



AMERICAN ZOO AND AQUARIUM ASSOCIATION

SEPTEMBER 9 - 11, 2002

NUMBER OF EXHIBITORS: 162

NUMBER OF POSTERS: 21

NUMBER OF ROUNDTABLES: 27

NUMBER OF CONSERVATION & SCIENCE / SPECIAL MEETINGS: 133

KEYNOTE SPEAKER: Dr. M. E. Emer, Senior Economist

CEP MONEY EARNED FROM LIVE AUCTION: \$25,696

Annual Conference Proceedings 2002

Publisher: American Zoo & Aquarium Association
8403 Corporate Center Drive, Silver Spring, Maryland, USA

Copyright: ©2003 American Zoo & Aquarium Association
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior permission of the copyright owner.

Citations: Ballentine, J. W. (2003). American Zoo & Aquarium Association Proceedings 2002. Silver Spring, Maryland: American Zoo & Aquarium Association. 2002.

American Zoo & Aquarium Association

2002 ANNUAL CONFERENCE PROCEEDINGS

Accreditation

Blakey, M. E.	1
The Grass IS Greener on the Other Side of Accreditation!	
Diebold, E.	5
Loss of Institutional AZA Accreditation – What are the Implications from the Perspective of the AZA's Wildlife Conservation & Management Committee (WCMC)?	
Healy, M.	9
Accreditation Hot Buttons – How Not to Push Them	
Read, B. & Cook, J.	13
On the Other Side of the Fence	

Animal Behavior and Husbandry

Colahan, H.; Joseph, S. & Mellen, J.	17
Backyard Science – What Is It And Why Should I Use It At My Zoo?	
Flores, V.; Pavlik, G. & Volk, B.	23
Piercing the Night: Shedding Light on Reproductive Management of Captive Jaguars (<i>Panthera Onca</i>)	
Hallager, S.; Ward, A.; Maslanka, M. & Boylan, J.	25
Kori Bustard Nutrition and Dietary Husbandry	

Animal Welfare

Kirtland, J.	27
Day of Reckoning: Choosing Between Animal Rights and Animal Welfare	

Conservation

Barongi, R. & Foose, T. J.	33
Developing A Viable Balance for Rhino Conservation Through In Situ Protection and Ex Situ Propagation.	
Brockett, R. C.	39
If You Build It, Will They Come?	
Diebold, E.	45
Riverbanks Conservation Support Fund (CSF): Small Grants, Big Impact	
Galvin, J.	49
Sumatra to Samburu: Sustainable Solutions for Elephant Conservation and Research	

Howard, J., DVM, PhD; Marinari, P., MS & Wildt, D. E., PhD	55
Integration of Assisted Reproductive Technology in the Recovery of the Black-Footed Ferret (<i>Mustela nigripes</i>)	
Osofsky, S. A.	61
World Wildlife Fund's Asian Rhino and Elephant Action Strategy: In Pursuit of Partnerships	
Roth, T. L.	63
Integrating Science, Technology and Animal Management to Produce the First Sumatran Rhino Calf in Captivity in 112 Years.	
Stoinski, T., PhD & Lukas, K., PhD	67
The Contribution of AZA Institutions to <i>In Situ</i> Conservation: Gorillas as a Case Study	
Strom, K. & Waak, P.	73
Population Pressure: Seeing the Problem Through Animals' Eyes	
Swanson, W. F., DVM, PhD	75
The Role of Science and Reproductive Biotechnology in Establishing and Managing the Brazilian Ocelot Population in U.S. and Brazilian Zoos	

Development and Marketing

Rathbun, G.	79
How Operations Pricing Affects The Development Ask	

Education

Acceturo, J.	83
Earthwatch Lecture Series: Showcasing the Excitement of Conservation	
Bailey, N.; Groff, A.; Jarrett, P.; Revard, B.; Peterson, A. & Stoinski, T.	87
Bushmeat Resource Guide: A Resource for Reaching out to the Public	
Ettlin, R.	95
Interpretation: The Most Effective Conservation Education Tool! 6	
Interpretation Training Activities	
Ferster, A.	103
Putting Kid Power to Work for Your Zoo	
Marsh, L. K.	107
Global Climate Change: Lessons that Transcend Organizations	
Peterson, A.	111
A Manager's Guide to Incorporating Diversity into your Organization	
Peterson, A.	115
A Manager's Guide to Incorporating Diversity into your Organization, Part II	
Povey, K. D.	117
Close Encounters: The Benefits of Using Education Program Animals	
Slivovsky, K.	123
Educating the Public about Controversial Issues: How Environmental Doom and Gloom Can Affect Young Children.	
Tiegs, S.	127
What's A Seafood Lover To Eat? ... The Right Bite, Of Course!	
Inspiring Our Guests To Take Action Through Consumer Education	

- Tunncliffe, S. D., PhD 131
 Getting Elementary Schools to Your Zoo to Hear Your Message – Zoos as
 Centers for Cross Curricular Learning
- Wenger, A. & Haynes, M. 139
 Today's Youth, Tomorrow's Conservationist

Enrichment

- Farmerie, M. 145
 Environmental Enrichment: Achieving Zoo Wide Animal Enrichment Days
 Through Successive Approximation and Positive Reinforcement

Green Business Practices

- Anderson, J. 151
 Shades of Green at New England Aquarium and a National Park Area

Institutional Design

- Lanier, J. A., PhD 159
 A River Runs Through It

Institutional Safety and Security

- Baker, W. K., Jr. & Graves, Comdr. W. S. 161
 The Terrorist Threat to Zoological Institutions
- Hodges, V. & Wuttken, G. 169
 Does Aquarium/Zoo Diving Comply With Scientific Diving Standards?

Marketplace Presentations

- Fassnacht, D. K. 175
 Harness the Passion, Shake the Organization: Getting It Done With TEAMS

Partnerships and International Projects

- Jones, D. 177
 Kabul Zoo- Managing for Diplomacy
- Osofsky, S. A. 179
 World Wildlife Fund's Asian Rhino and Elephant Action Strategy: In Pursuit of
 Partnerships

Posters

- Ashmore, G. & Dickey, A. 181
 Plight of the Pupfish

Developing A Viable Balance for Rhino Conservation Through In Situ Protection and Ex Situ Propagation

Rick Barongi, Vice President, International Rhino Foundation
Houston Zoo, 1513 North McGregor, Houston, Texas 77030
Thomas J. Foose, Program Director, International Rhino Foundation
20 Pen Mar, Waynesboro, PA 17268

The International Rhino Foundation is a non-profit 501(c)3 incorporated in 1993. The IRF is dedicated to the conservation of rhinos by motivating, mobilizing, and facilitating the involvement of institutions and individuals to develop and support programs that will effectively protect and save the remaining five species of rhino.

The IRF began in the early 1980s, as the IBRF, to respond to a specific crisis in Zimbabwe for the black rhino with a specific program involving both in situ and ex situ components. A coalition of institutions and individuals included, White Oak/Gilman International Conservation, Fossil Rim Wildlife Center, Lee & Ramona Bass and their El Coyote Ranch, the Zoological Parks Board of New South Wales, the Fort Worth Zoo, Dallas Zoo and Harry Tennison with Game Conservation International.

Today, the IRF is made up of 15 Board members (made of individuals from several zoos and conservation centers in the US, UK, and Australia, private individuals, and scientific, legal and financial advisors) that have all made a personal commitment of their time and resources to better manage and protect the five remaining species of rhino.

John Lukas (White Oak/Gilman International Conservation) leads the IRF as President and Dr. Tom Foose, as Program Officer, orchestrates the various individual programs in 12 countries. Both have been with this organization since its inception. I would particularly like to thank Tom Foose and Kelly Russo from the Houston Zoo for doing the lion's share of the work for this presentation.

IRF has believed, from its inception, that both ex situ and in situ programs – and the interaction between them, are vital for the survival of rhinos. The IRF is dedicated to the conservation of rhinos by motivating, mobilizing, and facilitating the involvement of institutions and individuals primarily from zoos and conservation centers. This afternoon's session is devoted to organization that is good examples and models for conservation partnerships between traditionally separate and sometimes opposing missions. Hence, mission of the IRF is: to support and operate rhino conservation and research programs, both in nature and in captivity, with particular emphasis on intensive management and protection.

As this slide shows, small population numbers remain in the wild. The 11,670 number for white rhinos is a deceiving number, in that most are in managed populations in Kruger National Park and other protected sanctuaries in South Africa. All five species together equal 17,500, which is less than many other single species that we consider of critical importance in our SSP programs.

Because of the worldwide rhino conservation crisis and because the IBRF had been successful in recruiting supporters for rhino conservation, in 1993, the IBRF evolved into the IRF with an expanded scope to include all five species of rhino. Since 1993, the IRF has raised and donated over US\$10 million (not including significant in-kind donations) with US\$6 million going to field programs for rhino protection and sanctuaries. A total of US\$1.5 million has been invested in research to diagnose and treat many of the health problems experienced in the captive management of rhinos. IRF also provides important assistance and support to captive management programs through support of the AZA Rhino Taxon Advisory Group, studbook maintenance, and facilitating both importation and relocation of rhino between captive and managed wild populations.

With its initial start in Zimbabwe, IRF became involved with the Northern white rhino in Garamba National Park in (then Zaire) the Democratic Republic of Congo. Initially, IRF proposed that removing some of the small remaining group of Northern white rhinos to an ex situ program would be beneficial and would create additional populations that could be better protected from the civil war situation present in that

region. When this option was not possible, IRF became committed to assisting with protection of the population *in situ*. Initially, the involvement was to organize a coalition of concerned institutions and individuals to help provide desperately needed vehicles. The conservation program in Garamba had been supported by other NGOs for over a decade when IRF became involved. In 1995, there was a need for a new leadership role in support of the guards at Garamba and the Columbus Zoo and White Oak/Gilman International Conservation provided the support for IRF to assume this responsibility. As the situation in Zaire deteriorated, other NGOs withdrew their support and in 1998, the IRF assumed an expanded role by providing, in addition to support for guards, support for the senior staff, including both the Zairian and ex patriate members and all park operations. Support for the IRF in Garamba has been greatly assisted by the institution of the World Heritage Site designation on five Congolese national parks, including Garamba, through funding from the UN Foundation. One partner that has remained dedicated to Garamba and may expand its support to Garamba, is the Frankfurt Zoological Society, which has provided the main aircraft for rhino monitoring and anti-poaching surveillance. Other institutions that have more recently become involved in Garamba include; the Brookfield Zoo, the Fort Worth Zoo, the Houston Zoo, Disney's Animal Kingdom, Busch Gardens, and the Peace River Refuge.

Rhinos are umbrella and flagship species but they also share the same habitat with other such species, including the elephant. This has expanded our programs to include new partnerships with the International Elephant Foundation, which was founded to emulate the model that IRF provided. The USF&WS African Elephant Conservation Fund has also joined IRF in partnership by providing funds for conservation programs in Garamba.

From Africa, IRF extended its efforts to Asia, in particular for the Sumatran rhino. As with the Northern white rhino, interest in the Sumatran was initially oriented toward revitalizing the captive breeding program. IRF began a two-stage program, starting with assistance in the development of managed breeding centers in native habitat in both Indonesia and Malaysia. IRF believed that larger and more natural enclosures would be more conducive to overall health and reproduction. At the same time, the Walt Disney Company became involved with IRF and along with the White Oak/Gilman International Conservation, funding was made available for this project. The second stage of this program was funding research grants to the Cincinnati Zoo where Dr. Terri Roth and her colleagues were concentrating on research to solve the problem of why Sumatran rhinos have proven so difficult to reproduce in captivity. This project succeeded in the birth of a healthy male calf in 2001.

The information and techniques learned at the Cincinnati Zoo are being applied to the breeding centers in Indonesia and Malaysia. Steve Romo, from the Cincinnati Zoo, is working hand-in-hand on site in Malaysia with Dr. Aid Mohd, head of the Rhino Center in peninsular Malaysia, as well as Mohd. Khan, Chairman of the Asian Rhino Specialist Group. This is another example of IRF's interaction between both *in situ* and *ex situ* programs to benefit the Sumatran rhino. Dr. Robin Radcliffe, from Fossil Rim Wildlife Center, and Dr. Terri Roth, from the Cincinnati Zoo, have traveled to this region several times to assist with reproductive treatments and training. The Sumatran rhino captive propagation program has become a model for a global cooperative program and Asian rhino programs now hold the largest part of IRF's efforts.

The managed *in situ* breeding centers were established with two major purposes: 1. To facilitate the breeding of captive rhino; 2. To generate income as centerpieces for conservation tourism to support protection in the wild. However, due to political situations in that country, the tourism aspect of this project has not been realized.

Along with its activities, relative to the Sumatran Rhino Sanctuaries, IRF was able to facilitate a major grant from the Global Environment Facility (GEF) to establish a program of anti-poaching teams known as RPU's (rhino protection units) in Indonesia and Malaysia. After the conclusion of the three-year GEF grant, IRF has continued to provide and recruit funds for continuation of the RPU's. Both White Oak/Gilman International Conservation and Disney's Animal Kingdom once again provided core funds for this project. Other major partners include, the Rhino & Tiger Conservation Fund of the USF&WS, WWF, AAZK Bowling for Rhinos, Cincinnati Zoo, Anna Merz and Save the Rhino International.

Just as rhino and elephant share a flagship & umbrella species niche in Garamba, so tigers share the status as a flagship and umbrella species in Southeast Asia. Because the RPUs were so successful protecting rhinos, this concept is now being used to protect not only rhinos, but also other mega-vertebrates in Southeast Asia, with the development of protection units for both tigers and orangutans. This has lead IRF into partnerships with a number of other conservation organizations like Save the Tiger Fund, the Sumatran Tiger Project, and the BBS program of WCS.

While IRF has been very active in in situ protection efforts, the protection of rhinos in the wild is very difficult and uncertain. IRF believes that meta-populations must be managed as one worldwide population and that viable captive components of the population are a vital backup as part of a diversified conservation strategy to maximize options and minimize risks. IRF has always promoted and encouraged genetic interaction between groups. The IRF Program Office assists the Rhino Taxon Advisory Group and the Species Survival Plan programs with the development of SSP Masterplans for rhino populations in North America. IRF maintains a very close relationship with these efforts, with several of the IRF Board members and advisors serving in TAG and SSP groups for rhinos. For several years, the AZA Rhino TAG and the IRF Program Office were at the same institution, The Wilds, which did much to support both the IRF and the Rhino TAG. This close working relationship was mutually beneficial; with IRF using the Rhino TAG Research Masterplan as the guide for IRF's research grant priorities and the Rhino TAG pursuing the in situ goals of its 5-Year Plan in close collaboration and through the IRF. IRF also provide listserves for various SSP and other rhino interest groups through its website service.

IRF serves to facilitate interactions between the SSP and other regional captive propagation programs for rhinos and range states which are interested in cooperative programs benefiting both the wild and captive populations, such as the recent importation of many southern white rhino to rejuvenate the captive populations and in exchange, the South African National Parks received support for in situ rhino conservation efforts.

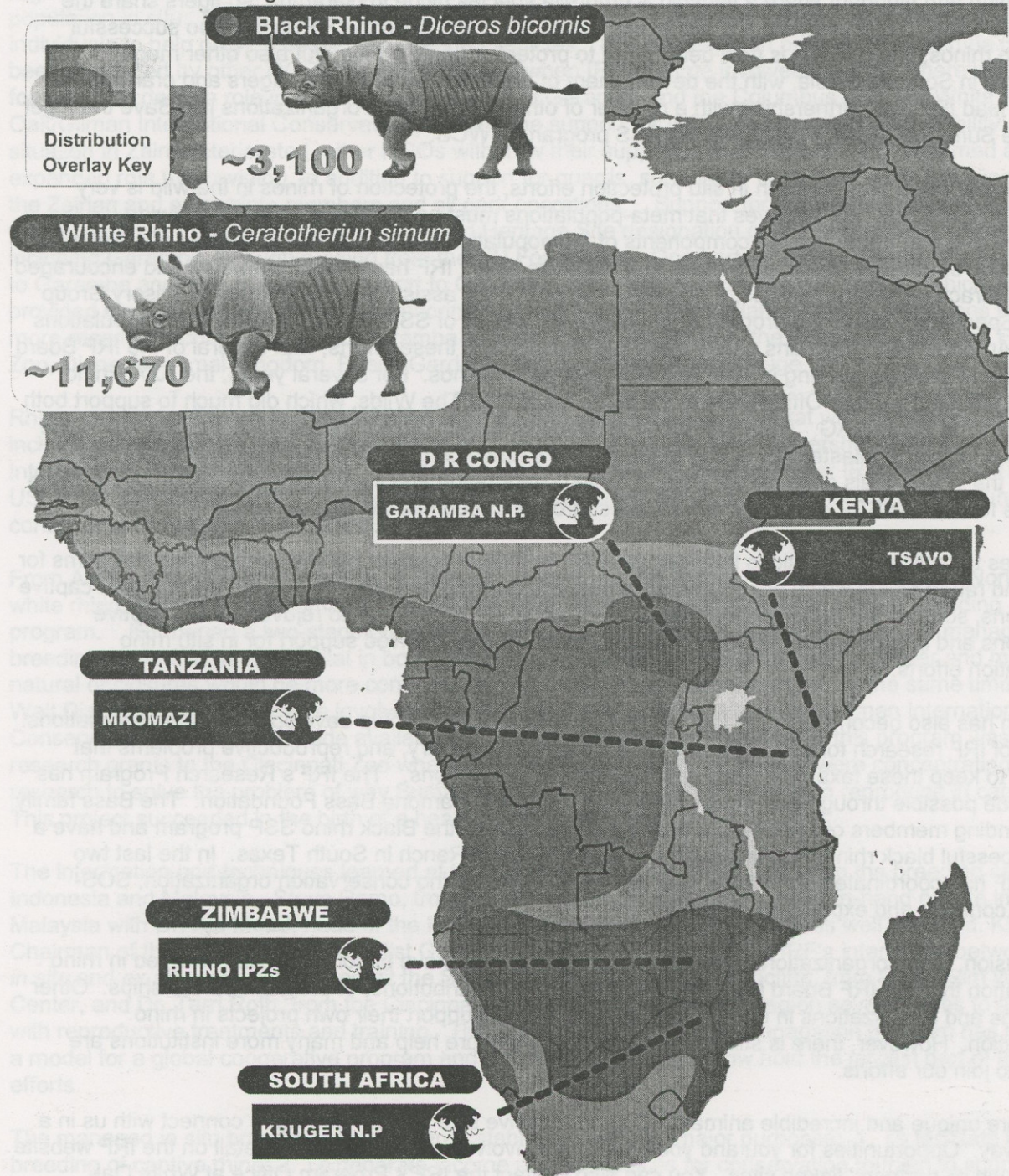
Research has also become a major tool the IRF can use in trying to help develop truly viable populations. Support of IRF research focuses on major health issues, husbandry, and reproductive problems that continue to keep these taxa from becoming sustainable populations. The IRF's Research Program has been made possible through generous grants from the Lee & Ramona Bass Foundation. The Bass family were founding members of the IBRF / IRF and also partners in the Black rhino SSP program and have a very successful black rhino breeding facility at their El Coyote Ranch in South Texas. In the last two years, IRF has coordinated some of its research with another rhino conservation organization, SOS-Rhino to continue and expand this research.

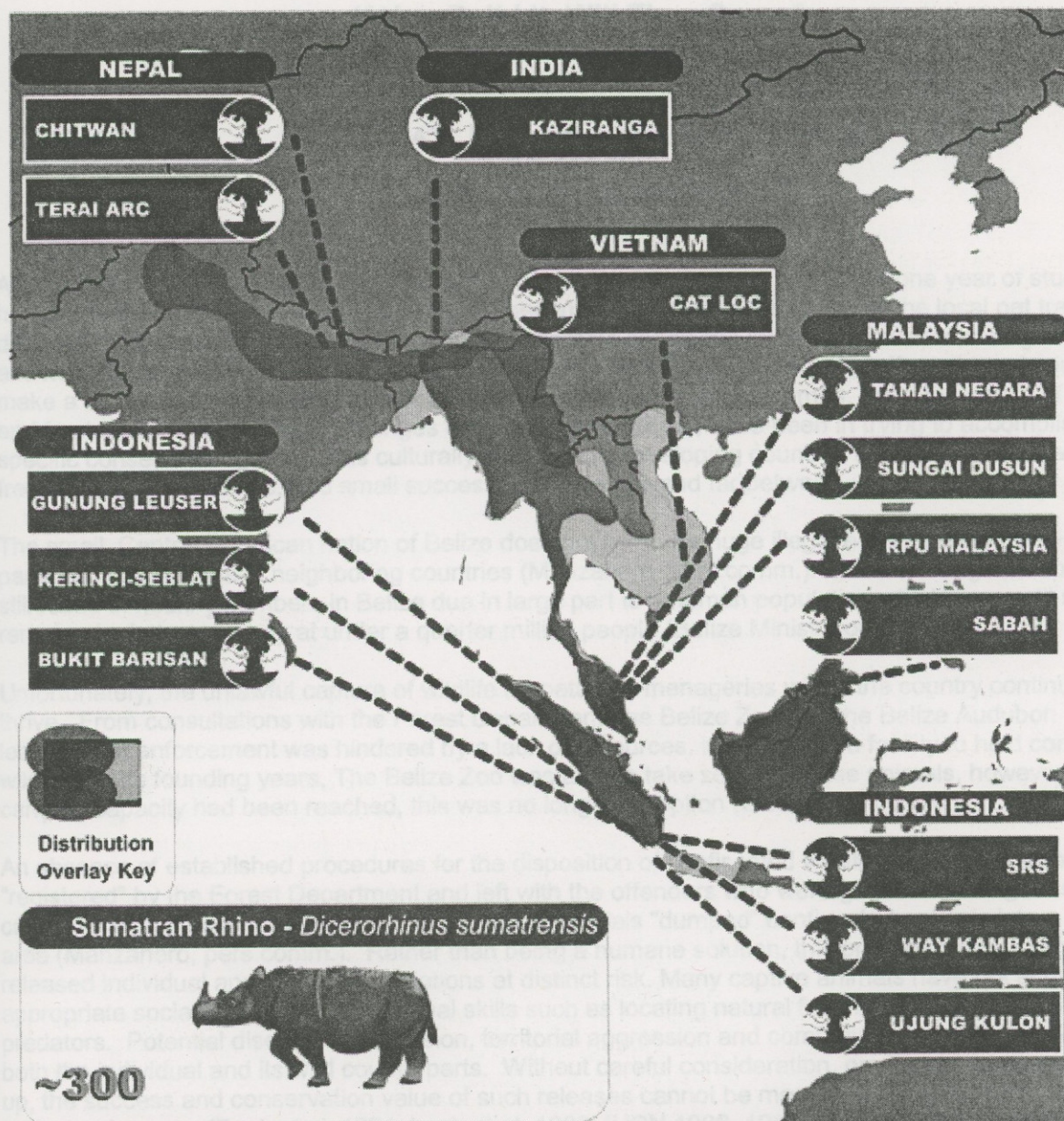
In conclusion, many organizations, institutions, and individuals, have become actively involved in rhino conservation through IRF Board membership, institutional contributions, or program partnerships. Other institutions and organizations in the captive community also support their own projects in rhino conservation. However, there is still much to be done and more help and many more institutions are needed to join our efforts.

Rhinos are unique and incredible animals. Their impressive size and gentle nature connect with us in a special way. Opportunities for you and your zoo to get involved are described in detail on the IRF website and through its partners' linked sites. You can also contact the IRF's Program Office at White Oak Conservation Center in Yulee, FL at (877-IRF-5392). The Houston Zoo supports IRF programs in Garamba and has assisted the IRF through the production of a new full color informative brochure on the IRF's programs. Find out how you can help.

IRF welcomes more partners and support for its programs and projects. Every AZA institution with a concern or interest in rhinos can and should become involved with a specific rhino program. IRF relies on and encourages collaborative efforts and combined resources for successful rhino conservation.

MAPS – IRF Funded Programs in Africa and Asia.





Release programs follow criteria based on established guidelines and existing methodology to support the highest probability of success (Lynch 1989, 1998, 1999; Klein, 1994; Konstant and Millemann, 1982). Pre-release surveys are conducted to identify suitable release sites, animals undergo health screening, are acclimated onto natural diets and returned to captivity. Methodology from the WCS translocation of howlers conducted in Belize is the primary contribution information on optimal release