PROJECT SUMMARY

TITLE OF PROJECT: Expansion and collaborative development of the forestry and biodiversity information systems BRAHMS, FROGGIE and SISTEM+.
R NUMBER: R5648
RNRRS PROGRAMME: Forestry
PROGRAMME MANAGER: OFI
SUB-CONTRACTOR: OFI
RNRRS PROGRAMME PURPOSE: The use of trees within farming systems, including community and farm woodlots, optimised.
RNRRS PRODUCTION SYSTEM: Semi arid
COMMODITY BASE: Tree fodder, fuelwood, charcoal, building poles, sawn timber, non-timber forest products.
BENEFICIARIES: Resource-poor farmers
TARGET INSTITUTIONS: National forestry research institutions
GEOGRAPHIC FOCUS: Worldwide

START DATE:01/04/93**FINISH DATE:**31/03/96
TOTAL COST:£201,209

1. Project purpose:
The demand for efficient management of the large numbers of data generated by the OFI and its collaborators in the course of ODA-funded genetics research led to the development of the SISTEM+ (Species Information, Seed, Trials and Environment data Management), BRAHMS (Botanical Research And Herbarium Management System) and FROGGIE (Forest Reserves Of Ghana: Graphical Information Exhibitor) databases (R3881, R4369, R4526). Much experience with the installation of these systems, both at the OFI and at many research institutions around the world, has shown that there is a need for the expansion of their capabilities to meet more completely and easily the requirements of their users.

2. Outputs:
The overall project objective was **to expand the technical capabilities of the SISTEM+, BRAHMS and FROGGIE databases**. The specific objectives were:
1)to make major additions to the databases in specific areas;
2)to create/improve the batch loading facilities for specific data categories;
3)to link the three systems for graphics and mapping purposes;
4)to standardize the programs to form a library of data compatible products, focusing on their respective geographical and taxonomic data structures;
5)to create network (multi-user) and windows versions of the systems;
6)to provide comprehensive and uniform documentation for each system;
7)to complete the transfer of all mainframe based data into SISTEM+ (network) and to streamline links to Alice Holt.

3. Contribution of outputs to project goal:
The project substantially achieved its objectives, thus producing aids that will assist research organisations to produce information needed for **the optimisation of the use of trees within farming systems, including community and farm woodlots**.

The BRAHMS and SISTEM+ databases were extensively upgraded, increasing their utility and distribution potential. A new library of flexible mapping and graphics software known as MUSICA was developed, in part to replace FROGGIE. MUSICA is a powerful tool that can draw and print species distribution maps, stock maps, biodiversity survey results, and any other data file with x/y or lat/long coordinates, projected or otherwise. A program called MAP-LINK was also developed to link BRAHMS, SISTEM+ and other sources of data to MUSICA.

Procedures to install, adapt and implement these systems across a wide range of project types were developed. Primer data sets, including lists of taxa, gazetteers and maps were assembled and also widely distributed, ready to import into fledgling databases. Routine maintenance and backup procedures were developed to protect project data. Documentation was prepared to cover the essential operational aspects of these systems.

4. Dissemination products:
See PROREC output.

7. Follow-up:
The immediate priority is to stabilize and further document the existing systems. This will be carried out under a new project (R6683), which will round off all work carried out to date.

Pressure from research projects and institutions for new software developments remains high. The single most important priority is to complete networking capability. The conversion of these systems to Windows also needs to be implemented as soon as possible.