

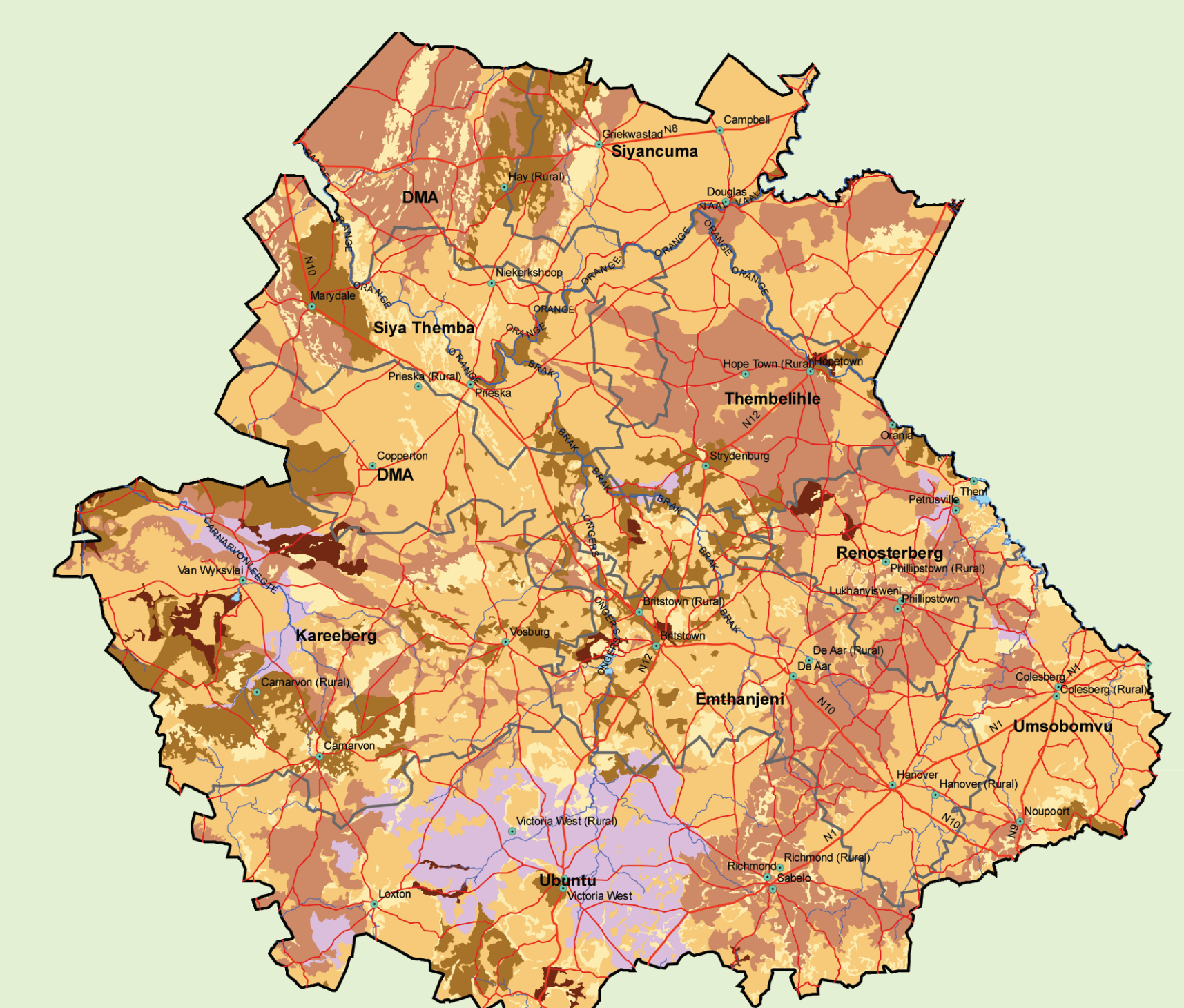
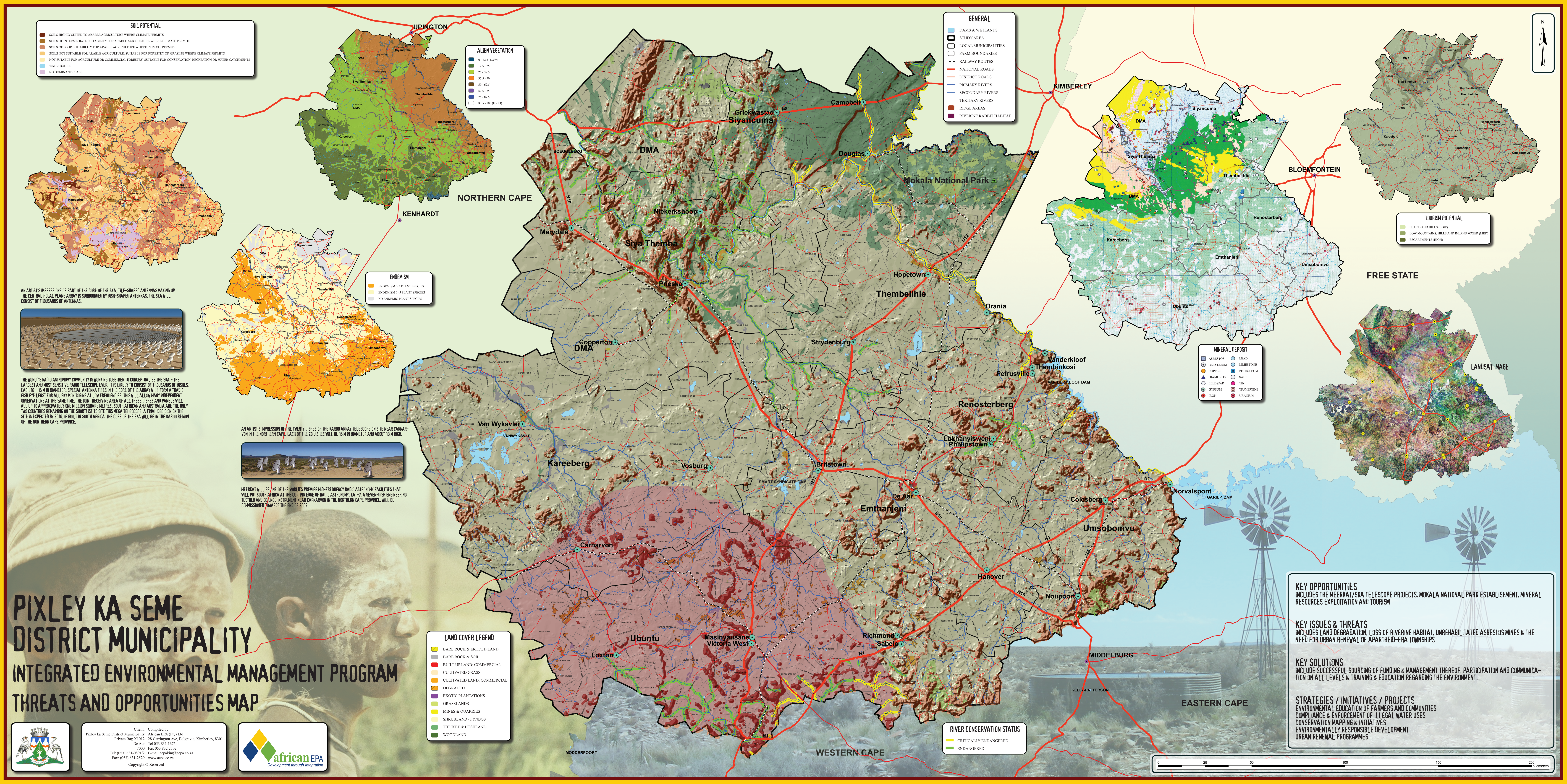
PIXLEY KA SEME DISTRICT MUNICIPALITY

INTEGRATED ENVIRONMENTAL MANAGEMENT PROGRAM

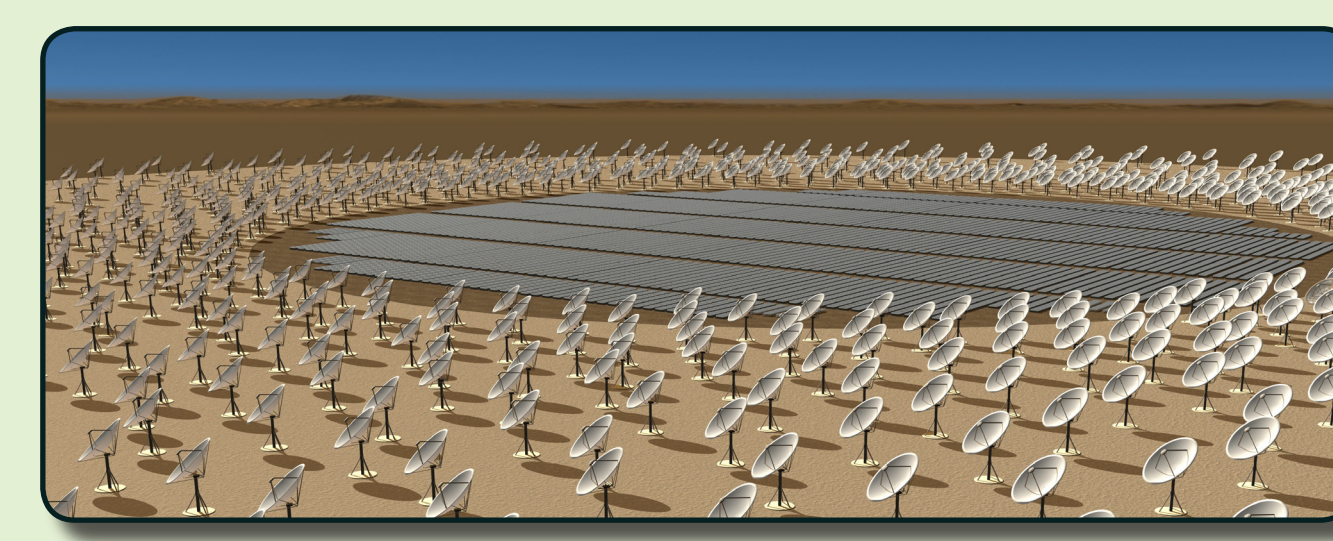
THREATS AND OPPORTUNITIES MAP



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AN ARTIST'S IMPRESSIONS OF PART OF THE CORE OF THE SKA, TILE-SHAPED ANTENNAS MAKING UP THE CENTRAL FOCAL PLANE ARRAY IS SURROUNDED BY DISH-SHAPED ANTENNAS. THE SKA WILL CONSIST OF THOUSANDS OF ANTENNAS.



THE WORLD'S RADIO ASTRONOMY COMMUNITY IS WORKING TOGETHER TO CONCEPTUALISE THE SKA - THE LARGEST AND MOST SENSITIVE RADIO TELESCOPE EVER. IT IS LIKELY TO CONSIST OF THOUSANDS OF DISHES, EACH 10 - 15 M IN DIAMETER. SPECIAL ANTENNA TILES IN THE CORE OF THE ARRAY WILL FORM A "RADIO FISH EYE LENS" FOR ALL SKY MONITORING AT LOW FREQUENCIES. THIS WILL ALLOW MANY INDEPENDENT OBSERVATIONS AT THE SAME TIME. THE JOINT RECEIVING AREA OF ALL THESE DISHES AND PANELS WILL ADD UP TO APPROXIMATELY ONE MILLION SQUARE METRES. SOUTH AFRICAN AND AUSTRALIA ARE THE ONLY TWO COUNTRIES REMAINING ON THE SHORTLIST TO SITE THIS MEGA TELESCOPE. A FINAL DECISION ON THE SITE IS EXPECTED BY 2010. IF BUILT IN SOUTH AFRICA, THE CORE OF THE SKA WILL BE IN THE KAROO REGION OF THE NORTHERN CAPE PROVINCE.

AN ARTIST'S IMPRESSION OF THE TWENTY DISHES OF THE KAROO ARRAY TELESCOPE ON SITE NEAR CARNARVON IN THE NORTHERN CAPE. EACH OF THE 20 DISHES WILL BE 15 M IN DIAMETER AND ABOUT 15 M HIGH.



MEERKAT WILL BE ONE OF THE WORLD'S PREMIER MID-FREQUENCY RADIO ASTRONOMY FACILITIES THAT WILL PUT SOUTH AFRICA AT THE CUTTING EDGE OF RADIO ASTRONOMY. KAT-7, A SEVEN-DISH ENGINEERING TESTBED AND SCIENCE INSTRUMENT NEAR CARNARVON IN THE NORTHERN CAPE PROVINCE, WILL BE COMMISSIONED TOWARDS THE END OF 2009.

- #### LAND COVER LEGEND
- BARE ROCK & ERODED LAND
 - BARE ROCK & SOIL
 - BUILT-UP LAND: COMMERCIAL
 - CULTIVATED GRASS
 - CULTIVATED LAND: COMMERCIAL
 - DEGRADED
 - EXOTIC PLANTATIONS
 - GRASSLANDS
 - MINES & QUARRIES
 - SHRUBLAND / FYNBOS
 - THICKET & BUSHLAND
 - WOODLAND

- #### ALIEN VEGETATION
- 0 - 12.5 (LOW)
 - 12.5 - 25
 - 25 - 37.5
 - 37.5 - 50
 - 50 - 62.5
 - 62.5 - 75
 - 75 - 87.5
 - 87.5 - 100 (HIGH)

- #### ENDEMISM
- ENDEMISM > 5 PLANT SPECIES
 - ENDEMISM 1 - 5 PLANT SPECIES
 - NO ENDEMIC PLANT SPECIES

- #### GENERAL
- DAMS & WETLANDS
 - STUDY AREA
 - LOCAL MUNICIPALITIES
 - FARM BOUNDARIES
 - RAILWAY ROUTES
 - NATIONAL ROADS
 - DISTRICT ROADS
 - PRIMARY RIVERS
 - SECONDARY RIVERS
 - TERTIARY RIVERS
 - RIDGE AREAS
 - RIVERINE RABBIT HABITAT

- #### MINERAL DEPOSIT
- ASBESTOS
 - BERYLLIUM
 - COPPER
 - DIAMONDS
 - FELDSPAR
 - GYPSUM
 - IRON
 - LEAD
 - LIMESTONE
 - PETROLEUM
 - SALT
 - TIN
 - TRAVERTINE
 - URANIUM

- #### TOURISM POTENTIAL
- PLAINS AND HILLS (LOW)
 - LOW MOUNTAINS, HILLS AND INLAND WATER (MED)
 - ESCARPMENTS (HIGH)

- #### RIVER CONSERVATION STATUS
- CRITICALLY ENDANGERED
 - ENDANGERED

KEY OPPORTUNITIES

INCLUDES THE MEERKAT/SKA TELESCOPE PROJECTS, MOKALA NATIONAL PARK ESTABLISHMENT, MINERAL RESOURCES EXPLOITATION AND TOURISM

KEY ISSUES & THREATS

INCLUDES LAND DEGRADATION, LOSS OF RIVERINE HABITAT, UNREHABILITATED ASBESTOS MINES & THE NEED FOR URBAN RENEWAL OF APARTHEID-ERA TOWNSHIPS

KEY SOLUTIONS

INCLUDE SUCCESSFUL SOURCING OF FUNDING & MANAGEMENT THEREOF, PARTICIPATION AND COMMUNICATION ON ALL LEVELS & TRAINING & EDUCATION REGARDING THE ENVIRONMENT.

STRATEGIES / INITIATIVES / PROJECTS

ENVIRONMENTAL EDUCATION OF FARMERS AND COMMUNITIES
COMPLIANCE & ENFORCEMENT OF ILLEGAL WATER USES
CONSERVATION MAPPING & INITIATIVES
ENVIRONMENTALLY RESPONSIBLE DEVELOPMENT
URBAN RENEWAL PROGRAMMES

