



Zoo and
Wildlife

SOLUTIONS

Best Practice Collection Planning

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Zoo and Wildlife Solutions

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- Various Roles in European, Australian and African Zoos - Keeper, Vet , Curator, Director
- Ministry of Environment and Animal Health – Head of Zoo and Wildlife Policy
- Zoo Inspector
- European Ex-Situ Programme Co-Ordinator for 2 Species
- Consultant – Zoo Development, Zoo Management, Conservation and Research

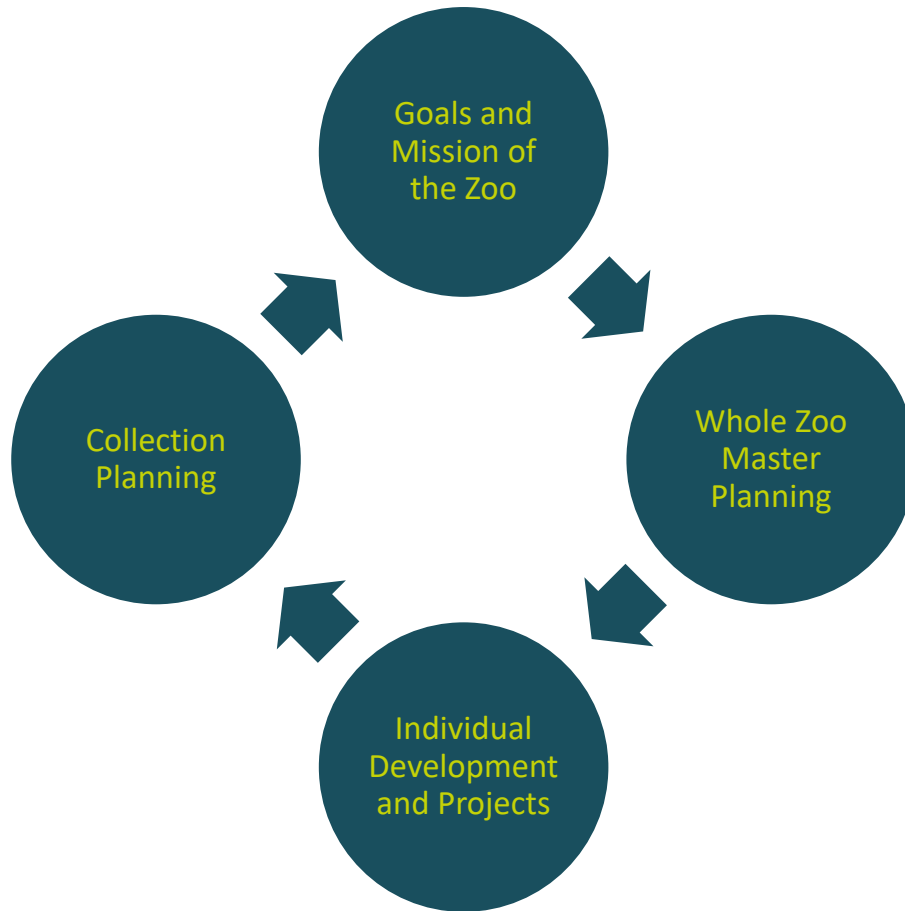


Institutional Collection Planning

Document which:

- Lists all the species held in the zoo
- Identifies a 'role' – a reason why that animal is kept in the zoo
- Plan which new species should be acquired
- Decide which current species should not be kept anymore
- Helps to prioritise improvements and developments
- Living Document – changes regularly
- May have a time period – 3 years or 10 years or 30 years

Linked Processes of Modern Zoo Management



Specific Collection Plans



May be appropriate to have separate collection plans for part of the zoo in some cases

- Reptile House with no reptiles in the rest of the zoo
- Aquarium
- Major Development with multiple species – Tropical House .

Best Practice Collection Planning

Opportunity to Review:

- Animal Welfare
- Suitable Facilities ?
- Visitor Attraction Value
- Education Opportunities
- Conservation Opportunities

Must be Realistic

Need to Know or Decide :

- Likelihood of major new developments and animal transport budget
- Likelihood of being able to refurbish existing exhibits and smaller animal transport budget
- Minor modifications to exhibits – new plants or enrichment and only a small transport budget



Collection Planning

First Question - What Animals are Kept at the Zoo ?

Next Questions – What Animals Do We Have Now ?

- What Animals Do We Want in The Future ?

Most Important Question

WHY ?

Current Animals

- Historically kept and bred
- Available and Affordable to Obtain
- Personal Interests of Staff or Decision Maker
- Rescued and Rehabilitated Wild Animals
- Confiscated Animals from Private Owners or From Airport Security

Linking to Zoo's Mission and Goals

- Provide Animals with the Best Possible Environment and Care
- Provide an Excellent Visitor Attraction
- Educate Visitors on Natural World, Biodiversity, Sustainability and Conservation
- Contribute to Conservation Actions
- Participating In Zoo Associations – Joining EAZA ?

Animal Environment

- Which of the Zoos Exhibits are Not Meeting Best Practice ?
- Will it be Possible – Physically or Financially to Make it Meet Best Practice for the Current Species ?
- Can the Enclosure be Used for a Different Species ?
- Or Should it be Demolished and Replaced ?
- Cost of Appropriate New Enclosures



Re-Use of Old Enclosures



Bear Pit



Primate Enclosure

Consideration

Sumatran Tiger:

- Tropical Jungle
- Heated indoor house
- Endangered

- New Facility £2,500,000



Siberian Tiger:

- Siberian Tundra
- Outdoor Caging
- Endangered

- New facility £250,000



Animal Care

- Keeper Resources – some species require more attention than others
- Keeper and Veterinary Experience – some species are more difficult
- Resources available – bamboo or eucalyptus or fish specialist feedings
- Cost of heating and operation of facility
- Legal Requirements- provide home for rescued or injured animals ?



Visitor Attraction

- What species are the most popular ?

Do a Questionnaire to ask them



Reasons for Popularity:

(We might not want to agree with them all)

- A-Z popular species people familiar with
- Active species which is doing something
- Babies
- TV and Films
- Walk through exhibits or other contact

Perceptions and Reality

Tiger:

- Publicity
- Often Sleeping – Visitors spend 30 seconds – time in zoo the same

In the same space for less money

South American Walk-Through Exhibit – Squirrel Monkeys, Flamingos, Macaws.

Colourful and Active

Increase Time in Zoo – more refreshments



Education

Involve your Education Staff !

- Which animals have unique features, behaviour or ecology which are used or could be used in the future for education – teaching materials, talks etc. ?
- Which animals can be used to teach about habitats, geographical regions etc
- Which animals can demonstrate conservation actions – eg. Zoo is involved in reintroduction project



Conservation

Which animals have a conservation role?

- Ex Situ Management and Breeding Programme
- Reintroduction
- Conservation Training – breed a less endangered species to develop skills with a more endangered one
- Zoo supports in situ conservation of this species
- Species demonstrates how public can make a difference to conservation – Palm Oil Use or
- Native Species Conservation Action

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Animal Acquisitions

- Need to be realistic
- Are they part of a Regional Management Programme ?
Is your zoo a member ?
Could you be a member ?
- Would you be supporting capture from the wild if you obtained this animal ?
- If you have no staff that have worked with this species before where can you get advice, support and training from ?



Structuring a Collection Plan

- Include the Criteria Described
- Decide if they are a positive (lots of opportunities for conservation) or negative (Difficult to keep and expensive to keep)
- Score

Outcome:

Shows the value of existing species in the zoo – so can decide to keep them or dispose of them

Compares with new species you could obtain

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Some Examples

Common name	Scientific name	Current inventory if present	Location on site if present	Conservation value ¹	Education value ²	Research value ³	Exhibit value ⁴	EAZA RCP recommendation ⁵	Planned actions (breed/don't breed, increase/don't increase, acquire or rehome)	Justification of plans (including welfare consideration)
Pied tamarin	<i>Saguinus bicolor</i>	2.2	Retired pair: off show 3-4 New breeding pair: AV5	5	4	5	3	Insurance population: Breed	Retire breeding pair, create new pair with one of the offspring as per EEP recommendations	EEP recommendation
Harvest mouse	<i>Micromys minutus</i>	8	Nocturnal room	5	4	1	2	N/A	Breed for release	Monitor group to ensure it doesn't get too big and split if required
Red tailed split fin	<i>Xenotoca doadriai</i>	50.26.1000+	Latin America zone & conservation breeding management facility	5	5	1	2	In progress	Maintain group for display. Maintain adult breeders off show. Breed and cull policy in place to promote sustainability and long-term viability of popn	Prolific live breeders and holding capacity of facilities and staff resource for species are limited.

Scale Key: 5 = Max value, 1 = Min Value
Colour code key: green = Max value, Amber = neutral, Red = Minimum value

Example 1

Common name	Scientific name	Current inventory if present	Location on site if present	Role(s) in collection *	EAZA RCP recommendation	Welfare**	Cost ***	Environmental impact ****	Planned actions (breed/don't breed, increase/don't increase, acquire/rehome)	Justification of planned actions	Comments on planned actions (inc welfare impacts, facility development, costs incurred etc)
Komodo Dragon	<i>Varanus komodoensis</i>	1.1.4	R2D2	1b, 1e, 1f, 1g, 2, 3	Yes	0	5	3	Do not breed. Export juveniles	EEP recommendations	
Angolan python	<i>Python anchietae</i>	0.2	CP3o		no	0	1	1	Obtain male, breed, Publish reproductive husbandry	Establish species in EU collections.	None
Adder	<i>Vipera berus</i>	0	N/A	1a, 1c, 1e, 1f, 1g, 2, 3	no	0	TBC	0	Obtain founders for conservation breeding. Target number 4.8	Severe decline in UK population based on University studies	Partner with land management trust UK NGO and local university
Owston's civet	<i>Chrotogale owstoni</i>	0.1	Civet1	1B, 1E, 1F, 3	EEP	3	3	5	Breed – acquire 1.0 as per EEP recommendation	Ambassador species for flagship conservation project	Continue ongoing research to aid species knowledge for both in-situ and ex-situ purposes

Example 2

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Common Name	Stock	Location	EAZA	IUCN	Display	Commercial	Hardy	Difficulty	Education	Conservation	Research	TOTAL /21	
Meerkats	SC	2.1	1	NO	LC	3	3	2	2	3	0	0	13
Porcupine	SM	1.1	1	NO	LC	1	2	2	3	3	0	0	11
De Brazza Monkey	AEM	1.1.1	2	EEP	LC	2	1	1	2	3	3	2	14
Six-banded armadillo	SM	1.1	5	NO	LC	2	3	2	2	3	0	0	12
Azara's agouti	SM	0.0.3	5	ESB	DD	2	1	3	3	1	0	0	10
Yellow Footed Rock Walalby	MM	1.1.	4	EEP									
Swamp Wallaby	MM	1.1	4	EEP									
Parma Wallaby	MM	1.1.	4	EEP									
Sulcata Tortoises	R	3.1	7	NO	LC	2	1	1	3	3	0	0	10
Ring-tailed lemur	Pr	10.0	8	EEP	EN	3	3	2	2	3	3	2	18
Red Bellied Lemur	Pr	1.1	8	EEP	VU								
Grevy's zebra	EQ	4.0	11	EEP	EN	3	3	2	1	3	3	1	16
Drill	AEM	1.2	10	EEP	EN								
Lemur Species	Pr	0.0.2	2	EEP	EN								
Amur Tiger	F	0.0.2.	12	EEP	EN	3	3	3	1	3	3	1	17
Fishing Cat	F	1.1.	13	EEP	VU	1	1	2	1	2	3	1	11
Red panda	SC	0.0.2.	14	EEP	EN	2	3	3	2	2	3	1	16

Example 3a

Species	Part of Managed Programme	Focus of YWPF or YWP Project	Conservation Potential for YWP	Active Conservation Initiatives	Vulnerable or Above IUCN Rating	YWP Staff Involved at EAZA/BIAZA Level	Opportunity for YWP to Advance Husbandry	Current Research at YWP	Research Potential	Opportunity to Breed
Giant anteater	1	0	1	1	1	1	0	0	1	1
Six-banded armadillo	0	0	0	0	0	1	0	0	0	1
Red-bellied Lemur	1	1	1	1	1	1	0	1	1	1
Ring-tailed lemur	1	0	0	1	1	1	0	1	1	0
Guinea baboon	1	0	0	0	0	1	1	1	1	1
Cotton-topped tamarin	1	1	1	1	1	1	1	0	1	1
Gelada Baboon	1	0	1	1	0	1	1	1	1	1
White Faced Saki	1	0	0	0	0	1	0	0	1	1
Roloway Monkey	1	1	1	1	1	1	1	1	1	1

Screenshot

Example 3b

Species	Used in Educational Sessions	Focus of Talk, Feed or Ranger Interaction	High Education Potential - Unique features	High Use for Undergraduate Research	Focus of Education Materials	High Display Value	Walk Through Exhibit	Rarity in Collections - Less than 4 in UK and 10 in Europe	High Media Value	Experiences
Giant anteater		1	1	1		1	0	0	1	1
Six-banded armadillo		0	1	0		1	0	0	1	1
Red-bellied Lemur		1	0	1		1	1	0	1	1
Ring-tailed lemur		1	1	1		1	1	0	1	1
Guinea baboon			1	1		1	0	1	1	1
Cotton-topped tamarin			1	1		1	0	0	1	1
Gelada Baboon		1	1	1		1	0	1	1	1
White Faced Saki			0	1		1	1	1	1	1
Roloway Monkey		1	1	1		1	0	1	1	0

Screenshot

Collection Plan

Will be Unique to Your Zoo:

Principles are Important But

- Different priorities for conservation, education and visitor experiences
- Different budgets for improvements
- Different resources and expertise
- Different time scales

That is GOOD

- It's a TOOL for your Zoo
- We don't want every zoo to be the same

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