

UJUNG KULON NATIONAL PARK**Priority Actions to Conserve Javan Rhino in Ujung Kulon National Park****Representatives: Agoes Sriyanto & Tedi Sutedi**

Abstract

The javan rhino (rhinoceros *Sondaicus Desmarst*) population in Ujung Kulon National Park has not changed considerably and tend to level off at about 50 individuals for recent twenty years. The population become critical to environment change, habitat destruction, intra species competition, genetic regradation, epidemic and human disturbance whwn they live concentrated in limited area, Ujung Kulon Peninsula.

Management experience suggests that on going protection and guarding efforts are not enough to conserve successfully. The increased attention and effort to their population and natural habitat management, the availability of update data and information, and comprehensive and systematic research activities on biology and ecology of Javan rhino are in badly needed for further management in addition to tested and systematic management actions operationally retaining and developing the population at the rate safe to extinction.

INTRODUCTION

Ujung Kulon National Park is still under succession ecosystem of low land tropical rain forest. Javan Rhinos (*Rhinocerus sondaicus Desmarest*) is the most important par and interrelated to the other components of this ecosystem. Hence, every changes of ecosystem due to natural or human activities will affect the existence of the Javan rhino.

Conservation of Javan rhino is considered insufficient and has not been recently supported by complete data and information. It has only concentrated activities to protect their population and habitat definitely. Experience suggests that systematic and comprehensive research support and tested conservation management actions are badly need in well rhino conservation.

For further, Javan rhinos conservation, it not only needs the actions for population and habitat protection, but also needs actions for population and habitat management propped by research activities operationally that can retain and develop Javan rhino population at the rate safe to extinction.

CONSERVATION PROBLEMS

in the execution of Javan rhino conservation, the sustenance of the rhinos is threatened by some problems as follow :

- a. Distribution of Javan rhinos. They live concentratedly in Ujung Kulon peninsula the peninsulacovers only areas of 30,000 hectares. This condition leads the rhinos critical to possible extinction caused by environment change, habitat destruction, intra species competition, genetic degraatadition, epidemic, and human disturbance such as poaching, encroaching, illegal cutting, etc.
- b. Poaching of Javan rhinos. It has even decreased for the last decade. however caution to poaching threat must remain to be kept to anticipate if illegal trade of rhino horn and other parts still exists. And then low capability of our park guards/rangers to patrol and to prevent illegal rhino and other parts trade is also contributing problem to Javan rhino conservation effort.

- c. Succession process and ecological dynamic of the forest. The succession process and ecological dynamic still continuous and is complemented with fast spread of the Langkap species (*Arenga obtusifolia*) over the peninsula. This fast Langkap distribution can retard the growth of rhino food plants. In addition, decreased quality of habitat in Ujung kulon peninsula also threatening rhinos preservation seriously.
- d. Grazing areas. Existing grazing areas have yet to managed well and are used only by small number of Banteng. This condition poses the Banteng live spreaded over the forest claimed as rhino habitat and causes competition for space and food between the rhinos and the Banteng threatening the rhinos survival.

PRIORITY MANAGEMENT ACTIONS TO CONSERVE JAVAN RHINO

In consideration of the facing problems to Javan rhino conservation, long-term objectives of Javan rhino conservation program are formulated :

- 1. to maintain Javan rhino population at the rate which can ensure the long-term survival of the species through conservation management practices.
- 2. to encrease natural carrying capacity of Javan rhino habitat in Ujung Kulon National Park.

To achieve the objectives, population and habitat monitoring is absolutely required to ensure the availability of updated date and information as the basis for decision making process of the park management. Nothing that Ujung Kulon is an island habitat under succession process since Krakatau eruption in 1883 which has not yet reached climax community, ecological dynamic could be dangerous to the rhino survival.

As a national park and one of the natural world herigate site, the management of Ujung Kulon is not only exclusively dealt with Javan rhino but also inclusively with a whole biodiversity management, conservation education and ecotourism development. Within this frame work, management actions with many diferent specific objectives and hierarchy should be formulated and carefully designed to prevent the negative impacts to the Javan rhino survival.

- a. The daraft of guideline for javan rhino habitat management based on Langkap cutting has been formulated and discussed throught a workshop held on March 18th, 1997 in Bogor. As far as known, Langkap dominance will decrease the availability of Javan rhino food plant. However, before a large scale implementation of Langkap cutting, there are need of research support concerning : (a) Langkap ecology, both synecology and autecology (under study), including some comparative studies outside Ujung Kulon National Park; (b) Common Palm Civet population and behavior as seed disperser of Langkap in Ujung Kulon National Park; and (c) Increase in data accuracy on Javan rhino population throught improved methodology.
- b. The most recent and on going research carried out by IPB team in collaboration with the park management including : (a) Pilot project on Javan rhino habitat management (FY 1991/1992 - 1996/1997); (b) Langkap invasion and its role in Javan Rhino habitat degradation (FY 1996/1997 - 1998/1999); (c) Competition between Javan rhino and Banteng (FY 1997/1998 - 1999/2000); (d) Javan rhino consensus organized by the park management (FY 1994/1995 - 1996/1997); and (e) Some sicio-economic and cultural studies by LATIN and WWF - Indonesia Programme (FY 1991/1992 - 1996/1997), can be used as primary information to formulate some further management actions.

In the final analysis, priority actions to conserve Javan rhino can be formulated as follow :

- a. To update the Population and Habitat Viability Analysis (PHVA) for the Javan rhino to determine proper specific actions and revise Indonesian Rhino Conservation Strategy.

- b. To install automatic climate station in three sites, namely Codaon/Peucang, Cibunar and Jarangranjang. Climate instability could be a strong factor affecting habitat dynamic of Javan rhino.
- c. To formulated computerize management information system or data base, including Geographic Information System based on systematic monitoring. Considering the present human resources in Ujung Kulon National Park, the development of parcipative manitoring system is required.
- d. To properly m,anage grazing areas to prevent risk of intensive competition of Banteng with Javan rhino. It is assumed that good quality of grazing areas will attract Banteng and concentrate their population in the grazing areas.
- e. To strengthen institutional capacity to improve safeguarding system. A study on ranger commitment and behaviour, supported by analysis of poaching history and installation of semi or automatic alarm system may be required to improve safeguarding system. It should be noted that increasing incentive is not automatically increase effectiveness of safeguarding against poaching and other ilegal activities in the park.
- f. To improve management facilities and equipment.
- g. To develop conservation education materials and nature interpretation tracks.
- h. Toevaluate all species present in Ujung Kulon National Park.

The current researches have performed some important need for future management of Ujung Kulon National Park. However, other researches of top priority have been identified as follow :

- a. Comparative study of census methods to gain more accurate data on Javan rhino population. Two options were proposed : (1) Increase intensity of camera trapping methods; and (2) Reveal the optimum transect distance in track count methods.
- b. Comparative study on Langkap ecology outside Ujung Kulon National Park. Recommended study sites are : Nias Island, Cikepuh Nature Reserve, Siberut Island and along Rokan River-Riau (one proposal has been submitted to Rhino and Tiger Conservation Fund).
- c. Study on the population and behavior of Common Palm Civet (*Paradoxurus hermaphroditus*) in Ujung Kulon National Park (one proposal has been submitted to Rhino and Tiger Conservation Fund).
- d. Javan rhino genetic mapping as basic consideration of more accurated PHVA and bulding of secon population (will be carried out by WWF-Indonesia Programme).
- e. Policy study on Ujung Kulon National Park, especially addressing to clarify the status of Ujung Kulon as a natural world heritage site (ranger commitment and behaviour).
- f. Evaluation of Javan rhino ecology and behaviour especially resources utilization and movement pattern and fecal analysis (including identification of reproduction status). Observation rhino behavior is proposed to be carried out throught canopy track or Rhino sanctuary in small area (two proposal have been submitted to Rhino and Toiger Conservation Fund).

CONCLUSION AND SUGGESTION

1. To conserve Javan rhino, it is not only carried out through protection and safeguarding effort for their population and habitat but also needs pro-active efforts to manage population and habitat of Javan rhino comprehensively and integratedly.
2. Javan rhino conservation needs support of the availability of complete data and information, the systematic and comprehensive research, and the integrated, systematic and tested management actions.

3. Priority actions to conserve Javan rhino include updating of Population and Habitat Viability Analysis (PHVA) for javan rhino with further actions, installing climate stations, computerizing data and information, managing grazing areas property (ranger commitment and behaviour), furnishing facilities and equipment, developing rhino conservation education materials and evaluating the present of conserved species.
4. Priority necessary researches to support Javan rhino conservation include study on census method, study on Langkap ecology, study on population and behaviour of Common Palm Civet, mapping of Javan rhino genetic, study on management policy, and evaluation of behaviour and ecology of Javan rhino.

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