CONTENTS OF FIGURE

Figure-1.1: Various forms of Prehistoric ancestors of Rhinos
(After Dinerstein, 1993) ................................................................ 20

Figure-3.1: Location Map of Pobitora Wildlife Sanctuary ....................... 39

Figure-3.2: Rhino Population of The sanctuary during 1987-2009 .............. 44

Figure-3.3: Study area showing survey grids layout ................................. 47

Figure-4.1: Showing skin folds and other important body parts of Rhino for identification ................................................................. 54

Figure-4.2: Sighting of new individuals in different field visits .................. 57

Figure-4.3: Re-sighting of individuals in different field visits ..................... 57

Figure-4.4: Total sightings of Rhinos in different field days ...................... 58

Figure-4.5: Population demography of rhinos at Pobitora Wildlife Sanctuary ................................................................................................. 59

Figure-5.1: Percentage of different landcover type in Pobitora Wildlife Sanctuary ......................................................................................... 126

Figure-5.2: Land-cover Map of Pobitora Wildlife Sanctuary based on visual interpretation of satellite imagery .............................................. 127

Figure-5.3: Percentage of habitat suitability classes in Pobitora Wildlife Sanctuary .......................................................................................... 128

Figure-5.4: Percentage of habitat suitability classes in Pobitora Wildlife Sanctuary .......................................................................................... 129

Figure-5.5: Habitat suitability map of Pobitora wildlife sanctuary for Great Indian One-Horned Rhino ................................................................. 130

Figure-6.1: Seasonal range use pattern of M001(Dominant Male) during 2007-08 ........................................................................... 145

Figure-6.2: Seasonal range use pattern of M001(Dominant Male) during 2008-09 ........................................................................... 145
Figure-6.3: Seasonal range use pattern of M005 (Adult-male) during 2007-08

Figure-6.4: Seasonal range used pattern of M005 (Adult-male) during 2008-09

Figure-6.5: Seasonal range used pattern of M013 (Adult female with big calf) during 2007-08

Figure-6.7: Seasonal range used pattern of M006 (Adult-female with small calf) during 2007-08

Figure-6.8: Seasonal range used pattern of M006 (Adult-female with small calf) during 2008-09

Figure-6.9: Seasonal range used pattern of M007 (Sub-adult male) during 2007-08

Figure-6.10: Seasonal range used pattern of M007 (Sub-adult male) during 2008-09

Figure-6.11: Seasonal range used pattern of M019 (Sub-adult female) during 2007-08

Figure-6.12: Seasonal range used pattern of M019 (Sub-adult female) during 2008-09

Figure-6.13: Pobitora Wildlife Sanctuary Showing Rhino stray zone (Area at 90% probability level is about 270sq.kms.)

Figure-6.14: Pobitora Wildlife Sanctuary Showing Rhino movement pattern outside PWLS

Figure-6.15: Spatial distribution of straying traccks indifferent directions

Figure-6.16: Pobitora Wildlife Sanctuary Showing Rhino movement intensity (2007-2008) outside PWLS

Figure-6.17: Seasonal use of straying tracts by Rhinos around Pobitora Wildlife Sanctuary-2007-2008
Figure-6.18: Pobitora Wildlife Sanctuary Showing the Rhino movement intensity (2008-2009) outside the Pobitora Wildlife Sanctuary ................................................................. 158

Figure-6.19: Seasonal use of straying Tracts around Pobitora Wildlife Sanctuary during 2008-2009 ................................................................. 158

Figure-6.20: Habitat selectivity of Indian Rhinos throughout the year .................................................................................................................. 159

Figure-6.22: Habitat selectivity during Pre-monsoon Season ......................... 161

Figure-6.23: Habitat selectivity during Monsoon Season .................................. 162

Figure-6.24: Habitat selectivity during Re-treating monsoon Season .............. 162

Figure-7.1: Threats and pressures on the survival of Indian Rhino in Pobitora Wildlife Sanctuary ................................................................. 171

Figure-7.2: Encoarchment inside the notified boundary of Pobitora Wildlife Sanctuary ................................................................. 1714

Figure-7.3: Methods of Rhino poaching incidences in Pobitora Wildlife Sanctuary during 1987 to 2010 ................................................................. 177

Figure-7.4: Rhino poaching incidences inside and outside the Sanctuary boundary (1987-2010) ................................................................. 177

Figure-7.5: Different types accidental Rhino death incidences during 1987-2010 ........................................................................... 178

Figure-7.6: Distribution of Rhino affected villages around Pobitora Wildlife Sanctuary ................................................................. 180

Figure-7.7: Rhino poaching & human deaths trend around Pobitora Wildlife Sanctuary ................................................................. 180

Figure-7.8: Showing anti Poaching Locations and patrol paths ..................... 187
CONTENTS OF TABLE

Table-1.1: Present status of Living Rhinos in world. ................................. 23
Table-3.1: Field days in different seasons and years.............................. 47
Table-4.1: Numbers of rhinos recorded different age and sex classes. .......................................................... 58
Table-4.2: Rhino Demography at Pobitora Wildlife Sanctuary during the study. ............................................. 59
Table-4.3: Sighting records of identified rhinos in different field visits ........................................................................................................... 62
Table-5.1 Prioritizations of various habitat parameters for habitat suitability of Rhinos. ...................................................... 124
Table-5.2 Different land cover types in Pobitora Wildlife Sanctuary based on visual interpretation of satellite imagery. ......................................................... 126
Table-5.3: Habitat Suitability for Great Indian One-horned Rhinos in Pobitora Wildlife Sanctuary ............................................................ 128
Table-5.4: Number of different plant species recorded during the study. ................................................................................................................. 132
Table-5.5: List of plant species found to be consumed by Indian Rhino during the study in Pobitora Wildlife Sanctuary. .................. 132
Table-6.1: Individual ID of Rhinos selected for the study of annual and seasonal Home Range pattern in Pobitora Wildlife Sanctuary. ......................................................... 141
Table-6.2: Annual Home Ranges (in Km2) calculated using Minimum Convex polygon Method (MCP) in Pobitora Wildlife Sanctuary (2007-2009)............................................ 144
Table-6.3: Seasonal Home Ranges (Km2) calculated by Minimum Convex polygon Method (MCP) in various seasons in Pobitora Wildlife Sanctuary (2007-2009) ............... 144
Table-6.4: Straying tracks of rhino around Pobitora Wildlife Sanctuary ................................................................................................................................. 154
Table-6.5: Habitat utilization Pattern of Indian Rhinos in different Seasons in Pobitora Wildlife Sanctuary ................................................................. 160
Table-7.1: List of threats and definition of 100% threat reduction for each threat............................................................................................................. 170
Table-7.2: Density of domestic Cattle inside the sanctuary gazed in different .................................................................................................................. 172
Table-7.3: Areas under encroachment inside the notified boundary of Pobitora Wildlife Sanctuary ................................................................. 174
Table-7.4: Rhino poaching incidences in Pobitora Wildlife sanctuary during 1987-2010 ................................................................................................. 176
Table-7.5: Accidental death incidences of Rhinos during 1987-2010 ................................................................................................................................. 178
Table-7.6: Conflict intensity in different affected villages around the sanctuary .................................................................................................................. 179
Table-7.7: Human died in Rhino attack and poaching of Rhinos ............. 179
Table 7.8: VILLAGES ALONG THE BOUNDARY OF POBITORA WILDLIFE SANCTUARY ................................................................. 181
Table 7.9: Other affected Villages that Rhinos use to stray around Pobitora Wildlife Sanctuary ................................................................. 1813
Table-7.10: Protection strength (Manpower and infrastructure) ............... 187
Table-7.11: Calculation of Threat Reduction Index for conservation of Rhinos in Pobitora ................................................................. 192
CONTENTS OF PLATES

Plate-1: View of the study area ................................................................. 49
Plate-2: Some animals found in the study area................................. 50
Plate-3: The Author in the study area.................................................... 51
Plate-4: Showing Influence of Positive and Negative
Conservation Factors in the Sanctuary................................. 131
Plate-5: Indian Rhinos in and around Pobitora Wildlife
Sanctuary ................................................................................... 166
Plate-6: Photographic evidences of some threats and pressure
in the sanctuary........................................................................... 195
Plate-7: Some pressures and conservation measures adopted
in the sanctuary........................................................................... 196