



Solitary Elephants in Japan:

Still Alone –
A Current Assessment





Elephants in Japan

In Memory of Hanako

Elephants in Japan: In Memory of Hanako

info@elephantsinjapan.com

www.elephantsinjapan.com

1 (669) 268-8405 (ph)



Zoocheck Inc.

zoocheck@zoocheck.com

www.zoocheck.com

1 (416) 285-1744 (ph)

FOREWORD

Nearly a decade has passed since the original Solitary Elephants in Japan report was released in 2017. That report brought international attention to the lives of elephants held alone in Japanese zoos and raised serious concerns about the welfare impacts of social isolation, inadequate environments, and outdated management practices.

Since then, public awareness regarding the welfare of elephants in captivity has continued to grow, both internationally and within Japan. The Japanese Association of Zoos and Aquariums (JAZA) introduced new elephant management guidelines in 2021, reflecting broader recognition that elephants are highly social, intelligent animals with complex physical and behavioral needs. Since then, some facilities have made limited changes and discussions around welfare have become more visible.

And yet, many of the elephants remain alone.

This updated report, *Solitary Elephants in Japan: Still Alone — A Current Assessment*, revisits the issue to examine what has changed for solitary elephants in Japan and what has not.

The findings show that many of the core concerns identified in 2017 persist today. Across facilities assessed, elephants continue to live in environments that often provide limited space, little environmental complexity, inadequate substrates, restricted opportunities for natural behavior, and little or no meaningful social interaction. Stereotypic behaviors and other signs of compromised welfare remain common.

At the same time, international understanding of elephant welfare has continued to evolve. There is broader recognition that elephants require not only physical space, but also stimulation, autonomy, social opportunity, and environments that allow them to express species-typical behaviors. Increasingly, zoos around the world are being forced to confront whether traditional models of elephant captivity, even in the best circumstances, can adequately meet these needs.

Japan now stands at an important point of transition. Awareness of elephant welfare in captivity has grown in recent years, and conversations around the keeping of solitary elephants are more visible today than they were when the original report was published. Since 2017, some Japanese zoos have phased out elephant exhibits entirely, while others have explored new collaborations, enclosure changes, and updated management approaches. Political discussion around animal welfare in Japan has also become more visible, alongside growing public engagement with wildlife welfare and other animal welfare issues.

At the same time, meaningful progress will require stronger standards and continued discussions between zoos, policymakers, welfare experts, and the public. It will also require sustained dialogue and collaboration within Japan itself to ensure that welfare improvements are both impactful and lasting.

It is our hope that this report contributes constructively to that ongoing dialogue and helps support continued momentum toward better outcomes for elephants currently living in Japanese zoos.

Elephants in Japan & Zoocheck



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REPORT AUTHOR

Georgina Groves

ANIMAL WELFARE CONSULTANT

Georgina Groves has worked in the field of animal welfare for over two decades, with the past 15 years focused primarily on improving the welfare of captive wild animals, particularly within the global zoo sector. Her roles have included serving as a zoo biologist for the British and Irish Association of Zoos and Aquariums (BIAZA) and co-founding Wild Welfare, an organisation dedicated to advancing the welfare of captive wild animals.

Georgina has worked closely with global zoo organisations including the World Association of Zoos and Aquaria (WAZA) and the Southeast Asian Zoos Association (SEAZA). Through these collaborations, she has played a key role in developing welfare standards, auditing methodologies, and welfare accreditation frameworks.

Much of her work has focused on regions and institutions where welfare standards and regulatory frameworks are limited, supporting the development of robust welfare practices. She has delivered numerous international training workshops to build capacity in animal welfare across zoos, sanctuaries, and government facilities.

Georgina is currently an animal welfare consultant and holds several advisory and leadership roles, including being a member of the UK Government, Zoo Expert Committee and the ZSL Animal Welfare and Ethics Committee, Chair of Crustacean Compassion and advisor to various animal welfare NGOs.



BACKGROUND

This report presents an updated assessment of the living conditions of solitary elephants in Japanese zoos, building on the findings of the 2017 report from Elephants in Japan^[1] and Zoocheck by Dr Keith Lindsay. The current study revisits some of the same zoos examined previously to evaluate the current conditions and if there are any changes in housing, husbandry, or other welfare-related conditions. It also incorporates additional field observations and web-based research to document elephants not directly visited, providing an up-to-date overview of the status of solitary elephants in captivity across Japan, 2025.

In 2017, an investigation surveyed fourteen zoological institutions holding solitary elephants across Japan, revealing consistent outdated enclosure infrastructure, extremely limited spaces and poor management practices that are inconsistent with international best practice standards. This report highlighted the challenges of keeping highly social, cognitively complex animals in captivity and isolation.

Internationally, zoo standards have improved in the past few decades, although they remain hindered by culture, capacity and tolerance of the various zoo association institutions to meet them.^[1] However, many zoos have moved away from the keeping of solitary elephants, recognising the intrinsic social nature of the species and the difficulty of replicating adequate positive conditions for a single individual animal. The 2017 report called for change within Japanese zoos, in line with evolving global standards in elephant husbandry such as the UK Secretary of State's Standards of Modern Zoo Practice Appendix 8 – Specialist exhibits, Elephants^[2], that emphasises the need for appropriate and meaningful space, environmental complexity, social opportunity, and behavioral autonomy.

Since the previous report, the Japanese Association of Zoos and Aquariums (JAZA) created the elephant standards “Appropriate facility guidelines, Asian elephant *Elephas maximus*” March 2021. These guidelines are not mandatory for members and outline conditions required for elephants.

It recognises that elephants are social animals and need space to encourage natural behavioral interactions. It also states specific enclosure size requirements, temperature and ventilation needs, lighting, noise and vibration, substrate needs, facility safety and indoor design. A more detailed description of the standards can be found on Elephants in Japan website.^[3]

[1] https://elephantsinjapan.com/wp-content/uploads/2017/08/EIJ_Final_report_ENG_web.pdf

[2] <https://assets.publishing.service.gov.uk/media/5a81f6ec40f0b62305b91c0e/zoo-practice-elephants.pdf>

[3] <https://elephantsinjapan.com/what-you-need-to-know-japanese-zoo-guidelines-for-elephants/>

PURPOSE

The primary purpose of this 2025 assessment is to report on the conditions for solitary elephants currently held in Japanese zoos since the previous report in 2017. It is believed that there are now twelve facilities holding solitary elephants in Japan – two of these facilities hold two elephants but they are held separately. A historic list of solitary elephants, species, the zoos they are held in, whether they are a Japanese Association of Zoos and Aquariums (JAZA) member and if they were previously assessed, is found in Table 1. The previous assessment included a visual estimate of the elephants' enclosures as detailed in the report. It also included a visual assessment of the elephant's physiological and behavioral state. It also included the forms of management and husbandry practiced, but engaging with staff to solicit information was opportunistic as was viewing the indoor areas of the elephant enclosures.

SCOPE AND METHODOLOGY

This follow-up assessment was conducted in October 2025, encompassing on-site observations at nine zoological institutions housing a total of eleven elephants. These were both Japanese Association of Zoos and Aquariums (JAZA) and non-JAZA members. In two facilities, more than one elephant was present, but held separately. Each facility and elephant assessment followed a structured observational framework based in part on the JAZA Asian Elephant Guidelines, 2021 as well as mirroring the approach and parameters assessed in the previous 2017 assessment. While the Asian Elephant Guidelines are not mandatory for either JAZA or non-JAZA members and do not represent high, evidence-based best practice standards, they were considered an appropriate framework for visual evaluation. This approach allowed assessment of whether the zoos were meeting these nationally defined benchmarks, with the understanding that failure to meet even these baseline standards would indicate a significant welfare concern.

The assessment framework included visual records of the following parameters:

- Outdoor enclosure size and design including substrate and other terrain use (JAZA Asian Elephant Guidelines 2021)
- Outdoor environmental parameters including temperature (JAZA Asian Elephant Guidelines 2021)
- The indoor enclosure size and design including substrate use. (JAZA Asian Elephant Guidelines 2021)
- Outdoor environmental parameters including temperature, lighting, ventilation, humidity and sound. (JAZA Asian Elephant Guidelines 2021)

- Safety practices (fences, electric fencing and moat use) (JAZA Asian Elephant Guidelines 2021)
- Pool availability and size (JAZA Asian Elephant Guidelines 2021)
- Shade and shelter outside (JAZA Asian Elephant Guidelines 2021)

In addition:

- Feeding and dietary opportunities
- The elephant's physical and behavioral health at time of observation
- Where feasible, the management style of the elephants (protected or free contact, animal show use and training methods used)
- The educational material available to the public.

The assessment qualified whether the parameter, a) Met the identified standard, b) Needed Improvement or was c) Non-Compliant. Each parameter had a written qualification to justify the record given. Where a parameter was not able to be assessed, it was marked as "Not Known". A template example of the assessment used is found in Appendix A. In total, 34 parameters were assessed at each facility and for each elephant. 8 environmental, 2 outdoor space, 2 indoor space, 2 safety outdoors, 3 safety indoors, 5 environmental features, 3 nutrition, 4 management, 3 health, 1 behavior and 1 education parameters.

The assessor was accompanied by a Japanese speaker for 7 of the zoos visited, who was able to translate signage and other materials, while also, when possible, having discussions with keepers and/or staff to clarify aspects of elephant management and animal history. Each facility and elephant was observed for approximately 1-2 hours. Body condition scoring and foot health scoring utilized published qualifying methodology^{[4][5][6]}. Enclosure sizes were identified using Google Earth and measurement tools. If the enclosure was the same as the previous report, the sizes were not re-measured. Some limitations should be noted in interpreting the assessment findings. The observations represent single-visit assessments, and therefore seasonal or managerial variations may influence outcomes. Scoring discretion was applied in cases where direct measurement was not feasible and the precautionary principle was applied. In some instances, facility access was restricted, particularly to indoor spaces, which limited the ability to fully evaluate these spaces effectively. Foot health scoring

[4] Morfeld, K. A., Meehan, C. L., Hogan, J. N., & Brown, J. L. (2016). Assessment of body condition in African (*Loxodonta africana*) and Asian (*Elephas maximus*) elephants in North American zoos and management practices associated with high body condition scores. *PloS one*, 11(7), e0155146.

[5] Morfeld, K. A., Lehnhardt, J., Alligood, C., Bolling, J., & Brown, J. L. (2014). Development of a body condition scoring index for female African elephants validated by ultrasound measurements of subcutaneous fat. *PloS one*, 9(4), e93802.

[6] Benz, A. (2005). The elephant's hoof: macroscopic and microscopic morphology of defined locations under consideration of pathological changes (Doctoral dissertation, University of Zurich).

was harder to qualify due to sometimes not being able to view the foot and horn health up close, or because the elephant did not move during observation. Mac and Zuze from Kobe Oji Zoo were assessed under one assessment, as while there were some minor differences in management and enclosure (enclosure sizes and infrastructure differences were noted), it was considered minimal. Choi from Miyazaki City Phoenix Zoo was not observed as he was shut inside at time of observation, so only Midori was assessed, but the author is confident that Choi would experience similar management and care provisions (however is not used for riding/sit on photo opportunities, so it is not clear if he would be protected or free-contact managed).



CHANGES TO FACILITY AND ELEPHANT NUMBERS SINCE 2017 REPORT

The 2017 report assessed fourteen facilities in Japan. An update by Elephants in Japan shared that a number of elephants had died since the report; Hanako/Hana at Fukuoka City Zoo, Izumi at Kiryugaoka Zoo, Hiroko at Tennoji Zoo, Himeko at Himeji City Zoo, Mary at Tokushima City Zoo and Hamako at Hamamatsu City Zoo. There are now twelve facilities with solitary elephants. Fuku-chan from Fukuyama City Zoo was not included in this report as she has tuberculosis and cannot be moved / another elephant cannot join her.

TABLE 1: ZOOS THAT ARE CURRENTLY OR HAVE PREVIOUSLY HELD SOLITARY ELEPHANTS IN JAPAN

	Elephant	Species	Zoo	JAZA Member	Assessed 2017 report	Housing Type Assessed	Sex	Approx DOB	Information
1	Dumbo	Asian	Nihondaira Zoo	✓	X	Indoor/outdoor	F	1966	Solitary since death of companion Shanti in 2022.
2	Lala	African	Tohoku Safari Park	X	X	Outdoor, limited indoor	F	1982	Solitary since death of companion Sunny Boy in 2018.
3	Patra	African	Shirotori Zoo	X	X	Indoor/outdoor	F	1986	Arrived on June 2, 1985 approx. 3 years old.
4	Fuko	Asian	Chausuyama Zoo	✓	✓	Indoor/outdoor	F	1978	Solitary since death of companion Dumbo (M) in 2008.
5	Hanako	African	Omoriyama Zoo	✓	X	Indoor/outdoor	F	1989	Solitary upon return from Yagiyama Zoological Park in 2024. Male companion died 2021.
6	Mac	Asian	Kobe Oji Zoo	✓	✓	Indoor/outdoor	M	1992	Separated from Zuze; housed separately at the same zoo.
7	Zuze	Asian	Kobe Oji Zoo	✓	✓	Indoor/outdoor	F	1990	Separated from Mac; housed separately at the same zoo.
8	Mao	African	Morioka Zoo	✓	X	Indoor/outdoor	F	2002	Solitary since death of companion Tarou in 2018.

	Elephant	Species	Zoo	JAZA Member	Assessed 2017 report	Housing Type Assessed	Sex	Approx DOB	Information
9	Midori	Asian	Miyazaki City Phoenix Zoo	✓	X	Outdoor only during observation	F	2000	Solitary since death of companion Taiyo in 2014; sent to Kobe Oji Zoo 2018–2019 for breeding with Mac; currently used for rides and performances.
10	Choi	Asian	Miyazaki City Phoenix Zoo	✓	X	No Observation as shut indoors	M	2013	Arrived from Kyushu Natural Animal Park (African Safari) in December 2023 for breeding purposes with Midori.
11	Miyako	Asian	Utsunomiya Zoo	✓	✓	Indoor/outdoor	F	1973	
12	Sunny	Asian	Nomi Ishikawa Zoo (was closed on day of intended visit)	✓	✓	Not visited	F	1979	Taken off display March 2025 due to health issues; when re-introduced, a sign asked visitors to remain quiet.
13	Teru	Asian	Yuki Park Zoo	X	✓	Not visited	F	1978	Zoo closed for renovations until 2027; Teru remains on site.
14	Fuku-chan	Asian	Fukuyama City Zoo	✓	✓	Not visited (has Tb)	F	1998	Has tuberculosis (TB); cannot be moved or joined with another elephant
15	Fujiko	Asian	Okazakishi Higashi Park Zoo	✓	X	Died	F	1968	Died July 2025, aged 57.

	Elephant	Species	Zoo	JAZA Member	Assessed 2017 report	Housing Type Assessed	Sex	Approx DOB	Information
16	Hanako/ Hana	Asian	Fukuoka City Zoo	✓	✓	Died	F	NA	Died 2017 from foot-related illness. Enclosure refurbished; four elephants imported from Myanmar (July 2024). A 12-year-old female from this group died of/suspected EEHV on Sept 10, 2024, before public debut.
17	Izumi	Asian	Kiryugaoka Zoo	✓	✓	Died	F	NA	Died 2017, aged 61, due to inability to stand.
18	Hiroko	Asian	Tennoji Zoo	✓	✓	Under reconstruction	F	1969	Died 2018, aged 48, due to leg or foot issues; disturbing video posted by zoo four years later showing her final days.
19	Himeko	Asian	Himeji City Zoo	✓	✓	Died	F	1977	Died 2020
20	Merry	Asian	Ikeda Zoo	✓	✓	Died	F	1965	Died 2016 due to foot related issues. Elephant exhibit permanently closed.
21	Mary	Asian	Tokushima City Zoo	✓	✓	Died	F	1990	Died 2021
22	Hamako	Asian	Hamamatsu City Zoo	✓	✓	Died	F	1971	Died 2022

TABLE 2: FACILITIES AND ELEPHANTS ASSESSED IN 2025

	Elephant	Species	Zoo	JAZA Member	Assessed 2017 report	Visited	Sex
1	Dumbo	Asian	Nihondaira Zoo	✓	X	✓	F
2	Lala	African	Tohoku Safari Park	X	X	✓	F
3	Patra	African	Shirotori Zoo	X	X	✓	F
4	Fuko	Asian	Chausuyama Zoo	✓	✓	✓	F
5	Hanako	African	Omoriyama Zoo	✓	X	✓	F
6	Mac	Asian	Kobe Oji Zoo	✓	✓	✓	M
6	Zuze	Asian	Kobe Oji Zoo	✓	✓	✓	F
7	Mao	African	Morioka Zoo	✓	X	✓	F
8	Midori	Asian	Miyazaki City Phoenix Zoo	✓	X	✓	F
8	Choi	Asian	Miyazaki City Phoenix Zoo	✓	X	✓	M
9	Miyako	Asian	Utsunomiya Zoo	✓	✓	✓	F
10	Sunny	Asian	Nomi Ishikawa Zoo (was closed on day of intended visit)	✓	✓	X. Assessed online	F
11	Teru	Asian	Yuki Park Zoo (Closed to public due to renovations)	X	✓	X. Assessed online	F

RESULTS

Individual assessment results for each elephant visited, can be found in Appendix B and a summary is tabulated in table 4.

TABLE 3: INDIVIDUAL ELEPHANT ASSESSMENT SCORES

Elephant	Standards Met	Needs Improvement	Non-Compliant	Not Assessed
Hanako	13	7	10	4
Dumbo	9	10	10	5
Fuko	8	6	14	6
Mac & Zuze	10	5	15	4
Mao	13	4	10	7
Lala	5	1	18	10
Midori & Choi	5	3	13	13
Miyako	5	5	16	8
Patra	5	8	14	7

GRAPH 1: ASSESSMENT OUTCOMES FOR EACH ELEPHANT ASSESSED

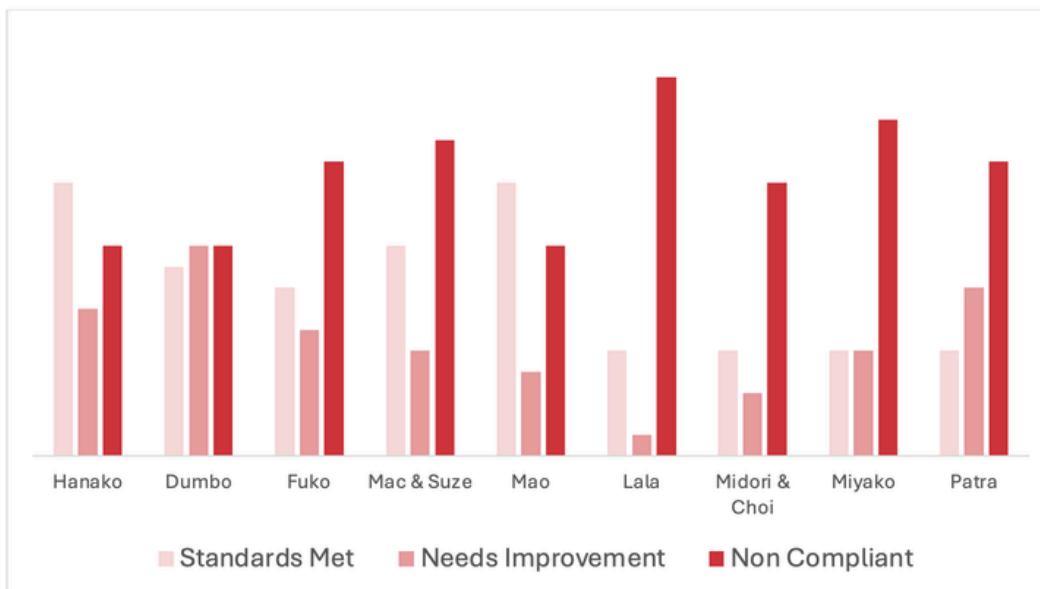


TABLE 4: SUMMARY OF INFORMATION ON THE PARAMETER CONDITIONS AT THE SURVEYED ZOOS

Elephant	Flooring	Protected Contact & Training	Show	Enrichment	Pool	Pool size	Barriers & Safety	Food & Water	Health	Behavior
Dumbo	Concrete indoor, some sand outdoor	Protected contact; likely +RT	No	Few present but unused by staff	Yes	33m ²	Moat & electric fencing	Minimal hay; no separate water	No obvious injuries	Pacing
Fuko	Mostly shallow soil on top of concrete	Likely free contact	No	None observed	Yes	Empty	Moat, shrub & electric fencing	Limited browse; no water seen	Not fully assessed	Pacing
Hanako	Concrete inside, outside - mix of concrete around the outside and in the middle was a large wet mud	Semi-protected	No	Minimal	Yes	62m ²	Moat & electric fencing	Minimal food; water from pool	Trunk injury history	Repetitive walking
Lala	Outdoor concrete some minimal dirt soil	Unknown	No	None	No	NA	Barrier sufficient public access unsafe	Public feeding only	Overweight	Anticipatory behavior (for food)
Mac	Concrete indoor; sand outdoor	Likely protected contact	No	Tyres	No	NA	Moat	Hay, browse	Foot deformities	Eating at time of observation
Zuze	Concrete indoor; sand outdoor	Free contact	No	Tyres	No	NA	Moat	Hay, browse	Foot concerns	Eating at time of observation
Mao	Concrete indoor; mix of substrates outdoor	Unknown	No	Old toys	Yes	~20m ²	Moat & electric fencing	Limited	No injuries	Pacing & agitated
Midori and Choi	Sand outdoors	Free contact	Yes	Minimal	Yes	30m ²	Moat	Remnants of hay only	Chipped toenail	Swaying of head & body

Elephant	Flooring	Protected Contact & Training	Show	Enrichment	Pool	Pool size	Barriers & Safety	Food & Water	Health	Behavior
Miyako	Concrete	Unknown	No	Old toys	Yes	20m ²	Moat	Public feeding only observed (no other food)	Poor condition	Self-soothing, possible repetitive behaviors
Patra	Mostly shallow soil on top of concrete	Unknown	No	Tyres	Yes	19m ²	Inadequate	Public feeding only observed (no other food)	Possibly overweight	Begging for food by standing with mouth open

TABLE 5: ENCLOSURE SIZES ONLY

(Sizes are an approximation)

JAZA recommended standard sizes:

- Indoor area 37m² per cow, 56m² per bull
- Outdoor area 500m²

Elephant	Indoor Enclosure Size	Outdoor Enclosure Size
Hanako	2 x 112m ²	799m ²
Dumbo	170m ²	387m ²
Fuko	2 x 36m ²	529m ²
Mac / Zuze	60m ² / 60m ²	217m ² / 238m ²
Mao	2 x 127m ²	1058m ²
Lala	40m ²	372m ²
Midori & Choi	54m ²	588m ²
Miyako	25m ²	100m ²
Patra	2 x 71m ²	155m ²
Teru	2 x 36m ²	207m ²
Sunny	25m ²	546m ²

THE ELEPHANTS



HANAKO, OMORIYAMA ZOO



VISIT INFO

- Visited on a mid-weekday
- Weather: sunny
- JAZA member

Hanako arrived from South Africa as a calf, along with a male elephant named Daisuke, both likely wild-caught. Omoriyama Zoo operates under the jurisdiction of Akita City. According to signage, the zoo has managed Hanako under a semi-protected contact system since 1999. In 2009, this policy was updated to improve keeper safety, and foot care appears to be provided as part of her routine management. Training is used to facilitate medical check-ups. KNW Western Corporation has sponsored Hanako's care since 2024. In October 2006, Hanako sustained an injury to her trunk, resulting in the amputation of approximately 10 cm.

Hanako has been included in regional efforts to breed African elephants. In 2018, northern zoos in Japan, including Yagiyama Zoological Park and Morioka Zoo, initiated a collaborative breeding project. Discussions with the Japanese Association of Zoos and Aquariums (JAZA) took place the same year to support this initiative. In 2018, Hanako was transferred to Yagiyama Zoological Park in Sendai to pair with the male Ben for breeding purposes, while female Lily was transferred to Omoriyama Zoo to pair with Daisuke. No calves were born from either pairing. Daisuke died in March 2021 while Hanako was away. Hanako returned to Omoriyama Zoo in June 2024, and Lily returned to Yagiyama Zoological Park around the same time.



The zoo provides Hanako with two indoor stalls, both are quite large and meet JAZA size guidelines. Each stall has a separate water access point, natural light from high windows, and a wide channel for keepers to move through. The floors are concrete with minimal scattered hay, and a tire is present in one stall, although its purpose is unclear. During the day, the indoor areas were closed off, preventing her access. The outdoor enclosure contained a shallow pool with steps that appeared potentially slippery, as well as a central mud wallow that shows evidence of use. The space offers both sunny and shaded areas, allowing partial protection from heat, although no dedicated shelter was visible for cold weather conditions unless Hanako is given access indoors. Electric fencing surrounds part of the enclosure, and a moat is positioned around the remainder.

The zoo displays information panels stating that Hanako is provided with toys, hay, and training. However, during the observation, no toys or hay were visible. A tire attached to a chain was present, but no other structures were evident to encourage natural behavior. Public feeding sessions take place, during which visitors, including children, can feed Hanako from across the moat, although this was not observed at the time of assessment.

Behavioral observations showed Hanako walking repeatedly around her outside enclosure with no apparent purpose. This did not appear to be exploratory (although she was picking up some fallen leaves), as food was not present, and may represent stereotypical behavior or a coping mechanism to alleviate boredom. She also appeared to want to be indoors (evident by her pausing by the indoor door multiple times) possibly due to the presence of limited hay within her indoor stalls.

FUKO, CHAUSUYAMA ZOO



VISIT INFO

- Visited on a mid-weekday
- Weather: sunny
- JAZA member

At the time of observation, Fuko was located inside her indoor enclosure and had no access to the outside. According to a keeper, she did not like the noise that the tree surgeons were making near her enclosure, so they kept her inside. The keeper said that this precaution was taken to prevent potential excitement or disturbance. It was also stated that Fuko generally has free access to the outdoor area, including during winter months. The facility contained two indoor enclosures; however, Fuko only had access to one. There were several metal fixtures on the floor, which might be used for securing chains although no chains were seen.

Fuko exhibited repetitive behaviors (mostly a form of pacing) within the enclosure. Some limited browse was available for her on the floor, though she appeared more focused on searching for additional food items that did not exist. The floor was concrete, with no other substrate. No water source was visible within the indoor area. A keeper was observed carrying a bull hook.

The indoor enclosure only appeared to receive limited natural light due to the window glazing or accumulation of dirt on them. Public viewing was possible from an open walkway running along the side of the building where her indoor area was, providing ventilation but potentially allowing cold air to enter during colder weather (it is imagined that doors are able to be closed however). The indoor



floor surface appeared wet during the observation. The ceilings were high and there were electrical fittings for artificial light in the public area.

The outdoor exhibit contained a pool with a ramped entry, though it was empty of water at the time of the visit. The ground surface consisted mainly of grass and sand, which appeared compacted in several areas. The visitors were separated from the elephant enclosure by dense shrub fencing, a moat and an additional electric barrier on the elephant side. A small holding area was visible outdoors, possibly used for management or veterinary procedures. The exhibit was divided into two levels connected by steps. No shade structures or weather shelters were apparent although trees from outside the enclosure may provide some shade.

MAC AND ZUZE, KOBE OJI ZOO



VISIT INFO

- Visited on a weekend
- Weather: sunny
- JAZA member

The elephant facility is part of a zoo run by a public corporation under the district of Kobe city. The entire elephant enclosure was constructed using the city's national lottery fund. According to signage, Sobota and Modena Animal Hospital sponsor these two elephants. The information provided at the enclosure notes that the zoo has been trying to breed Mac and Zuze, although they are currently managed separately to prevent unplanned breeding.

Mac was born in 1992 at a zoo in Switzerland and transferred to the current facility in 1995. Zuze was born in 1990 at a zoo in Latvia and transferred in 1996 as a symbolic gift from Latvia to Kobe following the city's earthquake, as part of a sister-city relationship.

The outdoor space is divided into two enclosures, one for each elephant, separated by a strong steel/metal fence and connected via what appeared to be a sliding fenced door. Each elephant had sand outside, though the depth of sand varied, with one side (Mac) being much deeper. Both enclosures provided shade: Mac's via a loose overhead covering, and Zuze's via a permanent structure. No pool or sprinkler system was visible in the outdoor spaces. A few tires were present, attached to logs or placed on the ground, though their purpose was unclear and looked unused for some time. There was a moat surrounding the enclosures and a small public barrier.



At the time of observation (15:00 hrs), both elephants were housed indoors, and not able to access the outside. We were told that the elephants are usually brought indoors at approximately 14:00 hrs. When indoors, they are housed in adjacent enclosures separated by two keeper channels, allowing visual but no tactile contact. When outdoors, they are separated by fencing that would allow some but limited tactile interaction. There was also an additional outdoor space, which was very small and did not look in use. This space is presumed to be Macs' old enclosure that was assessed in the 2017 report.

The indoor areas had high ceilings, multiple windows for natural light, and ceiling-mounted fans. Each enclosure is surrounded by a keeper tunnel, and an additional spare indoor enclosure exists but was unused. Floors are concrete, but there were small piles of shavings provided. There was no evidence of any sufficient substrate covering the full floor.

Food included browse, hay and carrots, all placed directly on the floor. No enrichment devices (e.g., haynets or foraging equipment) were observed. Signage indicated that indoor viewing windows may be closed in cold weather to regulate the temperature.

At the time of observation, both elephants were eating. Both elephants appeared to have quite severe foot and leg abnormalities. Mac's back feet appeared twisted upwards and outwards, while his front left foot displayed a growth at the base. All four legs appeared slightly deformed. He leaned back onto his rear feet, standing on his toes, and both front feet showed horn-like growths extending outward. Locomotion was not observed. Zuze's foot condition appeared less clear. The angle of her feet and toe length may require further assessment by a specialist.

According to signage Mac is managed under protected contact but Zuze is managed under free contact.

MAO, MORIOKA ZOO



VISIT INFO

- Visited mid-week
- Weather: sunny & hot
- JAZA member

Mao is housed at Morioka Zoo, which operates under the public management of Morioka City. In 2023, an attempt at artificial insemination was carried out by visiting German veterinarians but it was not successful. The zoo publicly supports anti-ivory initiatives, with clear signage of this at Mao's enclosure. The facility is currently engaged in crowdfunding to establish a new veterinary hospital, though elephants are not expected to be included within its scope.

At the time of the observation, Mao only had access to the outdoor enclosure area. Both the indoor and outdoor areas were quite large (meeting JAZA size guidelines). The indoor enclosure was fully visible through large windows. It had high ceilings, fans, natural light from windows and digital scales showing her body weight. A child's letter from a feeding experience was displayed near the viewing window, suggesting some visitor engagement initiatives. The indoor space included a hanging hay-net with a concrete floor, but no substrate. The indoor area was not obviously insulated.

The outdoor enclosure area was also split into two spaces by a wall that had a gap in it, and she appeared to have access to both. The space included a mix of concrete, grass, and soil surfaces. A waterfall feature was present, as well as a mud-bathing area. There was also a small pool, but this was not filled at the time of observation. Shade provision was relatively poor, and there was no specific shelter. There was a moat, a low fence, and electric reinforcement as the barrier between the enclosure and the public walkway.



Some enrichment objects were seen, including tyres and balls, but these did appear to be unused and possibly offered little novelty. There was no evidence of active feeding enrichment or opportunities for extended foraging. Separate drinking water to the pool/waterfall was not observed.

Mao's behavior included repeated walking/pacing along the long side of the outdoor enclosure and some signs of agitation related to what appeared to be a desire to get indoors. No injuries were observed, and her body condition appeared acceptable.

LALA, TOHOKU SAFARI PARK



VISIT INFO

- Weekend visit
- Weather: sunny
- Non-JAZA member

Lala is housed at Tohoku Safari Park in Fukushima Prefecture. Lala's whole living environment (indoor and out) was small and lacked any obvious or effective physical or behavioral enrichment.

The outdoor enclosure was mostly concrete with very minimal grass/soil substrate patches. There was no pool or shade or shelter, and she seemed disinterested in the limited vegetation (did not appear to have been touched for some time). As this was a drive through, it was quite difficult to observe the indoor area in detail, but what we could observe, (she did not have access to the indoor area at time of observation) - appeared dark, poorly ventilated, and not insulated.

Visitors were able to feed Lala directly from cars with food bought at the entrance, with no staff presence. They did this by feeding from their cars, there appeared to be no controls to prevent visitors leaving their cars as no keepers were present (there was one individual at the exit gate). No feeding or enrichment activities were observed apart from the public feeding. No browse, hay, or foraging materials were available within the enclosure, and there was no evidence of enrichment tools, training, or husbandry management equipment.



The enclosure was surrounded by a large tall steel barrier and a separate lower fence. There was a metal sheet that appeared to be where visitors were encouraged to stop and feed Lala. She displayed clear signs of stereotypic movement (notably repetitive head swinging) and lethargy in-between the visitor interactions. When a car stopped by her, she would reach out with her trunk in a begging motion. Her body condition appeared overweight, and potential foot health issues were noted, though not confirmed due to limited movement observed. There was no educational signage or interpretive material at the enclosure.

MIDORI (AND CHOI), MIYAZAKI CITY PHOENIX ZOO



VISIT INFO

- Weekday visit
- Weather: sunny & hot
- JAZA member

During observation, Midori was not allowed in her indoor area. The male elephant Choi was reported to be in musth and was kept separately from her. We were told that they were separated because they were fighting and when asked, staff indicated that he had previously injured her. The elephants are now never mixed and are alternated in outdoor access, with Choi typically given outdoor access during non-public hours.

The outdoor enclosure consisted of compacted sand and concrete. Two pools were present, each with steps leading into them, although at the time of observation, both contained only a small trickle of water. The enclosure was bordered by a moat and electric fencing on the elephant side, with post-and-rail fencing and vegetation on the visitor side. Shade within the enclosure was limited but provided in part by overhanging trees. A sheet above the indoor gate offered a small, shaded area. It was not possible to confirm whether the indoor housing provided natural light or ventilation as there was no public access to it. Weighing scales were in the outdoor enclosure, and the elephants' body weights were displayed to the public.

Information available on-site indicated that Midori and her former companion Taiyo arrived from Thailand (Surin Province) in July 2005. Taiyo died in 2014. The male elephant Choi was born on 26 May

2013 at Kyushu Natural Animal Park African Safari in Oita (also known as Beppu African Safari), where he was the first Asian elephant calf born at the facility. He arrived at Miyazaki City Phoenix Zoo in December 2023 from that facility for breeding purposes with Midori. Midori was previously transferred to Kobe Oji Zoo in 2018 for approximately 14 months for a breeding attempt with the male Asian elephant Mac. She returned to Miyazaki City Phoenix Zoo in September 2019 after the breeding attempt proved unsuccessful.

Midori was observed foraging for small wisps of hay on the ground. She displayed repetitive head-bobbing movements—up and down and side to side—in between searching for food. She was also observed striking the gate of the indoor enclosure, possibly to attract keeper attention, and repeating stereotypic behaviors in the same area of the outdoor enclosure. Midori made some attempts at dustbathing, although the compacted substrate appeared to limit this activity. One toenail on her right hind foot appeared chipped or broken.

Signage at the entrance to the elephant enclosure indicated that photo opportunities on an elephant were available for a fee of ¥500.



Members of the public were permitted to sit on the elephant under the supervision of an experienced Thai keeper; children were allowed, though infants were not. There was a dedicated area for this sit on photo opportunity, which was about 400 yards from their enclosure. It is presumed that a keeper walks or rides Midori to this area daily. Additional signage stated that the zoo was undertaking an elephant breeding program.

MIYAKO, UTSUNOMIYA ZOO



VISIT INFO

- Weekday visit
- Weather: raining
- JAZA member

Miyako is housed at Utsunomiya Zoo, located in Tochigi Prefecture. The assessment took place on a rainy weekday, with only one other zoo visitor observed at the time.

During the observation, Miyako had access to both indoor and outdoor areas, although the indoor space appeared to be uninsulated and very dark and small. The door to the outdoor area remained open, offering ventilation but also exposure to the outdoor weather. No artificial lighting or insulation was evident, and no apparent systems were in place to manage humidity or temperature variation (although we could not observe this indoor space closely). The outdoor area was concrete (it is presumed the indoor area is as well) with no visible soil or vegetation except for a few plants in the moat that she could reach by extending her trunk. There was a small tire, ball and some branches, but they appeared to have lost their novelty and did not look used. There was also a chain outside that Miyako interacted with, by manipulating it with her trunk and pulling on it.

The outdoor exhibit is surrounded by a low barrier and large moat separating Miyako from the public viewing area. The surface is concrete throughout, with no visible soil or vegetation except for a few plants she could reach by extending her trunk over the moat. A very small pool was present in the corner of the outdoor space, but it was very shallow, with unclear water circulation. There were no other shade structures available other than the indoor area.



Behavioral observations indicate that Miyako engaged in repetitive and possibly self-soothing behaviors, including leaning her head against enclosure structures, rubbing one leg against the other, and running her trunk repeatedly across her body. Her overall demeanour appeared subdued and lethargic. The only food offered came from the other visitor throwing food toward her – which she stood on the edge of the moat to catch. No foraging material was visible in her outdoor area. Some educational material about Miyako is displayed, although it appeared to have limited information.

PATRA, SHIROTORI ZOO



VISIT INFO

- Weekend visit
- Weather: cloudy
- Non-JAZA member

Patra is housed at Shirotori Zoo. During the observation, Patra was locked within the indoor area of her enclosure. When staff were asked about this, they said Patra had remained inside earlier due to rain and had not wished to go outdoors. No explanation was provided as to why the gate to the outdoor area remained closed once the weather had cleared.

Members of the public were able to offer food bought from the zoo, directly to her by throwing it at her. Patra was observed engaging with visitors by opening her mouth or extending her trunk toward them. Most visitors who stopped at her enclosure had food to give her.

Patra had access to two adjoining indoor areas, both with concrete flooring and no visible hay or bedding. A single tire was present at the rear of the enclosure but did not appear to be in use or used for some time. A separate water supply was available indoors. Within part of the indoor area, water was observed pooling on the floor, suggesting poor drainage.

The indoor enclosure received some natural light. Public access was restricted by a gated and padlocked entryway, followed by an elephant barrier. No staff were present during the observation, and a member of the public could have potentially accessed the area by climbing over the gate (although the zoo was quite small, so it is likely a nearby staff member might have seen this).

The outdoor section contained a pool, which had water in it but appeared shallow, with a raised concrete ledge at the entry point. The outdoor surface consisted primarily of compacted soil with sparse grass coverage. No additional features or furnishings were present other than the concrete entrance structure.



The perimeter between the public and the elephant enclosure outdoors consisted of a low hedge barrier approximately 1.5 meters from the elephant barrier. This was not electrified, and access to the enclosure appeared to be very easy for members of the public – certainly small children – would easily be able to enter the elephant enclosure through the main barrier bars as they would be wide enough apart to get through. The outdoor area did not contain any visible shade structures, shelter, or environmental enrichment items.

Patra's activity was largely directed toward soliciting food from the public and begged for this food by holding her mouth open and waiting for visitors. No other forms of engagement with the environment were seen during the observation period. Her right ear appeared to be bent unnaturally forward. The elephant enclosure is situated next to an animal performance arena, where loud music was audible during the performances.

DUMBO, NIHONDAIRA ZOO



VISIT INFO

- Weekend visit
- Weather: rain
- JAZA member

Dumbo is housed at the city-operated, Nihondaira zoo. During the observation, Dumbo did not have access to her indoor area. The outdoor space consists primarily of concrete flooring, with some compacted substrate provided across approximately one-third of the area. A pool was observed however, accessibility to it appeared to be difficult (via concrete steps) and the water was shallow. Between the elephant space and the visitor viewing area, there was a wide moat. In addition, some sections of the enclosure perimeter include electric fencing. From the visitor side, separation also consisted of a low barrier.

Supposedly feeding enrichment was provided to Dumbo as indicated by the signage by the enclosure. Within the enclosure, a couple of barrels with holes were observed, likely designed for food-based enrichment, although at the time of observation there was no use of these tubs.

The indoor facility is relatively dark, with some natural light provided by a window. The flooring is concrete, and no bedding material was observed. The indoor enclosure barrier includes some training infrastructure for foot care and an adjoining keeper alleyway that allowed the staff to move safely around the enclosure. Signs informed the public that the indoor space has been renovated to support a

このフェンスはなに？

安全に健康管理をするための施設に生まれ変わりました。



ゾウ舎は築50年を超えるとても古い獣舎で、人とゾウが同じ空間でお世話をする直接飼育のための構造になっていました。しかし、それではゾウの鼻が出てくる恐れがあるため、前足のケア・治療や、耳から採血を行うことができません。そこで、使用していないシャンティの寝室にフェンスを付け、トレーニングのための専用ルームに改修しました。以前から行っていた後足のケアに加え前足の手入れや耳からの採血もできるようになりました。毎日3回、ここでハズバンダリートレーニングを実施しています。

簡易的なPC(Protected Contact)ウォールです。飼育係や獣医師がより安全にトレーニングや治療を行うことができるようになりました。

protected contact management system. A sign also indicated that Dumbo is routinely moved indoors at 15:30 hrs, remaining inside until the following morning (specific time not displayed).

During observation, Dumbo engaged in a small dust bath outside, picked up from the area that included some sand (it was not deep). She was later seen reaching for plants located beyond the boundaries of her enclosure. Whisps of hay were observed within the enclosure, and Dumbo did appear to frequently search/forage for food, in a possible repetitive fashion.

Facilities Not Visited

SUNNY, NOMI ISHIKAWA ZOO



NOT VISITED

- Reviewed online
- JAZA member

Photo from the original assesement (2017)

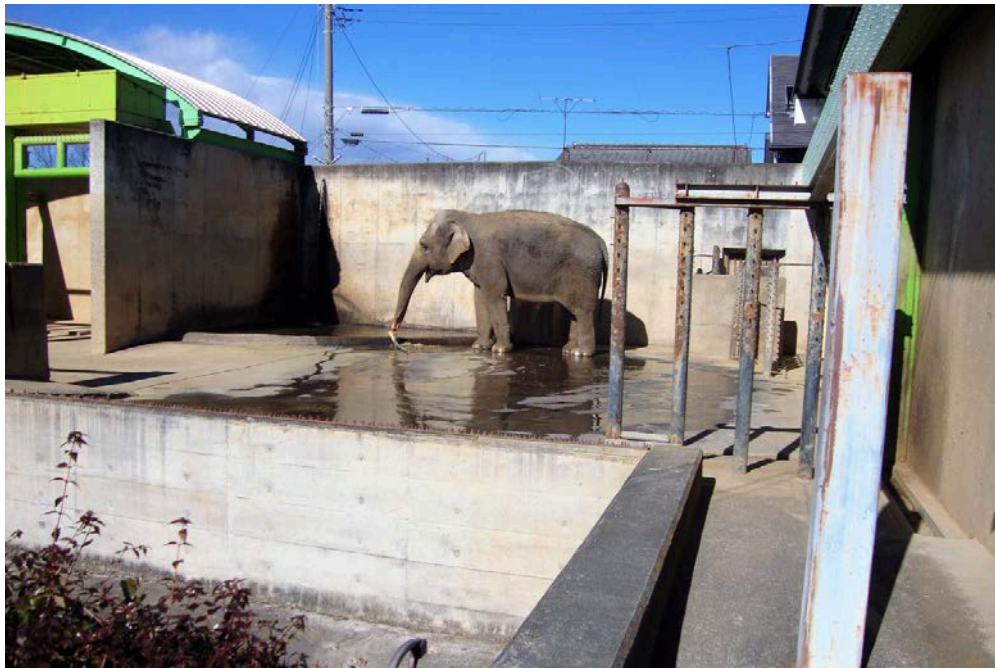
Sunny, an Asian elephant born in 1979, arrived at Ishikawa Zoo in 1989.^[7] Her “outdoor exhibit is equipped with a sandbox and water area, as well as stone pillars for Sunny to scratch and rub against”^[8] The website goes on to state that in recent years the zoo has received information from both Japan and overseas indicating where areas of improvement can be made to the elephant enclosure. In response, they have been working with JAZA and other zoos to improve the enclosure. They have increased the amount of time Sunny spends freely moving between the indoor and outdoor exhibit (exact time not provided), provided enrichment, added more feeders and created an environment that allows for more activities for her to choose to do. They have expanded the sandbox area for her as well. Emphasis appears to be on allowing Sunny more choices and thus autonomy and state they will continue to improve the environment. The website provides further detail on the enrichment they have provided for Sunny. It is assumed that the relative size of Sunny’s enclosure has not changed since the 2017 report and are 25m² (indoor area) and 546m² outdoor space respectively. Photo is taken from the Ishikawa Zoo website.

[7] https://www.elephant.se/database2.php?elephant_id=5794

[8] <https://ishikawazoo.jp/guide/animal/elephant.html>

In June 2025, Ishikawa Zoo announced that Sunny was removed from public viewing due to loss of appetite and health concerns, with the indoor viewing area also closed. Approximately one month later, upon improvement, she was returned to public display.

TERU, YUKI PARK ZOO



NOT VISITED

- Reviewed online
- Non-JAZA member

Photo from the original assesement (2017)

Teru is a female Asian elephant who arrived at Kofu City Yuki Park Zoo from Laos together with her companion Mimi in April 1980, with both elephants estimated to have been around two years old at the time. Teru has lived alone since Mimi's death in 2000 and was previously assessed for Dr Keith Lindsay's 2017 report. Unfortunately, Teru could not be visited for this report as the zoo was closed to the public for refurbishment works, including her enclosure.

COMPARISONS TO THE 2017 REPORT FINDINGS

From the twelve facilities holding solitary elephants identified and assessed, three of these facilities, Chausuyama Zoo (Fuko), Utsunomiya Zoo (Miyako) and Kobe Oji Zoo (Mac and Zuze), were also assessed in 2017. Nomi Ishikawa Zoo (Sunny) and Yuki Park Zoo (Teru) were also assessed in 2017 but are excluded from this comparison as they could not be visited. The other seven facilities assessed in 2025 were not included in Dr Keith Lindsay's original 2017 report.

Chausuyama Zoo

In the 2017 report, Chausuyama Zoo was considered a standard but outdated facility. From the assessment this year, it appears there has been no meaningful change for Fuko. It was noted that free-contact was used in 2017, and while this was not directly observed in this assessment, a keeper was seen holding a bullhook which is indicative of free-contact management. Fuko was shut inside at the time of observation, and we were told this was because Fuko was afraid of the tree cutting that was occurring near her enclosure, but otherwise we were told that she usually has access all the time, regardless of the weather (direct communication with the keeper). However, the 2017 report states she was only let outdoors for a few hours each day, so it may be that the time she is allowed outside has been extended, although this would need to be assessed further. It was also recorded in 2017 that her feet looked okay, however, in 2025 we noted some potential cracks in the horn on her feet. The size of the enclosure has remained the same and there was no meaningful environmental infrastructure, enrichment or substrate use within the indoor and outdoor enclosure spaces.

Utsunomiya Zoo

In the 2017 report, this elephant facility was considered to be in very poor condition. From the assessment this year, it is concluded that the facility remains in very poor condition and there are no meaningful improvements for Miyako the elephant. The size of the enclosure has remained the same, there was no meaningful environmental infrastructure, enrichment or substrate. No browse or feeding apparatus was evident. A small pool had been introduced, but it is considered insufficient in size and depth to allow for any meaningful use by Miyako. Miyako continues to have unsupervised interactions with the public who can buy food from the zoo to throw at her, and her enclosure remains dangerous and unfit for use, due to the large moat that she was observed precariously balancing over.

Kobe Oji Zoo

In the 2017 report, Kobe Oji Zoo was considered a standard but outdated facility. It is noted in the 2017 report that “plans have been developed to subdivide this large area so that Mac can have half of it”. While Mac still has a much smaller area than Zuze, he does appear to be in a larger space than when he was assessed in 2017. Indicative from the photos taken and the measurements, it appears that Zuze’s enclosure has been divided. Zuze now has approx. 238m² (compared to 464m²) and Mac approx. 217m² (compared to 35m²) in outdoor space. Their indoor space remains the same size.

It appears that handling management has remained the same (in 2017 it was reported they were managed through both free and protected contact), although the signs indicated that Mac was exclusively managed through protected contact, while Zuze is managed through both approaches).

COMMONALITIES BETWEEN THE ZOO FACILITIES

Environment

Across the facilities assessed, the outdoor enclosure space provided for the elephants, was commonly very small and restrictive. The JAZA guideline for outdoor space is 500 m² per elephant and was only met by four of the facilities (Morioka Zoo, Omoriyama zoo, Chausuyama Zoo and Miyazaki City Phoenix Zoo), with Mao at Morioka Zoo having the largest outdoor enclosure space, offering over 1,000 m² of space. Sunny from Nomi Ishikawa Zoo, which was not visited, also meets this standard guideline according to the 2017 report. The minimum dimensions provided in the JAZA guidelines are 37 m² for adult females and 56 m² for males, and most of the facilities appeared to meet this, but it was difficult to tell how accurate the findings were, as the figures identified through Google Earth, likely included keeper corridors, management areas or the combined area of multiple individual stalls, reducing the usable area by the elephants.

The provision of any suitable substrate also fell short of guideline recommendations for mixed sand, soil and mud. While a few facilities provided sand outside and two appeared to provide a mud bath area (Morioka zoo and Omoriyama Zoo), most were dominated by concrete surfaces or compacted soil surfaces, the latter being unlikely to provide any behavioral or physical benefit. Only one zoo had any form of substrate in the indoor area – Kobe Oji Zoo for Mac and Zuze – but this was so minimal it is unlikely to have provided any use for the elephants. Shelter and shade provision was also generally minimal and, if it did exist, it was typically incidental shade by over-hanging trees, rather than purpose-built structures, although the purpose-built shade provision for Mac and Zuze must be noted as better than others.

Indoor environments were sometimes dimly lit, appearing to rely on open doors that were designed more for public viewing access than for the elephants' comfort, for ventilation. There was also little evidence of heating or humidity control systems, which is concerning due to Japan's seasonal weather conditions. However, it should be noted that some of this kind of environmental infrastructure may not have been observable during this review. Some indoor areas did have fans.

No facility demonstrated any particular environmental complexity such as changing topography, differing substrates, ranging opportunities or thermoregulatory features. The provision of environmental or behavioral enrichment across the observed facilities was minimal to none and did not meet the JAZA identified guidelines for behavioral stimulation. Some manipulable objects were present, such as tires, but they appeared to have been in place for extended periods (showing no

evidence of maintenance or rotation of “toys”). and were of little interest to the elephants, evidenced by the lack of interaction with them. Only Dumbo’s enclosure appeared to display signage referring to enrichment, but no evidence of active foraging or other enrichment devices were observed in practice. Food provision appeared to rely on putting (mostly) hay or vegetables (only seen in Mac and Zuze indoor enclosure) directly on the floor in front of the elephant and no feeding enrichment practices were observed.

The pool facilities in general were particularly inadequate. All those observed were shallow—likely less than 0.5 m deep—or entirely empty, and some enclosures lacked pools altogether. A few pools had access by a sloping entrance, but many of the pools could only be accessed by steep concrete steps. Some were inaccessible to the elephants who were shut indoors at time of observation. None of the pools appeared to offer submersible or adequate bathing opportunities even if full, aside from Morioka Zoo (Mao) where, while the pool was shallow, there was also a waterfall feature present, as well as a mud-bathing area. Hanako at Omoriyama Zoo also had a mud bathing area in her enclosure, as well as a pool, although this was not filled very high.



Nutrition and Feeding

Feeding and the apparent nutritional management for the elephants was poor across the facilities. Few elephants were observed eating anything more than wisps of hay (likely given earlier in the day and placed in piles on the ground) and many elephants had no visible access to any food during observation, although they were clearly observed searching for it, notably by walking around and picking up any wisps of remaining hay or leaves. Mac and Zuze (who were shut inside at the time of observation) were the only two elephants that had more of a range of food varieties, that included hay, carrots, and branches, all placed directly on the floor. Natural browse or vegetation within enclosures was extremely limited. At a few sites, elephants were seen stretching over barriers to access any plants growing outside of the enclosure – a few times this looked dangerous as they were trying to access them from the surrounding moat. Access to separate (from a pool) drinking water was inconsistent. While some had separate drinking stations, for others it appeared they would have to rely on pool water.

Some public feeding opportunities were also observed and permitted at several facilities; notably Tohoku Safari Park which was a drive through facility that had no one monitoring the feeding of any of the animals (hoof stock) including Lala, and Shirotori Zoo where the public could throw food at Patra and Utsunomiya Zoo where the visitor was observed throwing food at Miyako. In all contexts, Lala, Patra and Miyako appeared to repeatedly beg for the food by reaching out with their trunks and in Patra's case, standing still with her mouth open, waiting for food to be thrown in.

Management and Safety Infrastructure

Any evidence of positive reinforcement training was minimal. No elephant-keeper interactions were observed, but across the assessed facilities, it appeared that many still operated under free contact or semi-protected contact conditions (either indicated by signage or through the management practices indicated and infrastructural design). Some do claim to have adopted protected contact management and Nihondaira zoo had accommodations for foot health checks of Dumbo through the use of an inspection hatch in the indoor area. A bull hook was observed at one site (Fuko, Chausuyama Zoo, being held by the keeper).

It appeared to be consistent across most facilities that elephants either had access to the outdoor enclosure or indoor enclosure, but not both at the same time (except for Miyako at Utsunomiya Zoo).

Indoor enclosure areas did mostly appear to include keeper alleys or access corridors, enabling staff to move and perform tasks while elephants were indoors. However, there was variability in the width and likely safety of these corridors across the facilities. Many of the outdoor enclosures had moat-

based barriers to separate elephants from the public (some electric wiring and low fence/hedge was also present). Miyako at Utsunomiya Zoo was observed balancing precariously at their edges while attempting to reach vegetation in the moat. It was particularly concerning that in Shirotori Zoo for example, visitors were permitted to approach Patra within almost reach of her trunk, only separated by a low gate and there appeared to be no keeper oversight during these interactions, as well as it appearing to be quite easy to enter her outdoor enclosure through the fence barriers.

Miyazaki City Phoenix Zoo advertised elephant rides with Midori (not Choi), appearing to be designed as a photo opportunity where members of the public could sit on her in a dedicated small arena about 300 yards from her normal enclosure (it is presumed she is walked or ridden there by a keeper). It is noted that in the 2017 report, Zuze from Kobe Oji Zoo was ordered to perform tricks for the viewing public – this was not observed or indicated during this assessment, although according to signs, Mac is managed under protected contact, but Zuze is managed under free contact so this may still be occurring.

Physical Health and Behavior

Within all the facilities assessed, the elephants demonstrated abnormal stereotypical behaviors. Repetitive pacing around the outdoor enclosure perimeter was routinely observed, as was head-swaying, begging for food and generalized lethargic behavior. Behaviorally, there were very few opportunities for the elephants to express natural and normal species-typical behaviors by interacting with their environment, such as foraging, exploring or environmental manipulation. There was a significant lack of any behavioral choice or control over their environments.

Social interaction was also not possible, although Kobe Oji Zoo did appear to allow Mac and Zuze to be able to see each other and, possibly, to engage in tactile interactions through the fence that separates them outside (although this was not observed as they were shut inside). Midori (and Choi) at Miyazaki City Phoenix Zoo appeared to be completely separated and had no visual or tactile interaction opportunities.

Some of the elephants appeared to be overweight, but others appeared in relatively poor body condition. Patra appeared to have a deformed ear, while there was information on Hanako that she had an amputation on part of her trunk due to an injury. Foot and horn abnormalities were also observed in some of the elephants and foot issues were especially concerning with Mac and Zuze, both of whom exhibited significant foot deformities and overgrowth.

CONSIDERATIONS AND RECOMMENDATIONS

In January 2018, the Japanese Association of Zoos and Aquariums announced that it supported the transfer of solitary zoo elephants to more social environments. The association said, through a dedicated elephant committee, it was promoting the transfer of single rearing elephants to bring them into a group where possible, but, if placing one of the elephants with others would cause it stress (problematic unresolvable stresses), they would endorse enrichment activities for that animal. However, despite this commitment, the findings of this report indicate that the welfare of solitary elephants, both in JAZA and non-JAZA member zoos, remains a serious concern across the country. Across the solitary elephants assessed, compliance with Japan's minimum JAZA welfare guidelines was extremely poor. In every measured domain area such as space, environmental quality, food, keeper management, and behavior—deficiencies were observed. The information collected demonstrated continued systemic issues with enclosure environmental design and elephant management, resulting in poor elephant health and behavioral well-being.

It must be noted that, any recommendations below are directed primarily to JAZA, as its existing Asian elephant management guidelines and membership obligations offer the most immediate route to raising standards. Strengthening and actively implementing these guidelines has the potential to influence practice more widely, and it is anticipated that improvements within JAZA facilities would encourage non-member institutions to follow suit.

Environmental Enrichment

All of the elephant enclosures lacked any meaningful environmental complexity or opportunities for the elephants to make choices about their own lives and daily activities. There also remains a distinct lack of natural vegetation and features, meaningful shade areas or protection from the elements, including extreme weather, and other amenities to increase elephant health and welfare. The inability to be able to choose and have control over how to regulate temperature and other aspects of their daily lives, along with the virtual absence of environmental complexity, which would encourage and stimulate positive elephant-environment interactions will result in poor individual welfare.

It was somewhat interesting to see that most enclosures did have what looked like an attempt at enrichment, namely through the use of car tires in the enclosure. Tires are commonly used as enrichment tools as they are durable and versatile. They can be filled with food to provide a novel feeding opportunity or encouraged to be pushed around as a play item. However, none of the tires

observed appeared to have been in use for some time. Placed in an enclosure they would provide novelty for only a short time before the elephants become bored and habituated to them. Their value as enrichment tools intended to encourage exploration or play is extremely limited.

All enrichment opportunities observed were static, limited in scope and novelty and did not appear to encourage any engagement with them. This minimizes any opportunity for the elephant to express meaningful natural behaviors, positive cognitive stimulation and sensory exploration in its environment.

It is recommended that JAZA strongly encourage their members to provide significantly more enrichment practices where appropriately stimulating natural environments are not provided. Enrichment should be delivered as part of an organized enrichment program, with weekly enrichment diaries to monitor effectiveness, along with regular review and updating. Doing so would be a positive step toward enhanced animal welfare.

Substrate Provision

There was also a distinct lack of appropriate flooring in all facilities. It is stated under the JAZA guidelines to provide soft flooring (sand, mats, or straw) indoors and that outdoor areas should provide natural substrates, mud and water. However, none of the indoor spaces observed had soft flooring, instead all indoor flooring consisted of concrete. Given that these elephants spend a significant portion of their day indoors, the lack of soft substrate is likely to contribute to poor health as it does not allow for comfortable lying down or sleep and can cause foot and joint problems. The UK Secretary of State's Standards of Modern Zoo Practice Standards^[9] require that the depth of sand should enable good drainage and allow for building of sand mounds to enhance recumbent sleep as well as other natural behaviors such as digging and as such, should be no less than 1m in depth. The importance of sleep for good welfare is often under-represented in animals. Actual lying rest increases with soft substrates, linking the elephant's environment directly to sleep quantity and likely musculoskeletal recovery^[10] It is recommended that for JAZA member facilities, JAZA strongly encourages the enforcement of, at a minimum, the use of indoor soft substrate (preferably well-drained sand) at a depth that encourages lying down.

[9] <https://assets.publishing.service.gov.uk/media/5a81f6ec40f0b62305b91c0e/zoo-practice-elephants.pdf>

[10] <https://onlinelibrary.wiley.com/doi/10.1002/zoo.21693>

Quality Space Provision

Environmentally, the outdoor enclosures were (mostly) smaller than JAZA's recommended guidelines and certainly smaller than international standards. For example, new UK Secretary of State's Standards of Modern Zoo Practice 2025 (that commence in 2027^[11]) and must be enforced by 2040, require 20,000 square meters for five or fewer group-living adults outside and the minimum size must be at least 320 square meters for indoor bull facilities.

The importance of space is in relation to the elephant's ability to have meaningful interactions with that space and for social opportunities. Quality space means that elephants can forage in natural, diverse vegetation, walk for miles each day, and exert a high degree of control over the environment and also social interactions.^[12]

JAZA appears to have adopted The Association of Zoos and Aquariums (AZA's) enclosure standard sizes to recommend; of 37m² per female elephant and 56m² per male elephant indoor space, and 500 m² per elephant for outdoors. It should be noted that in April 2025, AZA announced that they are reviewing and revising the elephant standards (through their Elephant Strategy initiative). The European Association of Zoos and Aquariums (EAZA)^[13] recommends that all indoor cow facilities are provided at least 300 m² for each group of four (or fewer) animals, and for each additional animal over two years of age, to increase this space by at least 80 m², provided that the indoor facility is a complex environment. It is recommended that the indoor facility for a mature bull provide at least 160 m². Both AZA and EAZA specifically focus on the ability of social/herd interaction and the ability to interact in a complex environment even when indoors. In the absence of being able to radically change the size of the indoor or outdoor spaces for the elephants, it is recommended that JAZA provide specific guidance on necessary environmental complexity in both indoor and outdoor enclosure spaces. Even smaller spaces can be made more interesting and appropriately stimulating for an animal, with a combination of approaches such as enrichment, feeding, management, space access and variability etc.

Some of the enclosures were surrounded by large deep moats, with no prevention such as electric fencing to prevent the elephants leaning over the moats, either trying to reach vegetation in them or the other side of them. In particular, the assessor was concerned about Miyako at Utsunomiya Zoo, who, while under observation, balanced on the edge of the moat with her front feet, leaning over to beg for food being thrown for her by the public. Dry moats can pose a substantial threat to elephants,

[11] <https://assets.publishing.service.gov.uk/media/681494272de62f4a103a828d/standards-of-zoo-practice-2025.pdf>

[12] <https://www.conservativeanimalwelfarefoundation.org/wp-content/uploads/2022/07/Digital-CAWF-Elephants-in-Captivity-Report-final-v3.pdf>

[13] https://strapi.eaza.net/uploads/Elephant_TAG_BPG_2020_6956205c9a.pdf

especially those out of which an elephant cannot easily climb.^[14] At a minimum a moat should allow easy access to get in or out in case of an accident and not be of a size that allows an elephant to fall into one. The use of additional barriers such as electric fencing and steel barriers should be required and modern zoos suggest the use of enclosure barriers that minimize risk to animals (and people). JAZA does not suggest that moats cannot be used, but does recommend that they do not enclose the entire perimeter as they recognise the risk of injury is significant and the elephant could become trapped. The use of moats within any animal enclosure is an outdated practice that does not prioritise the animal's safety and well-being and it is strongly advised that JAZA recommends that there should be a planned phase out and eventual ban of moats being used for elephant enclosures.

Indoor and Outdoor Access

It appeared to be common practice to manage the elephants either in their indoor or their outdoor enclosure and not to allow them to have access to both at any one time. The Standards of Modern Zoo Practice for Great Britain (2022 update)^[15] explicitly require that “other than in exceptional weather conditions, elephants should have access to both over a 24-hour period and be able to choose where they spend their time.” Emphasis on this access requirement is a reflection of the understanding that this access facilitates an elephant's choice over the use of its space (not just the ability to use the space) as well as not just meeting a space minimum requirement.

The European Association of Zoos and Aquariums recommend in its EAZA Best Practice Guidelines for Elephants^[16] that “if possible, to enable free choice of indoor/outdoor access over the 24-hour period throughout most of the year except in periods of extreme weather (depending on the local climate).” It is recognised that some areas of Japan can get very cold and careful monitoring of the temperature is important, but EAZA states that “When elephants have free choice between indoor and outdoor areas, elephants are happy to roam outside with temperatures just above freezing point, as long as they have a place to warm up and sleep”, but EAZA also recommends that “under windy conditions and below 7°C, time spent outdoors should be monitored” It is strongly recommended that zoos in Japan, at a minimum, adopt a management approach that allows elephants free access to their indoor and outdoor enclosures, weather permitting.

[14] https://assets.speakcdn.com/assets/2332/aza_standards_for_elephant_management_and_care.pdf

[15] <https://assets.publishing.service.gov.uk/media/5a78ce01ed915d042206578f/standards-of-zoo-practice.pdf>

[16] https://strapi.eaza.net/uploads/Elephant_TAG_BPG_2020_6956205c9a.pdf

Feeding

No facility appeared to offer opportunity for extended feeding times or replicate the natural foraging behavior of elephants. While there was the presence of suspended feeding tubs in one facility (Nihondaira zoo), these appeared to be un-used. The presence of wisps of hay in many of the enclosures indicates that hay is likely to have been distributed on the ground outside for the elephants. African elephants may spend up to 75% of their daylight day foraging for food^[17] or 18 hours a day foraging^[18].

If captive elephants are only feeding a few hours per day, this significantly minimizes the opportunity for this important foraging behavior. In captivity, substantial feeding opportunities with more natural time budgets should be provided to allow for this extended foraging and cognitive behavior. At present it does not appear that JAZA provides feeding guidance, and it is recommended they produce guidelines for its members on foraging requirements that mimic these more natural behaviors and time budgets. Dispersing and hiding of food, use of a variety of feeding enrichment tools that require cognitive stimulation, and a greater food selection will all contribute to more positive feeding behaviors.

Behavior and Health

Of significant concern is the presence of stereotypic behavior in the elephants. According to Greco et. al, captive elephants (both African elephant and Asian elephant) can exhibit a range of stereotypic behaviors^[19]. The presence of such behaviors is indicative of systemic and significant issues for the elephants. While some of these behaviors are among the typical suite of stereotypies observed in captive elephants, such as head bobbing and the swaying of the body, others were less obvious, such as pacing (route-tracing) and self-soothing. Pacing is when an elephant walks along a very similar route repeatedly. Stereotypic behavior is a coping mechanism to an unstimulating environment or an anxiety or anticipatory response to a regular routine. Pacing may be the result of the motivation for the elephant to walk and explore but cannot satisfy this behavior because of the special, social and management constraints, so repeats the behavior. Unfortunately, such behaviors can limit the time for natural behaviors such as foraging or resting to be expressed.

[17] <https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2656.12971>

[18] <https://pubmed.ncbi.nlm.nih.gov/27688971/>

[19] <https://www.sciencedirect.com/science/article/abs/pii/S0168159117301454>

Also noted are behaviors that may indicate learned helplessness or reduced behavioral motivation resulting from their low environmental complexity and limited control over surroundings. This was particularly evident in Miyako who appeared to carry out some self-soothing behaviors.

It is strongly recommended that facilities adopt regular welfare assessment methodologies that utilize a combination of assessing input (quality of care) and output (behavioral and health responses) parameters, and with JAZA's support and guidance, JAZA members collectively utilize this data to help understand underlying conditions that contribute to poor behavioral welfare. Intervention practices are more likely to be effective with objective data that is regularly collected.

Some of the elephants appeared to be overweight, this could possibly be due to their restricted movement opportunities and thus low daily activity levels. Conversely, others appeared in poor condition, potentially reflecting inadequate or irregular access to feed or low dietary fiber. The foot and horn abnormalities documented are likely to be associated with prolonged standing on hard flooring, insufficient locomotion opportunities and poor management. The prevalence of stereotypies, suboptimal body condition, and poor foot health point to deficiencies in enclosure design, husbandry routines, and opportunities for natural behavior, underscoring the need for fundamental improvements in environmental standards, management practices and individualized behavioral and health care. It is recommended that JAZA require all member facilities to implement robust, evidence-based health provisions for elephants, including routine body-condition scoring, scheduled foot and horn assessments, and proactive management plans to address any abnormalities. Facilities should also develop individualized health and behavioral care plans for elephants showing signs of compromised welfare, with regular veterinary oversight and documented follow-up.

Elephant Visitor Interactions

The educational benefit of holding elephants in captivity is significantly diminished when elephants cannot display normal and natural behaviors, including social behaviors. Equally, the public–elephant contact events seen in some of the facilities pose human safety risks while undermining broader animal welfare goals aimed at promoting respectful, non-exploitative human–animal interactions. The World Association of Zoos and Aquariums (WAZA) passed a position statement on elephant riding in 2021^[20]. This stated that “WAZA does not approve of elephant rides at WAZA members institutions as they do not meet WAZA's view or guiding principles on animal welfare, conservation messaging, and safety.” There was only one zoo, Miyazaki City Phoenix Zoo, that allowed rides/sitting on the elephant.

[20] <https://www.waza.org/news/waza-position-statement-on-elephant-rides/>

This zoo is a JAZA member and is not a WAZA direct member, so therefore is not under the jurisdiction of WAZA guidance. However, JAZA itself is a direct organizational member of WAZA, and it is strongly recommended that the WAZA position of ending elephant riding is adopted by JAZA and its own members to be in line with modern international best practice.

Sociality of Elephants

Finally, sociality issues remain a serious concern, even when there are two elephants at the same facility. Elephants, especially females, have evolved to live in complex social systems. The maintenance of positive relationships, kin-associations and group decision-making is extremely important for positive welfare outcomes. Social bonds provide emotional comfort, stress buffering, and behavioral enrichment. The absence of normal social relationships and the presence of poor quality relationships can lead to chronic stress, reduced opportunities for species-typical social behaviors and may exacerbate abnormal behaviors (including stereotypes).

With an apparently strong focus on the future breeding of elephants in Japan it is important that any young elephants have strong social opportunities. Both calves and juveniles interact with mothers and wider social groups for learning social cues and emotional regulation. A lack of such interactions may lead to atypical behaviors. However, importantly, social behavioral opportunities in captivity must be integrated with other important housing factors such as environmental space and quality, enrichment and substrate to allow for meaningful welfare opportunities, as while sociality is critically necessary, it is not sufficient alone.

The 2017 report recommended the development of Japanese Association of Zoos and Aquariums (JAZA) elephant management guidelines in line with modern international best practice in zoos and sanctuaries. While JAZA developed these guidelines in 2021^[21], they are still not sufficiently in-line with international best practice, nor are they enforced. As a result, these guidelines are not addressing the elephant concerns identified in this report at JAZA's member facilities. JAZA is encouraged to address the inefficiency of its current guideline content to bring these up to international standards and develop an enforcement process so that all JAZA elephant facilities meet these standards within an agreed timeframe.

[21] <https://www.jaza.jp/about-jaza/a-f-guidelines>

APPENDIX

Appendix A

TEMPLATE TABLE USED FOR ASSESSMENT

Indicator	Criteria from JAZA standard	Comment	Meets Standard	Needs Improvement	Non-Compliant
Environment Conditions					
Outdoor Temperature Management	Outdoor access restricted when temperature < 0°C unless active behavior observed. Monitoring when < 5°C; heating for young/sick elephants if < 5°C.				
Indoor Temperature Control	≥13°C in general areas ≥21°C for vulnerable individuals (e.g., elderly, young, ill, or pregnant)				
Ventilation	Evidence of natural or mechanical ventilation, no signs of air stagnation.				
Humidity & Dryness Management	Measures in place to combat winter dryness (e.g., misting, humidifiers).				
Daylight Access	Indoor areas allow natural light penetration.				

Indicator	Criteria from JAZA standard	Comment	Meets Standard	Needs Improvement	Non-Compliant
Artificial Lighting	Sufficient lighting for elephant and staff visibility; staff can operate safely.				
Construction/any other Noise Management	Elephants acclimatised; behavioral signs of stress minimal during construction.				
Disturbance Minimisation	Ability to provide quiet environment during vulnerable periods such as elderly or birth				
Outdoor Space					
Minimum Area	≥500 m ² per elephant (e.g., 2000 m ² for 4 elephants).				
Terrain & Variety	Mixed substrates: sand, soil, mud. Sufficient space for social behaviors.				
Indoor Space					
Bedroom Size	≥56 m ² for male or mother+calf ≥37 m ² per adult female				
Manoeuvrability	Elephants can turn and lie down comfortably.				
Safety Infrastructure Outdoors					
Barrier Height & Strength	Fences: ≥2 m for females, ≥2.5 m for males Electric fencing used for reinforcement				

Indicator	Criteria from JAZA standard	Comment	Meets Standard	Needs Improvement	Non-Compliant
Safety Zones	≥4 m distance between public areas and enclosure Use of surrounding moats that risk injury discouraged				
Safety Infrastructure Indoors					
Safety-Oriented Layout	Staff can safely feed, clean, and monitor elephant Visual barriers and safe transfer zones				
Health and Enrichment Tools	Access to scales, treatment pens, enrichment tools				
Flooring	Clean, well-drained, dry Non-hard surface or cushioned flooring (sand/mats/straw)				
Environmental Features					
Play & Enrichment Features	Access to water, sand, soil, plants, objects for manipulation				
Shelter & Shade	Natural/artificial shade for all individuals Protection from rain/wind/snow				
Pool Size	≥100 m ² in area, ≥1.5 m depth				

Indicator	Criteria from JAZA standard	Comment	Meets Standard	Needs Improvement	Non-Compliant
Pool Access	All individuals can use it freely				
Pool Hygiene	Circulation or easy water-changing system in place				
Nutrition					
Food	High fiber hay that looks dust free. Browse and grass must account for the majority of the diet				
Feeding	Food is provided in a manner that maximises foraging time.				
Water	Separate water access to the pool for drinking. Water is clean, portable and in a shaded area.				
Management					
Performance/shows	An elephant should not be involved in shows or performances. If they are involved,				
Protected Contact	Elephants should be managed through protected contact. If they are managed through free-contact, there should be no obvious use of a bull hook or other form of control.				

Indicator	Criteria from JAZA standard	Comment	Meets Standard	Needs Improvement	Non-Compliant
Training	Positive reinforcement training must be used				
Use of outdoor space	An elephant should be able to use the outdoor space 24/7				
Health					
BCS					
Feet Health	Condition of feet and nails, and ability to walk without showing discomfort on feet • Ability to lie down and stand without difficulty				
Body Injuries	No obvious injuries observed.				
Behavior					
Behavioral patterns	Behavior is natural and normal with no signs of stereotypies including but not limited to repetitive behavior , lethargy and self-harm.				
Education					
Educational material	Educational material is visibly available, that is accurate, informative and provides information about the individual elephants				

Appendix B

INDIVIDUAL ELEPHANT AND FACILITY ASSESSMENT RESULTS TABULATED

Dumbo, Nihondaira Zoo

Indicator	Criteria from JAZA standard	Comment	MS	NI	NC
Environment Conditions					
Outdoor Temperature Management	Outdoor access restricted when temperature < 0°C unless active behavior observed. Monitoring when < 5°C; heating for young/sick elephants if < 5°C.	Not possible to assess but, she did not have access to indoor space during day at time of assessment. No shelter provided outside, one side of the enclosure was banked by large bushes and backdrop of mountains.	Not Known		
Indoor Temperature Control	≥13°C in general areas ≥21°C for vulnerable individuals (e.g., elderly, young, ill, or pregnant)	Indoor area did not appear to have insulation or heated areas.	Not Known		
Ventilation	Evidence of natural or mechanical ventilation, no signs of air stagnation.	Doors were open to the inside (although gated so she could not get in) so likely ventilation was ok, indoor area had semi-high ceilings which likely provided some ventilation and windows were open where the public were. No signs of air stagnation, but the indoor area was quite dark and being hosed down at time of observation,	X		

Indicator	Criteria from JAZA standard	Comment	MS	NI	NC
		so in the winter when doors are closed more, stagnation may occur.			
Humidity & Dryness Management	Measures in place to combat winter dryness (e.g., misting, humidifiers).	No obvious measures in place to manage winter dryness	Not Known		
Daylight Access	Indoor areas allow natural light penetration.	Indoor area had some windows that allowed some natural daylight access, but these windows were covered or semi-opaque so did not allow as much natural light as there could have been.		X	
Artificial Lighting	Sufficient lighting for elephant and staff visibility; staff can operate safely.	Lights were not observed, but some natural light.		X	
Construction/ any other Noise Management	Elephants acclimatised; behavioral signs of stress minimal during construction.	No construction noise was heard at time of assessment. General zoo noise was minimal	Not Known		
Disturbance Minimisation	Ability to provide quiet environment during vulnerable periods such as elderly or birth	Highly unlikely as no space in enclosure to retreat from public as they had access to observe the indoor area			X
Outdoor Space					
Minimum Area	≥500 m ² per elephant (e.g., 2000 m ² for 4 elephants).	Approx 387m ²			X

Indicator	Criteria from JAZA standard	Comment	MS	NI	NC
Terrain & Variety	Mixed substrates: sand, soil, mud. Sufficient space for social behaviors.	Outdoor surface looked like it was mostly shallow soil on top of concrete. Her pool and surrounding path of the pool was concrete.		X	
Indoor Space					
Bedroom Size	$\geq 56 \text{ m}^2$ for male or mother+calf $\geq 37 \text{ m}^2$ per adult female	Approx 170m ² However this includes keeper space and likely space for Dumbo is much smaller	X		
Manoeuvrability	Elephants can turn and lie down comfortably.	Indoor area was sufficient in size to turn around but probably not to lie down and comfortably get up again. While there were two enclosures, they were separated by steel fencing with only a walkway for her to get through them. It is not clear if she would have access to both. However, a lack of substrate would mean the elephant cannot lie down comfortably.		X	
Safety infrastructure Outdoors					
Barrier Height & Strength	Fences: $\geq 2 \text{ m}$ for females, $\geq 2.5 \text{ m}$ for males Electric fencing used for reinforcement	There was a moat approx. 1.5m between elephant and public. There appeared to be electric fencing in some of her enclosure as well.			X
Safety Zones	$\geq 4 \text{ m}$ distance between public areas and enclosure	There was a moat			X

Indicator	Criteria from JAZA standard	Comment	MS	NI	NC
	Use of surrounding moats that risk injury discouraged				
Safety infrastructure Indoors					
Safety-Oriented Layout	Staff can safely feed, clean, and monitor elephant Visual barriers and safe transfer zones	There appeared to be a large access area for the keepers inside.	X		
Health and Enrichment Tools	Access to scales, treatment pens, enrichment tools	No scales – there were two pens and one of them had treatment areas for feet.		X	
Flooring	Clean, well-drained, dry non-hard surface or cushioned flooring (sand/mats/straw)	All concrete. No non-hard surface			X
Environmental Features					
Play & Enrichment Features	Access to water, sand, soil, plants, objects for manipulation	There were signs showing ways that they fed her using barrels etc. At time of observation no feeding barrel or other tool was being used although they were visible in the outdoor enclosure There was a pool which was not filled very much. The steps down to the pool were concrete and looked like they could get very slippery and the access to them looked quite difficult.		X	

Indicator	Criteria from JAZA standard	Comment	MS	NI	NC
Shelter & Shade	Natural/artificial shade for all individuals Protection from rain/wind/snow	She had no access to the indoor area at time of observation. There was no outdoor shelter from the sun. It is not known if she would have indoor access when it gets colder.			X
Pool Size	≥100 m ² in area, ≥1.5 m depth	Approx 33m ²			X
Pool Access	All individuals can use it freely	Yes, but was not a submersible pool	X		
Pool Hygiene	Circulation or easy water-changing system in place	Was not clear how the water was circulated. Pool appeared shallow and would not allow for effective wallowing/cooling down but there was an alternative space for this.		X	
Nutrition					
Food	High fiber hay that looks dust free. Browse and grass must account for the majority of the diet	No food was observed to be given to her. She may have had some hay earlier in the day from wisps seen on the ground.			X
Feeding	Food is provided in a manner that maximises foraging time.	There were signs showing ways that they fed her using barrels etc. At time of observation no feeding barrel or other tool was being used although they were visible in the outdoor enclosure		X	

Indicator	Criteria from JAZA standard	Comment	MS	NI	NC
Water	Separate water access to the pool for drinking. Water is clean, potable and in a shaded area.	No separate water access was observed on the outside aside the pool.			X
Management					
Performance/ shows	An elephant should not be involved in shows or performances.	Not carried out	X		
Protected Contact	Elephants should be managed through protected contact. If they are managed through free-contact, there should be no obvious use of a bull hook or other form of control.	Yes	X		
Training	Positive reinforcement training must be used	It is not known what training is provided but as protected contact is used for management, it is more likely to be +RT.		X	
Use of outdoor space	An elephant should be able to use the outdoor space 24/7	Not possible to assess	Not Known		
Health					
BCS	(Checking these are best BSC examples to use)	Score 3	X		
Feet Health	Condition of feet and nails, and ability to walk without showing discomfort on feet	Difficult to assess, but no obvious discomfort or obvious toe pathology.	X		

Indicator	Criteria from JAZA standard	Comment	MS	NI	NC
	• Ability to lie down and stand without difficulty				
Body Injuries	No obvious injuries observed.	No obvious injuries observed	X		
Behavior					
Behavioral patterns	Behavior is natural and normal with no signs of stereotypies including but not limited to repetitive behavior, lethargy and self-harm.	She appeared to demonstrate some repetitive pacing behavior. She was very keen to go inside but was not able.			X
Education					
Educational material	Educational material is visibly available, that is accurate, informative and provides information about the individual elephants	The zoo presented quite a bit of educational material and information about her and how they train her.	X		

Mao, Morioka Zoo

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environment Conditions					
Outdoor Temperature Management	Outdoor access restricted when temperature < 0°C unless active behavior	Not possible to assess but. She did have access to indoor space during day at time of assessment. No shelter provided	Not Known		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
	observed. Monitoring when < 5°C; heating for young/sick elephants if < 5°C.	outside, although there was a central wall in the outdoor enclosure which might provide some shade.			
Indoor Temperature Control	≥13°C in general areas ≥21°C for vulnerable individuals (e.g., elderly, young, ill, or pregnant)	Indoor area did not appear insulated.	Not Known		
Ventilation	Evidence of natural or mechanical ventilation, no signs of air stagnation.	Door was open to the inside, so likely ventilation was good and indoor area had high ceilings which likely provided good ventilation. Fans were provided inside (although she could not access it during the day at time of assessment)	X		
Humidity & Dryness Management	Measures in place to combat winter dryness (e.g., misting, humidifiers).	No obvious measures in place to manage winter dryness	Not Known		
Daylight Access	Indoor areas allow natural light penetration.	Indoor area had windows that allowed for natural daylight access.	X		
Artificial Lighting	Sufficient lighting for elephant and staff visibility; staff can operate safely.	Lights were not observed but there was access to electricity and suspect lighting was well managed due to natural light as well.	X		
Construction/ any other Noise Management	Elephants acclimatised; behavioral signs of stress minimal during construction.	No construction noise was heard at time of assessment. General zoo noise was minimal but we were visiting mid-week.	X		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Disturbance Minimisation	Ability to provide quiet environment during vulnerable periods such as elderly or birth	Highly unlikely as no space in enclosure to retreat from public – even indoor space had a large window where public could observe her.			X
Outdoor Space					
Minimum Area	≥500 m ² per elephant (e.g., 2000 m ² for 4 elephants).	Approx 1058m ²			X
Terrain & Variety	Mixed substrates: sand, soil, mud. Sufficient space for social behaviors.	Outdoor surface was a mix of concrete, large grass/mud area and some grassy region. Likely a 1/3 for each.	X		
Indoor Space					
Bedroom Size	≥56 m ² for male or mother+calf ≥37 m ² per adult female	Approx. 127m ² x 2 but not clear how much of this is accessible by Mao		X	
Manoeuvrability	Elephants can turn and lie down comfortably.	Indoor area was sufficient in size to turn around and lie down. However, a lack of substrate would mean the elephant cannot lie down comfortably.		X	
Safety infrastructure Outdoors					
Barrier Height & Strength	Fences: ≥2 m for females, ≥2.5 m for males Electric fencing used for reinforcement	There was a moat approx. 1.5m and low barrier in-between elephant and public. There appeared to be electric fencing in her enclosure as well.			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Safety Zones	≥4 m distance between public areas and enclosure Use of surrounding moats that risk injury discouraged	There was a moat			X
Safety infrastructure Indoors					
Safety-Oriented Layout	Staff can safely feed, clean, and monitor elephant Visual barriers and safe transfer zones	There appeared to be a large access area for the keepers inside.	X		
Health and Enrichment Tools	Access to scales, treatment pens, enrichment tools	Some “toys” were observed but are not considered necessarily effective enrichment because the purpose of enrichment is to provide infrastructure that encourages rewarding natural behaviors. Tyres, balls that have been in an enclosure for a long time are no longer novel and not enriching. Her weight was given to the public digitally so it is presumed she can be weighed. There also appeared to be two indoor pens	X		
Flooring	Clean, well-drained, dry non-hard surface or cushioned flooring (sand/mats/straw)	All concrete. No non-hard surface			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environmental Features					
Play & Enrichment Features	Access to water, sand, soil, plants, objects for manipulation	There was a very shallow pool which was not filled. There was also a “waterfall” that she could likely go under or get wet by and a mud wallow area. See enrichment comment above regarding object/toys.		X	
Shelter & Shade	Natural/artificial shade for all individuals Protection from rain/wind/snow	She had no access to the indoor area and there was no outdoor shelter from the sun. It is not known if she would have indoor access when it gets colder.			X
Pool Size	≥100 m ² in area, ≥1.5 m depth	Approx 20m ² but she also had a waterfall and mud bathing area.	X		
Pool Access	All individuals can use it freely	Yes, but was not a submergible pool	X		
Pool Hygiene	Circulation or easy water-changing system in place	Was not clear how the water was circulated. Pool appeared shallow and would not allow for effective wallowing/cooling down but there was an alternative space for this.	X		
Nutrition					
Food	High fiber hay that looks dust free. Browse and grass must account for the majority of the diet	No food was observed to be given to her. She may have had some hay earlier in the day from wisps seen on the ground and			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
		there was an empty haynet hanging in the indoor area.			
Feeding	Food is provided in a manner that maximises foraging time.	No foraging opportunities for the time we observed her and no obvious facilities to provide this.			X
Water	Separate water access to the pool for drinking. Water is clean, potable and in a shaded area.	No separate water access was observed			X
Management					
Performance/ shows	An elephant should not be involved in shows or performances.	Not carried out	X		
Protected Contact	Elephants should be managed through protected contact. If they are managed through free-contact, there should be no obvious use of a bull hook or other form of control.	Not possible to assess	Not Known		
Training	Positive reinforcement training must be used	Not possible to assess	Not Known		
Use of outdoor space	An elephant should be able to use the outdoor space 24/7	Not possible to assess	Not Known		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Health					
BCS	(Checking these are best BSC examples to use)	Acceptable			
Feet Health	Condition of feet and nails, and ability to walk without showing discomfort on feet • Ability to lie down and stand without difficulty	Not able to get close to observe foot health but no discomfort shown when walking			
Body Injuries	No obvious injuries observed.	No obvious injuries observed	X		
Behavior					
Behavioral patterns	Behavior is natural and normal with no signs of stereotypies including but not limited to repetitive behavior, lethargy and self-harm.	She appeared to demonstrate some repetitive pacing behavior. Behavior appeared slightly frantic and anxious as she was very keen to go inside but was not able.			X
Education					
Educational material	Educational material is visibly available, that is accurate, informative and provides information about the individual elephants	The zoo presents a public stance against the ivory trade, with signage displayed at the enclosure and quite a bit more educational material about Mao and elephants.	X		

Fuko, Chausuyama Zoo

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environment Conditions					
Outdoor Temperature Management	Outdoor access restricted when temperature < 0°C unless active behavior observed. Monitoring when < 5°C; heating for young/sick elephants if < 5°C.	Not possible to assess - she did not have access to the space during day at time of assessment. We were told (by a keeper) she usually has access all the time, regardless of the weather.	Not Known		
Indoor Temperature Control	≥13°C in general areas ≥21°C for vulnerable individuals (e.g., elderly, young, ill, or pregnant)	Indoor area did not appear to have insulation or heated areas.	Not Known		
Ventilation	Evidence of natural or mechanical ventilation, no signs of air stagnation.	There was an open walkway in front her enclosure that the public walked through which allowed for natural ventilation. The indoor area was quite dark despite there being some windows so in the winter if the doors are closed more, stagnation may occur.	X		
Humidity & Dryness Management	Measures in place to combat winter dryness (e.g., misting, humidifiers).	No obvious measures in place to manage winter dryness	Not Known		
Daylight Access	Indoor areas allow natural light penetration.	Indoor area had some windows that allowed some natural daylight access, but these windows did not allow as much natural light as there could have been.		X	

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Artificial Lighting	Sufficient lighting for elephant and staff visibility; staff can operate safely.	Lights were observed, and some natural light.	X		
Construction/ any other Noise Management	Elephants acclimatised; behavioral signs of stress minimal during construction.	No construction noise was heard at time of assessment however there was noise from tree surgery. However, due to the nature of the public walkway through the indoor area, while she is shut inside it could get very noisy. Her outdoor area is circular and is accessible by the public by almost all angles		X	
Disturbance Minimisation	Ability to provide quiet environment during vulnerable periods such as elderly or birth	Highly unlikely as no space in enclosure to retreat from public			X
Outdoor Space					
Minimum Area	≥500 m ² per elephant (e.g., 2000 m ² for 4 elephants).	Approx 529m ²			X
Terrain & Variety	Mixed substrates: sand, soil, mud. Sufficient space for social behaviors.	Outdoor surface looked like it was mostly shallow soil on top of concrete. Her pool and surrounding path of the pool was concrete.	X		
Indoor Space					
Bedroom Size	≥56 m ² for male or mother+calf ≥37 m ² per adult female	Individual stalls approx. 36m ²			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Manoeuvrability	Elephants can turn and lie down comfortably.	Indoor area was split into two spaces but she only had access to one. It was small in size and lacked substrate meaning the elephant cannot lie down comfortably.			X
Safety infrastructure Outdoors					
Barrier Height & Strength	Fences: ≥ 2 m for females, ≥ 2.5 m for males Electric fencing used for reinforcement	There was no barrier but there was a large moat and electric fencing (elephant side) and a hedge on the public side			X
Safety Zones	≥ 4 m distance between public areas and enclosure Use of surrounding moats that risk injury discouraged	The moat was wide but unknown if >4 m			X
Safety infrastructure Indoors					
Safety-Oriented Layout	Staff can safely feed, clean, and monitor elephant Visual barriers and safe transfer zones	There appeared to be a large front access area for the keepers inside. Was not clear from behind the indoor area if the access was similar	X		
Health and Enrichment Tools	Access to scales, treatment pens, enrichment tools	Nothing observed			X
Flooring	Clean, well-drained, dry non-hard surface or cushioned flooring (sand/mats/straw)	All concrete. No non-hard surface			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environmental Features					
Play & Enrichment Features	Access to water, sand, soil, plants, objects for manipulation	Nothing observed			X
Shelter & Shade	Natural/artificial shade for all individuals Protection from rain/wind/snow	She was shut inside the indoor area at time of observation. There was no shelter outside, but we were told she was allowed indoors or outdoors when she wanted (not observed though)			X
Pool Size	≥100 m ² in area, ≥1.5 m depth	Cannot identify			
Pool Access	All individuals can use it freely	Yes, but no water was in the pool		X	
Pool Hygiene	Circulation or easy water-changing system in place	Not able to assess	Not Known		
Nutrition					
Food	High fiber hay that looks dust free. Browse and grass must account for the majority of the diet	Limited browse material was available on the floor, though she appeared more focused on searching for additional food items. There was signage showing different types of food she got fed, but this was not observed.		X	
Feeding	Food is provided in a manner that maximises foraging time.	There were no signs showing ways that they fed her and highly unlikely that food			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
		was provided in a way that maximises foraging.			
Water	Separate water access to the pool for drinking. Water is clean, potable and in a shaded area.	Separate water access was not observed in the indoor area.			X
Management					
Performance/ shows	An elephant should not be involved in shows or performances.	Not carried out	X		
Protected Contact	Elephants should be managed through protected contact. If they are managed through free-contact, there should be no obvious use of a bull hook or other form of control.	Not known. A keeper was observed carrying a bull hook however which indicates free contact management			X
Training	Positive reinforcement training must be used	It is not known what training is provided.		X	
Use of outdoor space	An elephant should be able to use the outdoor space 24/7	Not possible to assess	Not Known		
Health					
BCS	(Checking these are best BSC examples to use)	Fairly obese 3	X		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Feet Health	Condition of feet and nails, and ability to walk without showing discomfort on feet • Ability to lie down and stand without difficulty	Some cracks in horn wall observed		X	
Body Injuries	No obvious injuries observed.	No injuries	X		
Behavior					
Behavioral patterns	Behavior is natural and normal with no signs of stereotypies including but not limited to repetitive behavior, lethargy and self-harm.	Fuko exhibited repeated pacing behavior within the enclosure			X
Education					
Educational material	Educational material is visibly available, that is accurate, informative and provides information about the individual elephants	There was some educational material available.	X		

Lala, Tohoku Safari Park

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environment Conditions					
Outdoor Temperature Management	Outdoor access restricted when temperature < 0°C unless active behavior observed. Monitoring when < 5°C; heating for young/sick elephants if < 5°C.	Not possible to assess but indoor area did not look insulated. She did not have access to indoor space during day when observed	Not Known		
Indoor Temperature Control	≥13°C in general areas ≥21°C for vulnerable individuals (e.g., elderly, young, ill, or pregnant)	Indoor area was not clearly insulated	Not Known		
Ventilation	Evidence of natural or mechanical ventilation, no signs of air stagnation.	No evidence of natural ventilation if the door was shut to the indoor area and there appeared to be no natural light. Not possible to qualify air stagnation.			X
Humidity & Dryness Management	Measures in place to combat winter dryness (e.g., misting, humidifiers).	No obvious measures in place to manage winter dryness	Not Known		
Daylight Access	Indoor areas allow natural light penetration.	It was incredibly dark to look into as there was no natural light, aside from the door access that we could see from the public space. there did not appear to be any other access to natural light.			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Artificial Lighting	Sufficient lighting for elephant and staff visibility; staff can operate safely.	Was not possible to assess as could not speak to staff – did not see any electrics from where we were, in the indoor space.	Not Known		
Construction/ any other Noise Management	Elephants acclimatised; behavioral signs of stress minimal during construction.	No construction noise was heard at time of assessment and the enclosure was within a drive through enclosure with other animals in it, so unlikely to be other noises except for cars.	X		
Disturbance Minimisation	Ability to provide quiet environment during vulnerable periods such as elderly or birth	Highly unlikely as no space in enclosure to retreat from public.			X
Outdoor Space					
Minimum Area	≥500 m ² per elephant (e.g., 2000 m ² for 4 elephants).	372m ²			X
Terrain & Variety	Mixed substrates: sand, soil, mud. Sufficient space for social behaviors.	Terrain was nearly all concrete. There were two small “tufts” of soil/plants that she clearly did not use as they did not appear to have been utilized for some time.			X
Indoor Space					
Bedroom Size	≥56 m ² for male or mother+calf ≥37 m ² per adult female	Appeared that although there were possibly three stalls, only one was being used/usable. Total size of space was approx. 40m ²	NA		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Manoeuvrability	Elephants can turn and lie down comfortably.	Unlikely but not able to assess.	NA		
Safety infrastructure Outdoors					
Barrier Height & Strength	Fences: ≥ 2 m for females, ≥ 2.5 m for males Electric fencing used for reinforcement	Fencing height was considered sufficient despite no electric fencing being used for reinforcement.	X		
Safety Zones	≥ 4 m distance between public areas and enclosure Use of surrounding moats that risk injury discouraged	The public could reach her trunk as she was being fed by them. There was no keeper observed and it would be feasible for the public to leave their cars (the enclosure only contained hoof stock) and get very close to her if they had wanted to (although warnings were provided to not leave the car).			X
Safety infrastructure Indoors					
Safety-Oriented Layout	Staff can safely feed, clean, and monitor elephant Visual barriers and safe transfer zones	There was an internal keeper walkway inside, and the inside was shut so assume it is cleaned while she is shut outside. No obvious safety barriers or safe transfer zones	Not Known		X
Health and Enrichment Tools	Access to scales, treatment pens, enrichment tools	Not observed			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Flooring	Clean, well-drained, dry Non-hard surface or cushioned flooring (sand/mats/straw)	Flooring was all concrete – no cushioned flooring.			X
Environmental Features					
Play & Enrichment Features	Access to water, sand, soil, plants, objects for manipulation	No pool, small patches of soil and plants and a tyre and a branch. All but the latter had clearly not been used for a long time. The branch was being carried by her.			X
Shelter & Shade	Natural/artificial shade for all individuals Protection from rain/wind/snow	No shelter or shade provided			X
Pool Size	≥100 m ² in area, ≥1.5 m depth	No pool			X
Pool Access	All individuals can use it freely	No pool			X
Pool Hygiene	Circulation or easy water-changing system in place	No pool			X
Nutrition					
Food	High fiber hay that looks dust free. Browse and grass must account for the majority of the diet	No food was observed although there may have been some wisps of a few strands of hay on the floor.			X
Feeding	Food is provided in a manner that maximises foraging time.	No food observed except what was being fed to her by the public which looked like halage pellets.			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Water	Separate water access to the pool for drinking. Water is clean, potable and in a shaded area.	Water was observed in a trough	X		
Management					
Performance/ shows	An elephant should not be involved in shows or performances.	Not carried out at time of observation and not advertised	X		
Protected Contact	Elephants should be managed through protected contact. If they are managed through free-contact, there should be no obvious use of a bull hook or other form of control.	Not possible to assess	Not Known		
Training	Positive reinforcement training must be used	Not possible to assess	Not Known		
Use of outdoor space	An elephant should be able to use the outdoor space 24/7	Not possible to assess	Not Known		
Health					
BCS	(Checking these are best BSC examples to use)	Appeared overweight, peculiar stomach bulging.			X
Feet Health	Condition of feet and nails, and ability to walk without showing discomfort on feet	Possible horn ring development - did not see much movement so unable to observe any discomfort or not.		X	

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
	• Ability to lie down and stand without difficulty				
Body Injuries	Include nature of injuries	No obvious injuries observed.	X		
Behavior					
Behavioral patterns	Behavior is natural and normal with no signs of stereotypies including but not limited to repetitive behavior, lethargy and self-harm.	Behavior was mostly her begging for food from cars. She showed some head stereotypy, swinging from side to side. She appeared lethargic in-between cars and was not at all interested in her environment.			X
Education					
Educational material	Educational material is visibly available, that is accurate, informative and provides information about the individual elephants	None observed.			X

Mac and Zuze, Kobe Oji Zoo

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environment Conditions					
Outdoor Temperature Management	Outdoor access restricted when temperature < 0°C unless active behavior observed. Monitoring when < 5°C; heating for young/sick elephants if < 5°C.	Both enclosures had some shelter (Zuze was a permanent shaded area, Mac had plastic/tarpaulin for shaded area). Not sure if had access to indoor area but unlikely as preparing for food and night shift	Not Known		
Indoor Temperature Control	≥13°C in general areas ≥21°C for vulnerable individuals (e.g., elderly, young, ill, or pregnant)	Indoor area did not appear to have insulation or heated areas but was difficult to assess.	Not Known		
Ventilation	Evidence of natural or mechanical ventilation, no signs of air stagnation.	Indoor area had semi-high ceilings which likely provided some ventilation and windows were open where the public were. No signs of air stagnation	X		
Humidity & Dryness Management	Measures in place to combat winter dryness (e.g., misting, humidifiers).	No obvious measures in place to manage winter dryness	Not Known		
Daylight Access	Indoor areas allow natural light penetration.	Indoor area had some windows that allowed some natural daylight access for both enclosures	X		
Artificial Lighting	Sufficient lighting for elephant and staff visibility; staff can operate safely.	Lights were not observed, but some natural light.		X	

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Construction/ any other Noise Management	Elephants acclimatised; behavioral signs of stress minimal during construction.	No construction noise was heard at time of assessment. General zoo noise was minimal at time of observation although public had complete observational access (with no sound barrier) to indoor area where elephants were being fed.	X		
Disturbance Minimisation	Ability to provide quiet environment during vulnerable periods such as elderly or birth	Highly unlikely as no space in enclosure to retreat from public as they had access to the indoor area			X
Outdoor Space					
Minimum Area	≥500 m ² per elephant (e.g., 2000 m ² for 4 elephants).	217m ² for Mac 238m ² for Zuze			X
Terrain & Variety	Mixed substrates: sand, soil, mud. Sufficient space for social behaviors.	Outdoor Surface for both enclosures was sand. Mac's looked quite deep while Zuze had shallower more hardened sand	X		
Indoor Space					
Bedroom Size	≥56 m ² for male or mother+calf ≥37 m ² per adult female	62m ² Mac 58m ² Zuze However both measures are approximate and do not consider that this indoor space includes keeper corridor which is likely to take up quite a lot of the measure recorded.		X	

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Manoeuvrability	Elephants can turn and lie down comfortably.	Indoor area was sufficient in size to turn around probably not to lie down and comfortably get up again (particularly for Mac). There were three enclosures in total, each elephant had one and one spare one. They were separated by a large keeper walkway. No substrate in either, although both had a small pile of shavings, unclear what these were meant to be for.		X	
Safety infrastructure Outdoors					
Barrier Height & Strength	Fences: ≥ 2 m for females, ≥ 2.5 m for males Electric fencing used for reinforcement	There was a moat approx. 1.5m between elephant and public.			X
Safety Zones	≥ 4 m distance between public areas and enclosure Use of surrounding moats that risk injury discouraged	There was a moat			X
Safety infrastructure Indoors					
Safety-Oriented Layout	Staff can safely feed, clean, and monitor elephant Visual barriers and safe transfer zones	There appeared to be a large access area for the keepers inside.	X		
Health and Enrichment Tools	Access to scales, treatment pens, enrichment tools	No enrichment devices were seen inside. No scales were observed.			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Flooring	Clean, well-drained, dry non-hard surface or cushioned flooring (sand/mats/straw)	All concrete. No non-hard surface			X
Environmental Features					
Play & Enrichment Features	Access to water, sand, soil, plants, objects for manipulation	No pool for either elephant. There was a tyre in each outdoor enclosure, chained to the floor. Unclear how they were used.			X
Shelter & Shade	Natural/artificial shade for all individuals Protection from rain/wind/snow	Both enclosures had some shelter (Zuze was a permanent shaded area, Mac had plastic/tarpaulin for shaded area). Not sure if they had access to indoor area but unlikely as preparing for food and night shift. Unknown if they have access during the winter, but they are brought in around 2-3pm each day.			X
Pool Size	≥100 m ² in area, ≥1.5 m depth	NA			X
Pool Access	All individuals can use it freely	No			X
Pool Hygiene	Circulation or easy water-changing system in place	None			X
Nutrition					
Food	High fiber hay that looks dust free. Browse and grass must account for the majority of the diet	Hay, branches (browse), cabbage and grasses were being provided to both in the indoor area.	X		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Feeding	Food is provided in a manner that maximises foraging time.	Food was not provided in a manner indoors that maximised foraging – it was just placed on the floor.			X
Water	Separate water access to the pool for drinking. Water is clean, potable and in a shaded area.	Not observed at time of observation			X
Management					
Performance/ shows	An elephant should not be involved in shows or performances.	Not carried out	X		
Protected Contact	Elephants should be managed through protected contact. If they are managed through free-contact, there should be no obvious use of a bull hook or other form of control.	Mac is managed through protected and Zuze through free-contact according to signs		X	
Training	Positive reinforcement training must be used	Possible some +RT provided as semi-protected contact used.		X	
Use of outdoor space	An elephant should be able to use the outdoor space 24/7	Not possible to assess	Not Known		
Health					
BCS	(Checking these are best BSC examples to use)	BCS were acceptable.	X		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Feet Health	Condition of feet and nails, and ability to walk without showing discomfort on feet • Ability to lie down and stand without difficulty	Extremely poor foot health for both elephants.			X
Body Injuries	No obvious injuries observed.	No obvious injuries observed	X		
Behavior					
Behavioral patterns	Behavior is natural and normal with no signs of stereotypies including but not limited to repetitive behavior, lethargy and self-harm.	Both were eating their food when observed so it is difficult to assess having not seen their full behavioral repertoire. Suze appeared to possibly be chewing awkwardly, but would need further investigation.			X
Education					
Educational material	Educational material is visibly available, that is accurate, informative and provides information about the individual elephants	The zoo presented quite a bit of educational material and information about both elephants.	X		

Hanako, Omoriyama Zoo

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environment Conditions					
Outdoor Temperature Management	Outdoor access restricted when temperature < 0°C unless active behavior observed. Monitoring when < 5°C; heating for young/sick elephants if < 5°C.	Not possible to assess but. She did not have access to indoor space during day at time of assessment. No shelter provided outside, although there was a wall which at time of assessed, provided some shade.	Not Known		
Indoor Temperature Control	≥13°C in general areas ≥21°C for vulnerable individuals (e.g., elderly, young, ill, or pregnant)	Indoor area did not appear to have insulation or heated areas, but was difficult to assess	Not Known		
Ventilation	Evidence of natural or mechanical ventilation, no signs of air stagnation.	Doors were open to the inside so likely ventilation was good and indoor area had high ceilings which likely provided good ventilation. No signs of air stagnation.	X		
Humidity & Dryness Management	Measures in place to combat winter dryness (e.g., misting, humidifiers).	No obvious measures in place to manage winter dryness	Not Known		
Daylight Access	Indoor areas allow natural light penetration.	Indoor area had windows that allowed for natural daylight access.	X		
Artificial Lighting	Sufficient lighting for elephant and staff visibility; staff can operate safely.	Lights were not observed but suspect lighting was well managed due to natural light as well.	X		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Construction/ any other Noise Management	Elephants acclimatised; behavioral signs of stress minimal during construction.	No construction noise was heard at time of assessment. General zoo noise was minimal but we were visiting mid-week.	X		
Disturbance Minimisation	Ability to provide quiet environment during vulnerable periods such as elderly or birth	Highly unlikely as no space in enclosure to retreat from public as they had access to the indoor area (this could of course be shut off but all information about Hanako is indoors so unlikely)			X
Outdoor Space					
Minimum Area	≥500 m ² per elephant (e.g., 2000 m ² for 4 elephants).	799m ²	X		
Terrain & Variety	Mixed substrates: sand, soil, mud. Sufficient space for social behaviors.	Outdoor Surface was a mix of concrete around the outside and in the middle was a large wet mud. Likely a 1/3 for each.		X	
Indoor Space					
Bedroom Size	≥56 m ² for male or mother+calf ≥37 m ² per adult female	2x 112m ²	X		
Manoeuvrability	Elephants can turn and lie down comfortably.	Indoor area was sufficient in size to turn around and lie down. However a lack of substrate would mean the elephant cannot lie down comfortably.		X	

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Safety infrastructure Outdoors					
Barrier Height & Strength	Fences: ≥ 2 m for females, ≥ 2.5 m for males Electric fencing used for reinforcement	There was a moat approx. 1.5m between elephant and public. There appeared to be electric fencing in some of her enclosure as well.			X
Safety Zones	≥ 4 m distance between public areas and enclosure Use of surrounding moats that risk injury discouraged	There was a moat, difficult to assess actual width but did not appear to be ≥ 4 m			X
Safety infrastructure Indoors					
Safety-Oriented Layout	Staff can safely feed, clean, and monitor elephant Visual barriers and safe transfer zones	There appeared to be a large access area for the keepers inside.	X		
Health and Enrichment Tools	Access to scales, treatment pens, enrichment tools	Two tyres were observed but are not considered enrichment because the purpose of enrichment is to provide infrastructure that encourages rewarding natural behaviors and these tyres did not appear to be in use.		X	
Flooring	Clean, well-drained, dry non-hard surface or cushioned flooring (sand/mats/straw)	All concrete. No non-hard surface			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environmental Features					
Play & Enrichment Features	Access to water, sand, soil, plants, objects for manipulation	There was a shallow pool which was not filled very much. The steps down to the pool were concrete and looked like they could get very slippery. There was a large wet mud soil area in the centre of her enclosure		X	
Shelter & Shade	Natural/artificial shade for all individuals Protection from rain/wind/snow	She had no access to the indoor area at time of observation. There was no outdoor shelter from the sun but half of her enclosure was naturally in the shade caused by a wall and trees. It is not known if she would have indoor access when it gets colder.			X
Pool Size	≥100 m ² in area, ≥1.5 m depth	62m ²			X
Pool Access	All individuals can use it freely	Yes, but was not a submergible pool	X		
Pool Hygiene	Circulation or easy water-changing system in place	Was not clear how the water was circulated. Pool appeared shallow and would not allow for effective wallowing/cooling down but there was an alternative space for this.	X		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Nutrition					
Food	High fiber hay that looks dust free. Browse and grass must account for the majority of the diet	No food was observed to be given to her. She may have had some hay earlier in the day from wisps seen on the ground.			X
Feeding	Food is provided in a manner that maximises foraging time.	No foraging opportunities for the time we observed her and no obvious facilities to provide this.			X
Water	Separate water access to the pool for drinking. Water is clean, potable and in a shaded area.	No separate water access was observed on the outside aside the pool. Observed her drinking from it.			X
Management					
Performance/ shows	An elephant should not be involved in shows or performances.	Not carried out	X		
Protected Contact	Elephants should be managed through protected contact. If they are managed through free-contact, there should be no obvious use of a bull hook or other form of control.	Semi-protected as indicated by signage		X	
Training	Positive reinforcement training must be used	Possible some +RT provided as semi-protected contact used.		X	
Use of outdoor space	An elephant should be able to use the outdoor space 24/7	Not possible to assess	Not Known		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Health					
BCS	(Checking these are best BSC examples to use)	2 – possibly slightly underweight.		X	
Feet Health	Condition of feet and nails, and ability to walk without showing discomfort on feet • Ability to lie down and stand without difficulty	No discomfort shown when walking	X		
Body Injuries	No obvious injuries observed.	No obvious injuries observed	X		
Behavior					
Behavioral patterns	Behavior is natural and normal with no signs of stereotypies including but not limited to repetitive behavior, lethargy and self-harm.	She appeared to demonstrate some repetitive pacing behavior. She was very keen to go inside but was not able.			X
Education					
Educational material	Educational material is visibly available, that is accurate, informative and provides information about the individual elephants	The zoo presented quite a bit of educational material and information about Hanako herself.	X		

Midori and Choi, Miyazaki City Phoenix Zoo

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environment Conditions					
Outdoor Temperature Management	Outdoor access restricted when temperature < 0°C unless active behavior observed. Monitoring when < 5°C; heating for young/sick elephants if < 5°C.	Not possible to assess but, Midori did not have access to indoor space during day at time of assessment. Minimal shelter provided outside and there was some shade from a central wall.	Not Known		
Indoor Temperature Control	≥13°C in general areas ≥21°C for vulnerable individuals (e.g., elderly, young, ill, or pregnant)	Could not be assessed.	Not Known		
Ventilation	Evidence of natural or mechanical ventilation, no signs of air stagnation.	Her indoor area was shut. The area to the male elephant indoor space was open, bar a gate preventing her from access. The male was not seen and likely was held behind further gates to prevent interaction.	Not Known		
Humidity & Dryness Management	Measures in place to combat winter dryness (e.g., misting, humidifiers).	No obvious measures in place to manage winter dryness	Not Known		
Daylight Access	Indoor areas allow natural light penetration.	Could not assess the indoor space	Not Known		
Artificial Lighting	Sufficient lighting for elephant and staff visibility; staff can operate safely.	Could not assess the indoor space	Not Known		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Construction/ any other Noise Management	Elephants acclimatised; behavioral signs of stress minimal during construction.	No construction noise was heard at time of assessment. The elephant enclosure could be viewed from 3 sides, so if there were large crowds it is likely the noise level could be quite high	X		
Disturbance Minimisation	Ability to provide quiet environment during vulnerable periods such as elderly or birth	The indoor area could not be accessed by the public as far as we could tell, however there was no outdoor area that was able to provide a quiet environment and Midori did not have access to the indoor at time of observation.			X
Outdoor Space					
Minimum Area	≥500 m ² per elephant (e.g., 2000 m ² for 4 elephants).	Approx 588m ² Only access one elephant at a time	X		
Terrain & Variety	Mixed substrates: sand, soil, mud. Sufficient space for social behaviors.	Outdoor surface looked like it was mostly shallow soil.	X		
Indoor Space					
Bedroom Size	≥56 m ² for male or mother+calf ≥37 m ² per adult female	Approx 2x 54m ² (although difficult to assess)			X
Manoeuvrability	Elephants can turn and lie down comfortably.	Could not assess the indoor space	Not Known		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Safety infrastructure Outdoors					
Barrier Height & Strength	Fences: ≥ 2 m for females, ≥ 2.5 m for males Electric fencing used for reinforcement	There was just a moat between the elephant electric fence and a small public barrier.			X
Safety Zones	≥ 4 m distance between public areas and enclosure Use of surrounding moats that risk injury discouraged	The gap could not be measured, however there was a moat.	Not Known		
Safety infrastructure Indoors					
Safety-Oriented Layout	Staff can safely feed, clean, and monitor elephant Visual barriers and safe transfer zones	Not able to be assessed	Not Known		
Health and Enrichment Tools	Access to scales, treatment pens, enrichment tools	Not able to be assessed	Not Known		
Flooring	Clean, well-drained, dry non-hard surface or cushioned flooring (sand/mats/straw)	Not able to be assessed	Not Known		
Environmental Features					
Play & Enrichment Features	Access to water, sand, soil, plants, objects for manipulation	There was access to sand/soil and a few small branches but otherwise no objects provided for manipulation			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Shelter & Shade	Natural/artificial shade for all individuals Protection from rain/wind/snow	No shelter provided outside although there was some shade from a central wall.			X
Pool Size	≥100 m ² in area, ≥1.5 m depth	Approx 30m ²			X
Pool Access	All individuals can use it freely	No, as the male was shut inside. It was not a submergible pool			X
Pool Hygiene	Circulation or easy water-changing system in place	Was not clear how the water was circulated although the elephant drank from running water beside the pool that might have been providing the pool its water source.		X	
Nutrition					
Food	High fiber hay that looks dust free. Browse and grass must account for the majority of the diet	No food was observed to be given to her by the zoo.			X
Feeding	Food is provided in a manner that maximises foraging time.	There were no signs showing ways that they fed her and therefore highly unlikely that food was provided in a way that maximises foraging.			X
Water	Separate water access to the pool for drinking. Water is clean, potable and in a shaded area.	separate water access was observed but it is not clear if this is water that has been re-circulated from the pool as it was right by it and appeared to be providing the water to the pool			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Management					
Performance/ shows	An elephant should not be involved in shows or performances.	Yes, the public could pay 500yen to sit on Midori for photo ops. There was a small stadium/show space about 500 yards from the elephant enclosure and it appeared that daily photo ops were available. It looked like the keeper rode her to this area which was a space open to the public.			X
Protected Contact	Elephants should be managed through protected contact. If they are managed through free-contact, there should be no obvious use of a bull hook or other form of control.	No (it is not clear if a bull hook is used)	X		X
Training	Positive reinforcement training must be used	It is not known what training is provided.	Not Known		
Use of outdoor space	An elephant should be able to use the outdoor space 24/7	Not possible to assess	Not Known		
Health					
BCS	(Checking these are best BSC examples to use)	Acceptable	X		
Feet Health	Condition of feet and nails, and ability to walk without showing discomfort on feet	One toenail on her right hind foot appeared chipped or broken.		X	

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
	• Ability to lie down and stand without difficulty				
Body Injuries	No obvious injuries observed.	No obvious injuries	X		
Behavior					
Behavioral patterns	Behavior is natural and normal with no signs of stereotypies including but not limited to repetitive behavior, lethargy and self-harm.	She showed stereotypical behavior for a significant portion of the time under observation			X
Education					
Educational material	Educational material is visibly available, that is accurate, informative and provides information about the individual elephants	There was minimal educational material available.		X	

Miyako, Utsunomiya Zoo

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environment Conditions					
Outdoor Temperature Management	Outdoor access restricted when temperature < 0°C unless active behavior	Not possible to assess but indoor area did not look insulated. She did have access to indoor space during day.	Not Known		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
	observed. Monitoring when < 5°C; heating for young/sick elephants if < 5°C.				
Indoor Temperature Control	≥13°C in general areas ≥21°C for vulnerable individuals (e.g., elderly, young, ill, or pregnant)	Indoor area did not look insulated and door remained open during the day (at least)	Not Known		
Ventilation	Evidence of natural or mechanical ventilation, no signs of air stagnation.	Door was open to the inside so likely ventilation was ok, but didn't appear to have through flow of air.		X	
Humidity & Dryness Management	Measures in place to combat winter dryness (e.g., misting, humidifiers).	No obvious measures in place to manage winter dryness	Not Known		
Daylight Access	Indoor areas allow natural light penetration.	It was incredibly dark to look into – aside from the door access there did not appear to be any other access to natural light.			X
Artificial Lighting	Sufficient lighting for elephant and staff visibility; staff can operate safely.	Was not possible to assess as could not speak to staff – did not see any electrics from where I stood in the indoor space.	Not Known		
Construction/ any other Noise Management	Elephants acclimatised; behavioral signs of stress minimal during construction.	No construction noise was heard at time of assessment	X		
Disturbance Minimisation	Ability to provide quiet environment during vulnerable periods such as elderly or birth	Highly unlikely as no space in enclosure to retreat from public – even indoor space opened directly onto the public facing area.			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Outdoor Space					
Minimum Area	≥500 m ² per elephant (e.g., 2000 m ² for 4 elephants).	Approx 100m ²			X
Terrain & Variety	Mixed substrates: sand, soil, mud. Sufficient space for social behaviors.	Indoor and outdoor surface was all concrete.			X
Indoor Space					
Bedroom Size	≥56 m ² for male or mother+calf ≥37 m ² per adult female	Approx 25m ²			X
Manoeuvrability	Elephants can turn and lie down comfortably.	Indoor area looked very small. Lack of substrate would mean the elephant cannot lie down comfortably. It is unlikely she can turn around comfortably either.			X
Safety infrastructure Outdoors					
Barrier Height & Strength	Fences: ≥2 m for females, ≥2.5 m for males Electric fencing used for reinforcement	There was a moat approx. 2.8m and low barrier in-between elephant and public.			X
Safety Zones	≥4 m distance between public areas and enclosure Use of surrounding moats that risk injury discouraged	There was a moat			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Safety infrastructure Indoors					
Safety-Oriented Layout	Staff can safely feed, clean, and monitor elephant Visual barriers and safe transfer zones	There appeared to be an access area for the keepers but to clean they would need to either go in with her or shut her indoors. There also appeared to be an outdoor space that she could be shut in.		X	
Health and Enrichment Tools	Access to scales, treatment pens, enrichment tools	Could not assess, but space indicated little room for health and enrichment tools	Not Known		
Flooring	Clean, well-drained, dry non-hard surface or cushioned flooring (sand/mats/straw)	All concrete. No non-hard surface			X
Environmental Features					
Play & Enrichment Features	Access to water, sand, soil, plants, objects for manipulation	Some “toys” were observed but are not considered enrichment because the purpose of enrichment is to provide infrastructure that encourages rewarding natural behaviors. Tyres, balls that have been in an enclosure for a long time re no longer novel and not enriching and clearly hadn’t been used for some time. There was no access to soil – she could stretch down JUST into the moat to reach some plants.			X
Shelter & Shade	Natural/artificial shade for all individuals	She had access to the indoor area	X		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
	Protection from rain/wind/snow				
Pool Size	≥100 m ² in area, ≥1.5 m depth	20m ²			X
Pool Access	All individuals can use it freely	Yes	X		
Pool Hygiene	Circulation or easy water-changing system in place	Was not clear how the water was circulated. Pool appeared very shallow and would not allow for effective wallowing/cooling down.			X
Nutrition					
Food	High fiber hay that looks dust free. Browse and grass must account for the majority of the diet	No food was observed to be given to her. Only food seen eating was carrots thrown at her by the member of the public.			X
Feeding	Food is provided in a manner that maximises foraging time.	No food was observed to be given to her. Only food seen eating was carrots thrown at her by the member of the public.			X
Water	Separate water access to the pool for drinking. Water is clean, potable and in a shaded area.	No separate water access was observed			X
Management					
Performance/ shows	An elephant should not be involved in shows or performances.	Not carried out	X		
Protected Contact	Elephants should be managed through protected contact. If they are managed	Not possible to assess	NA		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
	through free-contact, there should be no obvious use of a bull hook or other form of control.				
Training	Positive reinforcement training must be used	Not possible to assess	NA		
Use of outdoor space	An elephant should be able to use the outdoor space 24/7	Not possible to assess	NA		
Health					
BCS	(Checking these are best BSC examples to use)	Acceptable to poor		X	
Feet Health	Condition of feet and nails, and ability to walk without showing discomfort on feet • Ability to lie down and stand without difficulty	Potential fistule in horn wall and horn rings		X	
Body Injuries	No obvious injuries observed.	No obvious injuries observed	X		
Behavior					
Behavioral patterns	Behavior is natural and normal with no signs of stereotypies including but not limited to repetitive behavior, lethargy and self-harm.	She appeared to demonstrate some repetitive behavior and possibly self-soothing behavior. These included leaning her head against the enclosure side for periods of time, rubbing her back leg up and			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
		down her other back leg, running her trunk over her body repeatedly. Behavior appeared lethargic, depressed.			
Education					
Educational material	Educational material is visibly available, that is accurate, informative and provides information about the individual elephants	Some limited material was given.		X	

Patra, Shirotori Zoo

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Environment Conditions					
Outdoor Temperature Management	Outdoor access restricted when temperature < 0°C unless active behavior observed. Monitoring when < 5°C; heating for young/sick elephants if < 5°C.	Not possible to assess but, she did not have access to indoor space during day at time of assessment. No shelter provided outside. One side had a wall surrounding it.	Not Known		
Indoor Temperature Control	≥13°C in general areas ≥21°C for vulnerable individuals (e.g., elderly, young, ill, or pregnant)	Indoor area did not appear to have insulation or heated areas.	Not Known		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Ventilation	Evidence of natural or mechanical ventilation, no signs of air stagnation.	Doors were open to the inside so the public could throw food at her so likely ventilation was ok in the summer. The indoor area had semi-high ceilings which likely provided some ventilation. No signs of air stagnation, but the indoor area was quite dark despite there being some windows so in the winter when doors are closed more, stagnation may occur.	X		
Humidity & Dryness Management	Measures in place to combat winter dryness (e.g., misting, humidifiers).	No obvious measures in place to manage winter dryness	Not Known		
Daylight Access	Indoor areas allow natural light penetration.	Indoor area had some windows that allowed some natural daylight access, but these windows did not allow as much natural light as there could have been.		X	
Artificial Lighting	Sufficient lighting for elephant and staff visibility; staff can operate safely.	Lights were not observed, but some natural light.		X	
Construction/ any other Noise Management	Elephants acclimatised; behavioral signs of stress minimal during construction.	No construction noise was heard at time of assessment. However, there was an animal show right next door to her enclosure that played loud music.			X
Disturbance Minimisation	Ability to provide quiet environment during vulnerable periods such as elderly or birth	Highly unlikely as no space in enclosure to retreat from public as they had access to the			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
		indoor area to observe and interact with Patra.			
Outdoor Space					
Minimum Area	≥500 m ² per elephant (e.g., 2000 m ² for 4 elephants).	155m ²			X
Terrain & Variety	Mixed substrates: sand, soil, mud. Sufficient space for social behaviors.	Outdoor Surface looked like it was mostly shallow soil on top of concrete. Her pool and surrounding path of the pool was concrete.	X		
Indoor Space					
Bedroom Size	≥56 m ² for male or mother+calf ≥37 m ² per adult female	2x 71m ²	X		
Manoeuvrability	Elephants can turn and lie down comfortably.	Indoor area was split into two spaces and was sufficient in size to turn around and lie down. However, a lack of substrate would mean the elephant cannot lie down comfortably.		X	
Safety infrastructure Outdoors					
Barrier Height & Strength	Fences: ≥2 m for females, ≥2.5 m for males Electric fencing used for reinforcement	There was just a gap between the elephant steel fence and a small public barrier. No electric identified. It would be very easy for a member of the public to get over the fence and into the enclosure.			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Safety Zones	≥4 m distance between public areas and enclosure Use of surrounding moats that risk injury discouraged	The gap was approx 1.5m.			X
Safety infrastructure Indoors					
Safety-Oriented Layout	Staff can safely feed, clean, and monitor elephant Visual barriers and safe transfer zones	There appeared to be a large access area for the keepers inside.	X		
Health and Enrichment Tools	Access to scales, treatment pens, enrichment tools	No scales – there were two pens. There was a tyre but it was not being used and had no obvious benefit.			X
Flooring	Clean, well-drained, dry non-hard surface or cushioned flooring (sand/mats/straw)	All concrete. No non-hard surface			X
Environmental Features					
Play & Enrichment Features	Access to water, sand, soil, plants, objects for manipulation	While there was a pool it was shallow. No access to real play and enrichment features.			X
Shelter & Shade	Natural/artificial shade for all individuals Protection from rain/wind/snow	She was shut inside the indoor area at time of observation. We were told that was because she did not like the rain, although it was not raining at time of observation. There was no outdoor shelter from the sun.			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
Pool Size	≥100 m ² in area, ≥1.5 m depth	19.4m ²			X
Pool Access	All individuals can use it freely	Yes, but was not a submergible pool	X		
Pool Hygiene	Circulation or easy water-changing system in place	Was not clear how the water was circulated. Pool appeared shallow and would not allow for effective wallowing/cooling down.	Not Known		
Nutrition					
Food	High fiber hay that looks dust free. Browse and grass must account for the majority of the diet	No food was observed to be given to her by the zoo. Instead, members of the public could throw small cabbage and carrot slices at her.			X
Feeding	Food is provided in a manner that maximises foraging time.	There were no signs showing ways that they fed her and highly unlikely that food was provided in a way that maximises foraging.		X	
Water	Separate water access to the pool for drinking. Water is clean, potable and in a shaded area.	Separate water access was observed in the indoor area.			X
Management					
Performance/ shows	An elephant should not be involved in shows or performances.	Not carried out, but the public could interact with her by throwing food.		X	
Protected Contact	Elephants should be managed through protected contact. If they are managed	Not possible to assess	Not Known		

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
	through free-contact, there should be no obvious use of a bull hook or other form of control.				
Training	Positive reinforcement training must be used	It is not know what training is provided.	Not Known	X	
Use of outdoor space	An elephant should be able to use the outdoor space 24/7	Not possible to assess	Not Known		
Health					
BCS		Possibly overweight but difficult to assess from position of elephant during observation.		X	
Feet Health	Condition of feet and nails, and ability to walk without showing discomfort on feet • Ability to lie down and stand without difficulty.	Possible horn ring development. No observation of her walking enough to assess discomfort or ability to lie down and stand without difficulty.			
Body Injuries	No obvious injuries observed.	Her right ear was bent forward in an awkward position – appeared to be either deformed or as a result of an injury.		X	
Behavior					
Behavioral patterns	Behavior is natural and normal with no signs of stereotypies including but not	She begged for food the whole time she was observed. This was either by waving her trunk close to the public or standing still			X

Indicator	Criteria from JAZA standard	Observation	MS	NI	NC
	limited to repetitive behavior, lethargy and self-harm.	with her mouth open so people could throw food in it.			
Education					
Educational material	Educational material is visibly available, that is accurate, informative and provides information about the individual elephants.	There was one sign available which provided basic details such as size and weight.		X	



Elephants in Japan

In Memory of Hanako

info@elephantsinjapan.com | www.elephantsinjapan.com

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Cover: Patra, a solitary Asian elephant living at Shirotori Zoo.