

FINAL PROJECT COMPLETION REPORT

I. BASIC DATA

Organization Name: National Botanical Institute

Project Title: Creating electronic access to information on the red data list species and endemic plant families of the Cape Floristic Region

Project Dates: April 2003-March 2004

Date of Report: May 31, 2004

II. OPENING REMARKS

Provide any opening remarks that may assist in the review of this report.

This project was proposed in order to form the basis for all future work on the study and conservation management of the rare and endangered species in the Cape Floral Region. It would provide a record of our current knowledge and framework on which to record all new data. It was hoped that the project would set an example for the incorporation of this type of work for all other critical biomes within the country.

III. ACHIEVEMENT OF PROJECT PURPOSE

Project Purpose: Decision makers, landowners and communities make informed decisions based on reliable data ensuring the conservation of Red Data species, species of endemic families and other threatened species in the CFR

Planned vs. Actual Performance

Indicator	Actual at Completion
<p>Purpose-level:</p> <p>Purpose Indicator 1 A well populated, reliable, easily accessed database on Red Data species and species of CFR endemic families</p>	<p>PRECIS Database has been considerably expanded for the CFR region.</p> <p><u>RED DATA (RD) species records:</u> Total number of records in PRECIS database for the CFR is 36 796 of which 16 944 were added during this project. Total records georeferenced and checked were 23 619. Records that could be georeferenced accurately in this project were 12 526.</p> <p><u>Endemic family records:</u> Total number of records in PRECIS database for the CFR is 4350 of which 2759 were added during this project.</p>
<p>Purpose Indicator 2 A GIS generated map of numbers of Red Data species and species of CFR endemic families concentrations in cadastral units which is used in landuse planning</p>	<p>A map of the number of Red Data (RD) species per vegetation unit produced in the new South African Vegetation Map, 2004 (and not per cadastral unit) was generated, with a list of the species occurring</p>

	<p>or likely to occur in each unit with their RD status and rarity index. The rarity index indicates how restricted that species is to the various vegetation units of the CFR.</p> <p>Due to time constraints the non-RD species of the endemic families could not be georeferenced and therefore no map was generated for them.</p>
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Describe the success of the project in terms of achieving its intended impact objective and performance indicators.

During this project the PRECIS database has been considerably boosted with well georeferenced records for the Red Data species of the CFR, which is not the case for the rest of the country. This means that GIS can be used not only to locate the Red Data species populations in the CFR more accurately than before, but also assists the planning and execution of other Rares projects such as C.R.E.W., another CEPF-funded project in the Cape.

In the original project proposal it was estimated that there were 6 000 specimens or records of Red Data taxa in the Cape Herbaria and 1 000 records for the endemic families. In actual fact 16 944 records of Red Data species and 2759 records of endemic species was encoded and the Red Data species' records were georeferenced. This larger amount of work only required 3 months extension of the project without the need for any additional funding.

A much more meaningful map related to vegetation units of the new South African Vegetation Map with not only the number of species, but also listing the species per unit with their rarity index, was produced rather than the cadastral units as originally intended. The new VegMap was not available at the time the project was formulated.

Were there any unexpected impacts (positive or negative)?

The publication accompanying the new South African Vegetation Map will include the map produced by this project and the lists of Red Data species for the vegetation units of the CFR. This is intended by the authors of the VegMap to encourage the rest of the country to do the same. This is clearly a feather in the cap for the CEPF project.

The NBI's climate change modeling team also indicated that they would like to use the data from this project for use in modeling. The outputs are detailed enough for them to use in their modeling.

The data will also now be used as a sound basis for the provincial nature reserves' rares monitoring projects.

IV. PROJECT OUTPUTS

Project Outputs: Enter the project outputs from the Logical Framework for the project

Planned vs. Actual Performance

Indicator	Actual at Completion
Output 1: The Red Data species and species of	All work, excluding the georeferencing of the non-

endemic families in the CFR are databased, geo-referenced and verified	RD species of the endemic families was completed after an extension of 3 months for this procedure
1.1. Relevant Compton Herbarium Data entered, geo-referenced and verified	Completed as planned
1.2. Relevant Bolus Herbarium Data entered, geo-referenced and verified	Completed as planned
1.3. 'Relevant National Herbarium Pretoria data already in the database geo-referenced and verified	Completed as planned
Output 2: 'A GIS generated map of concentrations of Red Data species and species of endemic families in the CFR in cadastral units which is used in landuse planning	
2.1. Data extracted and given to CPU in the relevant GIS format	The data was extracted but not given to the CPU (see below)
2.2. CPU generates digital and hardcopy maps of concentrations of Red Data species and species of CFR endemic families in cadastral units	The GIS map was produced by the project 's co-supervisor based on the new vegetation units. This was done as a result of workshops held with interested parties. Because of the extension of time needed for encoding and georeferencing, the dates originally budgeted for by the CPU for the map production could not be met. Therefore alternative plans had to be made and the CPU was freed from the task of dealing with the production of the map.
2.3. Map placed on CPU website	The map has been provided to the CPU who will integrate it into their redesigned website when feasible.
Output 3: The time and costs for encoding, geo-referencing and verifying all other herbarium specimen data in the two CFR and SK herbaria, Compton and Bolus, have been assessed and will pave the way for obtaining funds for this process	
3.1. Based on experience gained from this project and the SABONET project, make an assessment of number of species involved with the time needed to encode, geo-reference and verify data	The area covered by two herbaria contains about 12 800 species and is represented by an estimated 500 000 records. Based on the experiences of the two databasing projects it is estimated that the databasing of these collections would take a team of 8 trained persons about 10 to 12 years to complete and together with the Pretoria encoded material georeferencing would take a team of 10 skilled staff about 10 to 12 years. At current costs this would require funding in the region of \$1.6 million.
3.2. Apply for funding from GEF CAPE	Already tried for GEF funding in the planning phase of the C.A.P.E. project by incorporating the databasing and georeferencing of the total Cape herbarium collections. These proposals were eliminated.

Describe the success of the project in terms of delivering the intended outputs.

See previous successes.

Were any outputs unrealized? If so, how has this affected the overall impact of the project?

The georeferencing of the non Red Data species of the endemic families of the CFR could not be done due to lack of time. This did not impact on the importance of finalizing the more important map of the Red Data species of the flora. The encoded data is, however, still available through the PRECIS database.

V. SAFEGUARD POLICY ASSESSMENTS

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

Not applicable for this project.

VI. LESSONS LEARNED FROM THE PROJECT

Describe any lessons learned during the various phases of the project. Consider lessons both for future projects, as well as for CEPF's future performance.

The number of specimens (records) was far underestimated. For the project proposal it was estimated that there were about 7 000 records to be encoded and georeferenced in the Cape Herbarium. Actually 16 944 records were encoded and 23 619 records were georeferenced. When the project proposal was submitted no estimation was made for the number already encoded in the National Herbarium in Pretoria and already in the PRECIS database. These also had to be georeferenced. There were also about 12 000 records overall in PRE, NBG, SAM and BOL that turned out to be duplicate records.

Due to an oversight in planning, leave due to the encoders from their previous contract with the NBI was not taken into consideration and many days of work was lost due to this. In future contracts any leave must be taken into consideration.

Project Design Process: (aspects of the project design that contributed to its success/failure)

Project design was very simple but with a specific conservation need in mind. The original objective of determining the areas with the most known RD species was achieved. However, originally the outputs were to be mapped in cadastral units and after a workshop with interested parties this was changed to the new vegetation units which were only available towards the final stages of the project. This was considered to be more meaningful and useful for conservation planning.

Project Execution: (aspects of the project execution that contributed to its success/failure)

The project was well executed due to the use of previously trained encoding/georeferencing staff together with the experienced supervisor and co-supervisor with a

deep knowledge of the Cape Flora, its geography and of GIS procedures. The proper GIS tools were available from both the National Botanical Institute and the Western Cape Nature Conservation Board. Fortunately the long distance linking from Cape Town to Pretoria of the PRECIS database came on line just before the project started thus considerably speeding up the amalgamation and querying of the separate database collections.

VII. ADDITIONAL COMMENTS AND RECOMMENDATIONS

The data from this project can be considered as a basis for planning and assessing the conservation of all rare and endangered plant species in the CFR. However the need for more intensive collection of rare species data was emphasized by this project. CREW is taking up this challenge.

Through this project the protocol for the storage of RD species data has been established, making future recordings easy.

Strong links were forged between the National Botanical Institute and the Western Cape Nature Conservation Board through this project adding to the effective conservation planning of the CFR. The working relationship between the Compton and Bolus Herbaria has also been greatly enhanced.

Because of this project and the direct linking of PRECIS with Pretoria and the Compton Herbarium, the electronic use of data (databasing) has been made an integral part of the two herbaria.

A copy of the final report on the full results, together with the maps given to the CPU for their website will be forwarded to CEPF Washington by the end of June 2004.

For more information about this project, please contact:

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