

Disaster preparedness Plan for Zoo/ Captive Wildlife

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Certain factors of environment are limiting to the growth and survival of zoo / captive Life, such as extreme events of environment including flood, cyclone, heat wave etc. which is a disaster for captive animals.

Disaster refers to the following

- ⌘ Lives of human, animal, plant or any other living creatures are endangered
- ⌘ Damage to zoo property
- ⌘ Normal pattern of captive life is completely disrupted.
- ⌘ Acute scarcity in essential commodities like food, water medicines etc for zoo animals

Disaster preparedness plan

Disaster preparedness plan is a list of activities that the zoo authority decides to follow to prevent loss of human life, zoo life and its property in case of emergency. It is also identified well in advance, action to be taken by administrator or group of workers in the zoo, so that each one is aware of his/her responsibilities in case of emergency. It can broadly be divided into three phases.

1. Pre disaster phase
2. Disaster phase
3. Post disaster phase

Pre-Disaster Phase

It is essential to take precautionary measures for facing the disaster effectively, economically and efficiently when it strikes. A systematic assessment of the threats, logical analysis of the damages likely to be caused and adequate planning to face the threats so as to minimize the damage constitute the pre-disaster activities

- ⌘ Mapping of hazard prone area.
- ⌘ Training of zoo workers
- ⌘ Trained officers can take leadership
- ⌘ Take care of health problems
- ⌘ Identification of local resources- (specialist, food source etc)
- ⌘ Storage facilities (shelters/store)
- ⌘ Maintenance of communications/transportation/supply line

Disaster Management

Disaster management is the range of activities designed to mitigate the effects of disaster and emergency situations. It can also provide a framework for helping animals at risk to avoid or recover from the impact of the disaster. Managing disaster includes steps to be taken prior to during and after the disaster and involve preparedness, mitigation, response and recovery.

It includes :

- ⌘ Pre disaster preparedness, warning,
- ⌘ Impact phase, rescue, relief,
- ⌘ Rehabilitation, reconstruction,
- ⌘ Vulnerabilities reduction and long term planning

Cause of veterinary disaster in zoo

1. Population –maximum population without space of living
2. Environmental temperature
3. Nature fury—deforestation cause high environmental temperature.
4. Laws of nature—changes after some years, age, change of climate.
5. Lacks of awareness and information – death of new species due to lack information
6. Zoonoses – disease transmission
7. Unhygienic quarantine – diseased transmission
8. Unhygienic condition
9. Lack of inspection

On / During Disaster phase

Evacuation
Rescue operation
First aid & camp management
Veterinary, hygiene and sanitation
Veterinary camps
Monitoring and surveillance
Restoring supply line
Communication and transportation
Disposal of deadbody

Post disaster Phase

Rehabilitation
Protective health measures
Monitoring and surveillance

Features of disaster

Unpredictability
Unfamiliarity
Speed
Urgency
Uncertainty
Threat

Types of disaster

Natural:
Floods,
Storms,
Earthquakes,
Epidemics,
Heat wave,
Cold wave.

Man made:
Fire explosion,
Shelter collapse,
Food poisoning.

MVPH, Veterinary Officer's Training
Institute, Bhubaneswar, Orissa

Desired Technology to compact the adverse effects of disaster

1. Monitoring
2. Methodology for carcasses disposal
3. Disease control programme
 - Treatment vaccination
 - Mass vaccination
 - Mass deworming
 - Mobile clinic
 - Health package programme
4. Pasture treatment
5. Water treatment
6. Provision of Shelters
7. Construction of cyclone proof shelters
8. Provision of feed and fodder
9. Emergency kit
10. Rehabilitation (What type of animals or birds to be brought; When to bring/ where to bring)
11. Long term action plan
12. Plantation
13. Protection of animals during and after cyclone
14. Reporting
15. Planning for protection of animals from in climate weathers like summer stress etc.
16. Protection of animal from environmental pollution hazards
17. Check on bio-hazards
18. Development of strong MIS
 - Telephone/mobile numbers of SMS
 - Finalization of coordination
 - Distribution of responsibilities
 - Other important information
20. Strong mock warning practices
21. Bio-security measures

Important Measures to be taken in Veterinary disaster preparedness plan for Zoo

1. Inception of disaster planning
2. Risk assessment

3. Defining levels of acceptable risk
4. Preparedness and mitigation planning
5. Testing the plan
6. Feedback from lessons learnt

Planning provides

- Direction
- A logical frame work for tackling the situation
- Recognising the role of different participants
- Government action to anticipate or mitigate the impact of disaster, etc.

The plan should be -

- Short term (0-30 days) Ex. Carcass disposal, water treatment, reporting, etc.
- Medium term (1-6 months) Ex. Repair, restoration
- Long Term – (6 Months – 3 Years) Ex. Plantation, creating durable measures

Monitoring

For better monitoring of disaster the Zoo authority should

- Make ongoing list potential impacts
- Outline methods of mitigation and control
- Use professional expertise
- Draw a specific action plan
- Rehearsal plan

Coordination

For better coordination have a

- Wireless set
- Address of SMS
- Fixation of responsibilities
- Selection of Coordinator
- Checklist
- Planner
- Development of reporting system
- Formation of groups etc.

Be Prepared !

Know the area:

- Total area,
- Part maps,
- Plot structures,
- Plot animals/ birds,
- Relate to the locality

Hazard Mapping:

- History of past incidents,
- History of incidents in similar zoological parks,
- Judge the intensity of the incidents,
- Forecast the probable incidents, Grade the hazards on priority.

Vulnerability Mapping:

- Which places are vulnerable,
- Who are vulnerable,
- Which assets are vulnerable,
- Who is at risk,
- What is at risk, Incorporate in the map.

Resource Mapping:

- List resources available,
- Categories and quantity,
- Check function ability,
- Who is the Controlling person,
- Who is the Contract person for release,
- Assess resources not available,
- www.idrn.gov.in

Zoo Emergency

Natural

Cyclone
Flood
Heat stroke
Epidemic
Snake bite
Rabid Dog bite
Monkey bite
Elephant depredation
Boundary wall collapse
Electrocution
Fire incidence

Man Made

Human depredation
Lapses in maintenance
Over confidence of staff,
Breach of safety rule
Ignorance of rule
Culling by miscreants
Wrongful feeding
Failure food supply
Failure of water supply
Failure of power supply
Fire
Agitation by staff /public
Public bundh