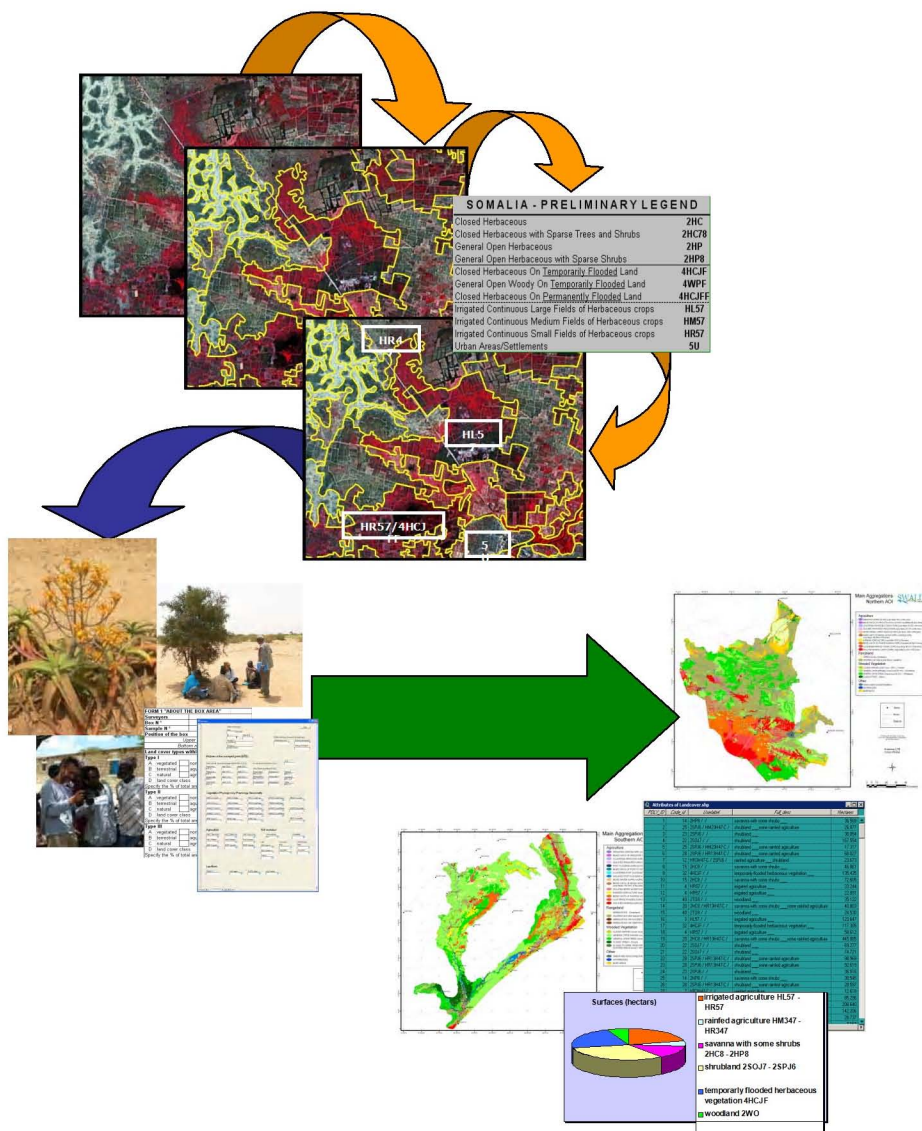


Land Cover of Selected Study Areas in Somaliland and Southern Somalia



Project Report N°L-03

February 2007

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Monaci, L., Downie, M., Oduori, S. 2007. Land Cover of Selected Study Areas in Somaliland and Southern Somalia. FAO-SWALIM. Project Report No L-03. , Nairobi, Kenya.

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List of acronyms

FAO – Food and Agriculture Organisation of the United Nations
SWALIM - Somalia Water and Land Information Management System
AOI – Area of Interest
LCCS – Land Cover Classification System
LMU - Land Mapping Unit
NASA – National Aeronautics and Space Administration
SRTM – Shuttle Radar Topography Mission
DEM – Digital Elevation Model
UNDP – United Nations Development Project
DIMU – UNDP Data and Information Management Unit
GIS – Geographical Information System
RS – Remote Sensing
UNEP – United Nations Environment Programme
MSS – Multispectral Scanner
VNIR - Very Near Infrared Radiometer
SVNIR - Short Wave Infrared Radiometer
IAO - Istituto Agronomico D'Oltremare (Florence)
IUCN - The World Conservation Union
EOS - Earth Observation System
CCs - Colour Composites
FCCs - False Colour Composites
NDVI – Normalized Differential Vegetation Index
ETM – Enhanced Thematic Mapper
DB – Database
GPS – Global Positioning System
SDRN – Environment and Natural Resources Service (Sustainable Development Department)
PAT – Polygon Attribute Table
FAT - Feature Attribute Table
asl – above sea level

Acknowledgements

The authors wish to acknowledge the considerable support given by the Project Task Force during preparation of this report.

Many thanks to the ecologists Abdulkadir Aden, Mohamed Ibrahim and Ahmed Jama Sugulle, who worked tirelessly collecting field data. The survey team benefited immensely from the support of many people whose collective effort contributed to the success of the field survey; their help is sincerely acknowledged.

Special thanks are due to the FAO staff in the Hargeisa office: Mohamed Jama Gahayr, Amran Ibrahim and Asha the FAO-Hargeisa office secretary who provided effective administrative and logistic backup, obtaining daily mission security clearances, hiring vehicles, payments, purchasing of materials, record-keeping and meeting arrangements.

Sincere acknowledgement also to the Somali drivers, and the Somali Organisations that were contacted for information are also thanked, including the Somali Mine Action Centre, Ministry of Agriculture and Cadastral Survey.

1 INTRODUCTION

This report is one of the outputs of Activity 2.B.8 of the FAO – Somalia Water And Land Information Management Project (SWALIM Phase II).

The main focus is the description of Land Cover mapping undertaken by the SWALIM Photointerpretation unit of two Areas of Interest (AOI) in Somaliland and southern Somalia.

This report includes descriptions of the methodology and the results obtained for:

- the land cover of the northern and southern AOI, with databases verified by field survey

Due to worsening security in the riverine areas of southern Somalia, the anticipated collection of field data necessary for validating the Land Cover map was delayed for the southern AOI. Therefore, the results for the northern AOI are based on field survey of May-June 2006 whereas those of the southern AOI are based on field survey in March 2007.

As indicated in the Implementation Plan of the SWALIM project, activities for the production of land baseline information include an “Assessment of Land Suitability and Agricultural Production Potential for the Riverine Areas in Southern Somalia and for the Dur-Dur/Gebiley AOI in North Western Somalia” (Activity 2B.8).

Land cover is defined as the observed (bio) physical cover on the earth’s surface (LCCS classification concepts and user manual – FAO, 2005).

In order to predict behaviour of land in response to specific patterns of utilisation, data on landform, land cover, land use, soil and climate need to be collected and properly integrated into the process of generating Land Mapping Units.

A Land Mapping Unit (LMU) is a mapped area of land, homogeneous according to the above-mentioned environmental factors, and is described in terms of its qualities. The LMU is the spatial unit of analysis for evaluation of land suitability.

A Land Cover map contains data about the distribution of vegetation, agriculture, bare areas and built up surfaces. In addition to its use as a thematic layer during suitability analyses, it is also used in the generation of land use maps.

Transformation from a Land Cover to a Land Use map takes place through a link between Land Cover classes and available socio-economic data (Annex 1).

The project document indicated two areas for assessment of physical land suitability: the Dur-Dur and Gebiley AOI in Somaliland, and riverine areas in southern Somalia. The detailed boundaries of these two AOI were delineated considering existing available Somali territory datasets and also taking into account areas mapped by the unverified 1:100 000 Land Cover map of the Juba and Shabelle riverine areas produced during SWALIM Phase I (Annex 2).