <30%.	Not attacked during observation. No new tooth-rake marks and old injuries <20%.
26	Behavior	Abnormal Behavior	• Does the animal frequently show abnormal behavior? • Examples include oral stereotypies, repetitive circling, excessive rubbing on pool bottom, regurgitation/re-ingestion, displacement behavior. • Are improvement measures reviewed regularly?	Severe abnormal behavior causing physical injury. No improvement measures.	Abnormal behavior occurs most of the time without injury. Improvement measures exist but are not reviewed.	Abnormal behavior is frequent without injury. Improvement measures are reviewed irregularly or improvements are unclear.	Abnormal behavior occurs occasionally without injury. Improvement measures are regularly reviewed and documented, with improvement.	No abnormal behavior is observed. Improvement measures are regularly reviewed and revised, with clear improvement.
27	Mental State	Choice & Control	• Can the animal exercise choice and control? • Does the institution promote policies/management that encourage choice and control? • Examples include not forcing participation in routine activities (except necessary medical	The animal has no choice and control. The institution does not encourage relevant policies.	The animal has very little choice and control. The institution does not encourage relevant policies.	The animal has some choice and control, but only for limited periods. The institution is neutral toward implementing relevant policies.	The animal can exercise choice and control most of the time. The institution encourages relevant policies.	The animal can freely exercise choice and control. The institution actively encourages relevant policies.

			care) and providing choices in feeding, enrichment, and social interaction.					
28	Mental State	Positive Human–Animal Relationship	• Willingness to participate (WtP) when interacting with trainers or keepers, calculated as the average over the preceding 5 days.	The individual is highly withdrawn during interactions. WtP < 1.5.	The individual shows low motivation during interactions. WtP < 2.5.	The individual shows moderate motivation during interactions. 3 > WtP ≥ 2.5.	The individual shows good motivation during interactions. 3.5 > WtP ≥ 3.	The individual shows very high motivation during interactions. WtP ≥ 3.5.
29	Mental State	Emotion-related Behavior	• Does the animal show behaviors associated with positive or negative emotional states? • Does the animal show signs of stress?	Negative emotional behaviors are displayed frequently. Severe stress is present and affects physical and psychological health.	Negative emotional behaviors are displayed often. Moderate stress is present, but no physical or psychological abnormalities are evident.	Negative emotional behaviors are infrequent, and positive emotional behaviors are displayed occasionally. The animal remains calm during some periods.	Positive emotional behaviors are displayed often. The animal remains calm and relaxed for most periods.	Positive emotional behaviors are displayed frequently. The animal appears calm and relaxed.
30	Management	Animal Monitoring	• Do keepers or trainers have sufficient time to observe the animal?	No additional observation time is provided.	The animal is observed only when specific needs or instructions arise.	Time is available to observe the animal weekly or on an irregular basis	Sufficient time is available to observe the animal daily.	The animal is observed thoroughly, and the findings are used to improve routine management.

Page	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**Total**
Score	/15	/20	/20	/20	/20	/20	/15	/20	/150

Notes:

Assessor: _____ (Signature) Veterinarian: _____ (Signature) Area Supervisor: _____ (Signature)

Appendix II. Natural Cetacean Behaviors and Their Significance for Educational or Display Interpretation

Dolphin behavior is highly complex and encompasses survival, reproduction, social interaction, and interaction with the environment. At its core are the need to secure sufficient energy intake for individual and group survival [4, 9] and the expression of strong cooperative ability and problem-solving intelligence [3, 17]. In captive environments, food-based enrichment should be used to simulate natural foraging processes [4, 7, 15, 55]. Four major categories of behavior are described below.

A. Foraging/Hunting Behavior

Dolphins are opportunistic predators with broad diets, feeding primarily on fish, squid, and crustaceans [4]. They use multiple hunting strategies:

1. Individual pursuit: An individual dolphin chases prey using high swimming speed and maneuverability.
2. Cooperative hunting: Dolphin groups exhibit highly coordinated hunting behavior, including:

(1) Herding—A group of dolphins surrounds a school of fish, drives it into a tightly packed ball, and takes turns rushing in to capture prey [5, 66].

(2) Tail slapping/flick-feeding—Dolphins strike the water forcefully with their tail flukes, generating waves or impact forces that may stun fish or cause them to aggregate [1].

(3) Mud ring feeding—Certain dolphin species, such as bottlenose dolphins, create rings of mud on the seafloor to trap schools of fish before entering the ring to capture prey.

B. Social Behavior

Dolphins are highly social animals living in complex fission–fusion societies in which membership changes according to needs and resources. Maintaining group cohesion [4, 6, 60], establishing social hierarchy [52], learning and transmitting life skills, achieving reproductive success [20], and ensuring calf survival [20, 60] are important tasks of their lives and are supported by the following behaviors:

1. Touching and rubbing: Dolphins rub their bodies against one another as a means of bonding, strengthening social relationships, and cleaning the skin [13, 18, 46, 60, 62].
2. Play: Chasing, playful interactions, tossing objects such as seaweed or small fish, and even producing bubble rings. Such behavior strengthens social bonds, development of social skills, and energy release [3, 6, 23, 37].
3. Alloparenting: Non-pregnant female dolphins may help care for calves and protect them from danger (Dave Neale, n.d.).
4. Aggression and dominance: Although less common, dominance-related behaviors such as chasing, biting, or ramming may occur when establishing social hierarchy or competing for resources or mates [10, 35, 53, 68].

C. Communication Behavior

Dolphins possess highly developed communication systems that rely primarily on vocalizations and body language. These systems help maintain group contact [15], coordinate hunting [8, 24], support navigation [2, 8, 24], warn of danger [45], express emotion [11, 12, 13, 40, 69, 71], and establish

individual identity [63]. The complexity of dolphin "language" reflects their advanced cognitive ability [34, 37].

1. Vocalizations (whistles, clicks, and pulsed sounds)
   (1) Whistles: Each dolphin has a distinctive "signature whistle," which can serve as an identifying cue for individual recognition. Whistles may also convey emotional states, such as excitement or distress, and help coordinate activities [25, 56, 63, 70].
   (2) Clicks: Primarily used for sonar or echolocation. Dolphins emit high-frequency sounds to detect their surroundings, locate prey, and navigate [2, 24, 26, 63].
   (3) Pulsed sounds: Used for close-range communication and may convey more complex information. For example, an open-mouth expression during play may be accompanied by particular pulsed sounds [45, 63].
2. Body language
   (1) Tail/fluke slapping: Striking the water with the tail flukes or pectoral fins may signal warning, excitement, courtship, or feeding activity [8, 57, 64, 68].
   (2) Breaching/leaping: The body leaves the water and lands forcefully. This behavior may serve communicative purposes, such as long-distance signaling, removal of parasites, territorial signaling, or simply play [8, 37].
   (3) Spy hopping: Raising the head above the water to inspect the surroundings, usually to observe objects or events above the surface [12, 25, 55].

D. Resting/Sleeping Behavior

Dolphins are air-breathing mammals, but their oceanic habitat requires a sleep pattern different from that of terrestrial mammals. Sleep allows the brain to rest [8] and recover [44] while maintaining respiration and environmental vigilance to reduce the risk of drowning or predation [22]. Three major states are described below:

1. Unihemispheric sleep: During sleep, only one cerebral hemisphere enters a sleep state while the other remains awake; the eye opposite the awake hemisphere remains open. This allows cetaceans to remain vigilant while resting, detect predators or conspecifics, and surface to breathe [32, 33, 41, 50, 61].
2. Logging: Dolphins may float together at the surface in either a vertical or horizontal posture, drifting slowly like logs [8, 10, 54].
3. Slow swimming: During rest, dolphins may swim very slowly while engaging in unihemispheric sleep [8, 13, 22], allowing rest while remaining in motion.

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