maux et Compagnies. This paper reflects the views of the scientists, and not the company. Thus, the authors declare no conflicts of interest.

Appendix A. The Dolphin-WET Matrix

Nutrition
Absence of prolonged hunger or thirst
Correct amount of food eaten

Indicator	Validation	Scoring description	Score
Body condition score (BCS)	Peer review	BCS of 3 = adequate	0
		BCS of 2 (underweight) or 4 (overweight)	1
		BCS of 1 (emaciated) or 5 (obese)	2
Weight oscillation throughout the year	Management-based expertise	Body weight oscillation (BWOS): ≤13% throughout the year or ≤5% in a 3-month period	0
		BWOS: >13% throughout the year or >5% in a 3-month period	2

Adequate diet
All water and nutritional requirements are covered

Indicator	Validation	Scoring description	Score
Kilocalories	Standards and Guidelines	Diet designed based on the EAAM Standards and Guidelines	0
		Diet not designed based on the EAAM Standards and Guidelines	2
Blood parameters for adequate hydration	Peer review	Within the range	0
		10% out of range	1
		>10% out of range	2

Adequate food quality
Analysis of fish and shelf life

Indicator	Validation	Scoring description	Score
Food quality, microbiology, physicochemical analysis	Standards and Guidelines	Fulfilled according to the EAAM Standards and Guidelines	0
		Not fulfilled according to the EAAM Standards and Guidelines	2

Adequate food variety
Adequate alimentary variability

Indicator	Validation	Scoring description	Score
Food variety throughout the year	Management-based expertise	At least five species are fed throughout the year, each individual's diet is adapted to its nutritional needs and preferences, the amount of food fed varies between sessions, and part of the diet is given via enrichment	0
		At least three, but no more than five, species are fed throughout the year, each individual's diet is adapted to its nutritional needs, but the amount of food provided to the dolphins during each session is the same, and favourite species/animal preferences are neglected	1
		Only three or less species of food are fed throughout the year, no variation throughout the year, and diet is not adapted to individual preferences/specific need	2

Environment
Safe environment
Health-related safe environmental design

Indicator	Validation	Scoring description	Score
Enclosure and barrier safety and maintenance	Standards and Guidelines	All criteria are met according to the EAAM Standards and Guidelines (see Section 5)	0
		At least one criterion is not met according to the EAAM Standards and Guidelines (see Section 5)	2
No foreign body ingestion		Absence in records	0
		Presence in records (last 3 months)	2

Adequate spatial requirements and pool complexity
Possibility to freely move between areas, resting place, and engaging environment
Possibility to perform desired behaviours, including fast swimming, jumping, social behaviours, and synchronised behaviour
Possibility of escaping from conspecifics

Indicator	Validation	Scoring description	Score
Pool dimension, pool design, number of pools, available access to pools, and group management	Standards and Guidelines	All criteria are met according to the EAAM Standards and Guidelines (see Section 5)	0
		At least one criterion is not met according to the EAAM Standards and Guidelines (see Section 5)	2

Social management
Evidence of forced loneliness

Indicator	Validation	Scoring description	Score
Absence of forced loneliness based on records/ trainer interviews		Dolphin was not separated or only separated during medical emergencies or for research purposes for short periods of time (<1 h/day) during the last 3 months	0
		Dolphin was separated for longer periods of time (>1 h/day) during the last 3 months	2

Water quality
Adequate water pH
Adequate water oxidation reduction potential (ORP) levels
Absence of toxic water levels of total chlorine, free chlorine, and combined chlorine
Absence of abnormal water levels of coliforms
Absence of abnormal water levels of Escherichia coli
Adequate salinity

Indicator	Validation	Scoring description	Score
Water quality parameters	Standards and Guidelines	All criteria are met according to Section 9 of the EAAM Standards and Guidelines	0
		At least one criterion is not met according to Section 9 of the EAAM Standards and Guidelines	2

Temperature
Adequate water temperature

Indicator	Validation	Scoring description	Score
Water temperature levels	Standards and Guidelines	All criteria are met according to Section 9 of the EAAM Standards and Guidelines	0
		At least one criterion is not met according Section 9 of to the EAAM Standards and Guidelines	2

Ambient light

Presence of/access to shaded areas

Indicator	Validation	Scoring description	Score
Sufficient shade provided and accessible in case it is needed	Standards and Guidelines	All criteria are met according to Section 5 of the EAAM Standards and Guidelines	0
		At least one criterion is not met according to Section 5 of the EAAM Standards and Guidelines	2

Absence of light-reflecting colours for pool walls

Indicator	Validation	Scoring description	Score
Absence of reflecting colours	Standards and Guidelines	All criteria are met according to Section 5 of the EAAM Standards and Guidelines	0
		At least one criterion is not met according Section 5 of to the EAAM Standards and Guidelines	2

Ambient noise

Adequate degree of underwater noise

Indicator	Validation	Scoring description	Score
40dB above hearing threshold [1]	Management-based experience	No noise above the 40 dB hearing threshold for more than 1 min/day	0
		Noise above the 40 dB hearing threshold for more than 1 min/day	2

[1] Based on the German "Gutachten über die Mindestanforderungen an die Haltung von Säugetieren" (BMEL, 2014).

Health
Absence of diseases
Correct locomotion

Indicator	Validation	Scoring description	Score
Normal floatability and displacement movement test	Peer review	Verification of normal movements	0
		Evidence of any locomotive/floating abnormalities	2
Records on previous incidents/diseases altering locomotion or floatability	Peer review	Absence of any locomotive/floating abnormalities in records	0
		Evidence of any locomotive/floating abnormalities in records	2

Eye lesions

Indicator	Validation	Scoring description	Score
Direct veterinary inspection	Peer review	Absence of active eye lesions	0
		Presence of active eye lesions	2
Normal responses in both eyes to visual cues	Peer review	Normal response	0
		Evidence of any abnormalities	2

		Gastrointestinal tract diseases	
Records on previous eye lesions/incidents/diseases	Peer review	Absence of previous incidents in records during the last 3 months	0
		Evidence of previous incidents in the records during the last 3 months	2

		Mouth condition (teeth, tongue, and mucosa)	
Indicator	Validation	Scoring description	Score
Direct physical exam of mouth	Peer review	Absence of oral lesions or painful areas in the mouth (including teeth) based on direct physical exam	0
		Presence of oral lesions or painful areas in the mouth (including teeth) based on direct physical exam	2
Records on previous dental or oral lesions	Peer review	Absence of previous incidents in the records during the last 3 months	0
		Evidence of previous incidents in the records during the last 3 months	2
Indicator	Validation	Scoring description	Score
Records of previous gastric/faecal abnormalities	Peer review	Absence of previous incidents in the records during the last 3 months	0
		Evidence of previous incidents in the records during the last 3 months	2

		Respiratory diseases	
Indicator	Validation	Scoring description	Score
Direct physical exam including blowhole visual evaluation and respiration performance	Peer review	Absence of any signs or evidence of respiratory disease during direct physical exam	0
		Presence or signs of respiratory disease during direct physical exam	2
Forced expiration test	Peer review	Absence of abnormalities	0
		Evidence of any abnormalities	2
Records on previous respiratory lesions/incidents/diseases	Peer review	Absence of previous incidents in the records during the last 3 months	0
		Evidence of previous incidents in the records during the last 3 months	2

		Generic/systemic/other diseases	
Indicator	Validation	Scoring description	Score

Direct physical exam	Peer review	Absence of external active signs of disease on skin or other natural openings on direct physical exam including global skin condition (colour, number and severity of viral lesions, major wounds, cracking, relative desquamation, scars, thermal ischemic necrosis, etc., excluding rake marks), genital slit (exudates, mucosal colour, and mucosal lesions), ears (exudates, pain to touch, and bulging), and rostrum (wounds and callosity)	0
		Presence of external active signs of disease on skin or other natural openings on direct physical exam including global skin condition (colour, number and severity of viral lesions, major wounds, cracking, relative desquamation, scars, thermal ischemic necrosis, etc., excluding rake marks), genital slit (exudates, mucosal colour, and mucosal lesions), ears (exudates, pain to touch, and bulging), and rostrum (wounds and callosity)	2
Records (complete blood work [2])	Peer review	Absence of previous signs/diseases in the records during the last 3 months	0
		Evidence of previous signs/diseases in the records during the last 3 months	2

[2] Including complete haematology, biochemistry, erythrocyte sedimentation rate, and fibrinogen determinations, as well as inflammatory markers (total white blood cell count, white blood cell differential count, band neutrophils (%), reticulocytes (%), haemoglobin, alkaline phosphatase, albumin, fibrinogen, and iron), biological data, or complementary diagnostic techniques (ultrasound, radiography, endoscopy, thermography, computed tomography scan, microbiology, hormonal analysis, molecular techniques, etc.).

Behaviour
Display of important behaviours that reflect a positive welfare state
Display of exploratory behaviour

Indicator	Validation	Scoring description	Score
Adequate environmental enrichment programme inducing exploratory behaviour	Peer review	Presence of an enrichment programme according to the EAAM Standards and Guidelines and display of exploratory behaviours	0
		Presence of an enrichment programme according to the EAAM Standards and Guidelines, but no display of exploratory behaviour	1
		No enrichment programme	2

Display of affiliative behaviour, play, or socio-sexual behaviour

Indicator	Validation	Scoring description	Score
Affiliative behaviour	Peer review	Dolphin displays affiliative behaviours (e.g., pair swimming, flipper rubbing, etc.) during observations	0
		Dolphin does not display affiliative behaviours (e.g., pair swimming, flipper rubbing, etc.) during observations	2
Play behaviour	Peer review	Dolphin displays play behaviour (social play, bubble ring play, object play, etc.) during observations	0
		Dolphin does not display play behaviour (social play, bubble ring play, object play, etc.) during observations	2

| Socio-sexual behaviour | Peer review | Dolphin displays socio-sexual interactions (petting, goosing, etc.) during observations | 0 |
| | | Dolphin does not display socio-sexual interactions (petting, goosing, etc.) during observations | 2 |

Display of maternal behaviour when justified

| Maternal behaviour | Peer review | Display of appropriate maternal behaviour towards the calf (echelon swimming, nursing, etc.) | 0 |
| | | Absence of appropriate maternal behaviour towards the calf | 2 |

Absence of abnormal behaviours/behaviours indicative of poor welfare
Absence of repetitive abnormal behaviours

Indicator	Validation	Scoring description	Score
Displacement behaviour (∗3)	Peer review	Dolphin does not display this behaviour during the last 3 months based on trainer interviews	0
		Dolphin displays the behaviour	2
Oral stereotypic behaviour	Peer review	Dolphin does not display oral stereotypic behaviour (e.g., chewing on gates, hoses, and toys)	0
		Dolphin displays oral stereotypic behaviour	2
Repetitive body movement	Peer review	Dolphin does not display this behaviour (e.g., circling)	0
		Dolphin displays the behaviour	2
Frequent, repetitive, and intense self-grooming behaviour	Peer review	Dolphin does not display frequent, repetitive, and intense self-grooming	0
		Dolphin displays frequent, repetitive, and intense self-grooming (e.g., excessive bottom rubbing)	2
Regurgitation/Reingestion	Peer review	Dolphin does not regurgitate	0
		Dolphin regurgitates	2

Absence of receiving aggressive behaviours, causing negative consequences

Indicator	Validation	Scoring description	Score
Receiving aggressive behaviour		Dolphin does not receive aggressive behaviour (e.g., biting, hitting, and slapping) during observations	0
		Dolphin receives aggressive behaviour (e.g., biting, hitting, and slapping) during observations	2
Rake marks (social-related marks)	Peer review	0%–15% new rake marks and < 30% old wounds	0
		15%–20% new rake marks and > 30% old wounds	1
		> 20% new rake marks	2

Absence of displaying aggressive behaviours, causing negative consequences

Indicator	Validation	Scoring description	Score
Displaying aggressive behaviour	Peer review	Dolphin does not display aggressive behaviour (e.g., biting, hitting, and slapping) during observations	0
		Dolphin displays frequent, repetitive, and intense aggressive behaviour (e.g., biting, hitting, and slapping) during observations	2

Evidence of avoidance of certain pool regions

Evidence of social isolation

Indicator	Validation	Scoring description	Score
Social isolation		Absence of social isolation during the last 3 months based on trainer interviews	0
		Presence of other animals lead to avoidance of certain pool areas during the last 3 months based on trainer interviews	2

Indicator	Validation	Scoring description	Score
Avoidance of pool areas		Absence of active avoidance of certain pool areas during the last three months	0
		Dolphin **avoids** certain pool areas on a consistent basis	2

[*3] Displacement behaviour includes self-directed behaviours displayed when an animal has a conflict between two motivations—for example, the desire to approach an object while at the same time being fearful of that object.

Mental state
Positive human–animal relationship
Positive animal–trainer relationship
Positive animal–visitor relationship

Indicator	Validation	Scoring description	Score
Willingness to participate (WtP)	Peer review	Average WtP over 5 days (same days as behavioural observations) is ≥2.5	0
		Average WtP over 5 days (same days as behavioural observations) is <2.5	2

Behaviours linked to positive affective states
Evidence of behaviours indicating positive mental state

Indicator	Validation	Scoring description	Score
Slow synchronous swimming, slow contact swimming, slow circular swimming	Peer review	Dolphin displays slow synchronous swimming, slow contact swimming, and slow circular swimming during observations	0
		Dolphin does not display slow synchronous swimming, slow contact swimming, and slow circular swimming during observations	2
Gentle rubbing behaviour	Peer review	Dolphin displays gentle rubbing behaviours during observations	0
		Dolphin does not display gentle rubbing behaviours during observations	2
Anticipatory behaviour	Peer review	Dolphin displays anticipatory behaviour during observations	0
		Dolphin does not display anticipatory behaviour or displays intense and long-lasting anticipatory behaviour during observations	2

Swimming behaviours linked to negative affective states
Evidence of behaviours indicating negative mental state

Indicator	Validation	Scoring description	Score
High frequency of fast swimming behaviour	Peer review	Dolphin does not exhibit high frequencies of fast swimming behaviour during observations	0
		Dolphin exhibits high frequencies of fast swimming behaviour during observations	2

| Intense and repetitive tail slapping behaviour | Peer review | Dolphin does not display intense and repetitive tail slapping behaviour during observations | 0 |
| | | Dolphin displays intense and repetitive tail slapping behaviour during observations | 2 |

Abilities of environmental choice and control
Environmental choice and control

Indicator	Validation	Scoring description	Score
Evaluation of choice and control based on trainer survey	Peer review	Facility promotes policies or management favouring choice and control, not forcing the animal towards any type of participation in any regular activity except for medical purposes as needed.Choice is promoted in other daily care activities such as feeding, enrichment, or companionship	0
		Facility does not promote policies or management favouring choice and control, not forcing the animal towards any type of participation in any regular activity except for medical purposes as needed. Choice is not promoted in other daily care activities such as feeding, enrichment, or companionship.	2

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