

SUMATRAN RHINOCEROS
DRAFT EMERGENCY PLAN FRAMEWORK

July 2013

EXECUTIVE SUMMARY

Introduction

Despite the challenges facing so much of the Earth's biodiversity, there is now considerable experience round the world in saving highly endangered species from looming extinction. This experience yields three fundamental lessons on how to save a species. These are:

- 1/ There must be available the fullest possible information on the species' biology, its habits, behaviour and interactions with its habitat,
- 2/ The greatest threat for very small population is extinction through chance factors that operate on small numbers; thus, demographic aspects are more important than genetic or any other considerations; numbers must be increased in any ways possible,
- 3/ It then follows that every single individual is valuable; each is a resource that can be used for certain purposes or techniques in the pursuit of increasing numbers.

These lessons are appropriate when the 'patient' species is in Intensive Care. When the situation has stabilised and the probability of damaging, chance events has lessened, a longer-term, recovery plan can then be put in place.

The Sumatran Rhino now needs Intensive Care. Its numbers in the wild are extremely low and individuals are scattered between several, small sub-populations across two range states. This situation, and the rhino's solitary nature and poor breeding record in captivity, all combine to make this a very challenging patient; extinction is a very real prospect.

Endangered species recovery also shows that non-biological factors can be equally critical for avoiding extinction: conservation efforts must be centred on determination by governments and all their component structures, having all the right parties involved and the necessary structures for coordination and collaboration; swift information from the field, quick and rational decision-making, effective teamwork and strong leadership can all be critical.

Recovery of the Sumatran Rhino will need all these elements. There are many aspects which allow optimism for the rhino: governments have stated their commitment at the highest level, to be transmitted and cascaded through to the lower levels for action. Political commitment is evident by the International Year of the Rhino. The prospects for international collaboration towards the common end should be enhanced by the Asian Rhino Range States Meeting in October 2013; the subsequent APEC meeting, to be hosted by Indonesia, is an opportunity to put the case of the Sumatran Rhino officially on the international agenda, with global awareness.

Any patient in Intensive Care needs an Emergency Plan, and this document is a possible framework for such a plan. Most of its suggested content derives directly from the proceedings of Sumatran

Rhino Crisis Summit 31 March – 4 April 2013); in addition, both the Asian Rhino and African Rhino Specialist Groups of IUCN have contributed material, as have other specialists in endangered species recovery.

This is an Executive Summary of a framework for the Emergency Plan, identifying the essential actions that are needed. There is much detail to be completed by the relevant persons and institutions of the range states, but it is offered as a starting point.

The Emergency Plan acknowledges several needs:

- High quality, standardised information is needed on the sex, age, locations of individual wild rhinos, both through surveys at once and through continuing monitoring,
- The governments of Indonesia and Malaysia are committed to preventing the species' extinction, and agree that all existing rhinos, whether in the wild, or under various confined conditions should be managed as a single population,
- Mechanisms to ensure decisive, high-energy conservation actions in range states are needed with further mechanisms for collaboration between ranges states and other institutions,
- The Emergency Plan should run for two years, mid-2013 to mid-2015, to be followed by a rolling Strategic Recovery Plan.

The following summarises the key elements of the full framework:

1. Critical information needs from wild rhinos in Sumatra

Building on ongoing efforts in Bukit Barisan Selatan National Park (BBS) and Way Kambas National Park (WK), the following precise and standardised, information is targeted for each (sub)-population in BBS, WK and Gunung Leuser (GL):

Information needed	Technique
Location and size of areas occupied by rhinos	Sightings, footprints, dung, local people reports + results from below
Size of rhino populations	DNA and or camera trap photos with Mark-Recapture Analysis; scope for using leech blood to be assessed
Sex structure of each population	DNA, camera trap photos,
Ages structure of each population	Video/camera traps photos supported by additional footprint size distribution data.
The relatedness amongst individuals of a population	DNA
Which females are proven breeders and which are not breeders in each population	Dung hormone analysis, with rhino identification from DNA; camera trap photos, sightings of females and calves.

- Resources for surveys in terms of funding, manpower, training need to be specified,
- Scheduling needs to be determined.

2. Protection of wild rhinos

- Maintain, but preferably strengthen, current Rhino Protection Units, and refresh training,

- Conduct a rhino protection needs assessment at all known sites with rhinos, leading to specification of required ranger density, equipment needs and patrolling protocols.

3. Detection and capture of isolated¹ rhinos

- Use all means of information-gathering and incentives to detect isolates,
- Have a quick response capability,
- Have pre-determined decisions on the destination of any captured isolates.

4. Management of rhinos in contained or confined conditions

- Develop an integrated strategy for enhanced reproduction across all sites and suitable rhinos,
- Develop plans for transfers of individuals or reproductive materials between countries and participating institutions,
- Remove procedural blockages to efficient transfer of individuals or reproductive materials,
- Develop assisted reproduction facilities as required,

5. Infrastructure development

- Do a cost-benefit analysis for contained rhinos of a single large enclosure (about 1000 ha) versus a system of small linked paddocks),
- Determine optimal sites for enclosures / paddocks in each range state,
- Develop infrastructure according to urgent needs.

6. Development of standard monitoring techniques and protocols

- Using the results from 1 (above), develop standard monitoring protocols to provide critical information on wild rhinos on an individual basis,
- Specify a reporting format and schedule to be used across all rhino sites in all range states.

7. Organisational and political issues

- Develop rhino conservation mechanisms, starting with the appointment of National Rhino Coordinators, in each range state,
- Urgently establish the mechanisms, through creating necessary new bodies and developing formal agreements, as the means for inter-governmental collaboration in support of a unified rhino conservation effort,
- Using various routes and persons, including the services of IUCN where appropriate, draw attention to the rhino situation in range state governments and relevant bodies such as the Indonesian-Malaysian Eminent Persons,
- Develop the Asian Rhino Ranges States Meeting for 2-3 October 2013.

8. Land use and protected areas

¹ For now, as a rule of thumb, it is suggested that where 6 rhinos are found in social contact in an area, they should be protected effectively there; therefore, isolated populations of 5 or fewer rhinos should be captured; monitoring results should indicate if this threshold needs adjustment.

- Work with relevant authorities so that rhino conservation interests are incorporated in land use development plans,
- Develop the concept of Intensive Protection Zones for formal recognition and appropriate legal status, with restrictions on other land uses and activities harmful to rhino conservation.

9. Awareness, building support, gathering resources

- Use the International Year of the Rhino to have the high-level Task Force established,
- Take all measures available to attain the ideal situation of an Indonesian Presidential Decree to be announced before the APEC meeting of October 2013,
- Develop models for local community support for, and engagement with, rhino conservation efforts,
- Develop a communication strategy that will proactively handle rhino conservation needs, management interventions and any adverse public opinions arising,
- Develop a comprehensive budget and funding needs for the Emergency Plan, with a strategy for raising necessary resources.

10. Development of a 5-year rolling Strategic Recovery Plan

- This will be the successor to the 2-year Emergency Plan,
- Development to start in the second half of year 2 of the Emergency Plan.

11. Research, evidence review

This comprises a set of issues for which hard or best evidence is needed for the Strategic Recovery Plan, to ensure it is not based on erroneous assumptions.

- Key issues relate to:
 - Natural densities of Sumatran rhino,
 - Causes of decline,
 - Optimal capture and handling methods,
 - Fencing design under prevailing conditions,
 - Individual reproductive health, reversible pathologies, and the success of reproductive interventions,
 - Maintaining healthy rhinos in captivity.