



AFRICOVER – E. Africa

FIRST NATIONAL CO-ORDINATORS MEETING OF 6, 8 – 9 DECEMBER 1997 AT THE SAFARI PARK HOTEL – NAIROBI

MINUTES OF MEETING

1.0 OPENING

THE MEETING WAS OFFICIALLY OPENED by the representative of the Permanent Secretary of the Ministry of Planning and National Development, Dr. Kang'ethe Gitu (See Annex I "Opening Ceremony") on 6 December 1997.

The opening addresses are also attached under the following Annexes:

- Guest-of-Honour (Annex II)
- FAO Representative (Annex III)
- Donor Representative (Annex IV)
- Hosting Institution – RCSSMRS (Annex V)

2.0 CHAIRMAN AND RAPPORTEUR

The Project Chief Technical Advisor (C.T.A.), Mr. Giovanni Cannizzaro, was appointed as the Chairman and Mr. Rob Postma was appointed as the rapporteur.

There was then self-introduction by all participants. The final list of participants is included in Annex VI.

The Agenda was then adopted with minor changes (Annex VII).

3.0 PRESENTATION OF AFRICOVER

The C.T.A. and the Project Senior Mapping Expert, Mr. Antonio Di Gregorio, made a presentation of AFRICOVER and AFRICOVER E. Africa. Geometric specific issues were presented by the Project Geometry Focal Point, Mr. Martin Chodota of RCSSMRS.

As answers to specific questions after some discussions, the following classifications/recommendations were issued:

AFRICOVER International Working Groups (IWG): the land cover classification document that was distributed at the meeting includes the final report of the WG N.1.

The Geometry and Geodesy document will be published in early 1998. The International Working Group 3 is related to Technical Methods and Quality Control.

A report is being produced by Scot Conseil in collaboration with AFRICOVER E. Africa. The release of document expected in 01/1998. Document will look at two practical cases: One derived from the E. African module and the other from a Senegal case study.

The IWGs were initiated under the umbrella of AFRICOVER and not by the East Africa module; the FAO selected experts for the different items (land cover classification; geodesy) were coming from all over the world not only from Africa. Regional offices (e.g. RCSSMRS) represented some countries in Africa. This selection was based on budgetary and practical reasons (discussion groups should not be too big)

AFRICOVER – E. Africa adopted a regional approach. The hosting organisation selected is the RCSSMRS in Nairobi. Equipment will be based here, training will be given to the national photo-interpreters, the interpretation done by national photo-interpreters and project staff in project offices and validated by nationals in their own countries were possible.

The AFRICOVER LCCS (Land Cover Classification System) has the possibility to describe more than 50,000 classes out of which a selection can be made to form the final legend per country.

The AFRICOVER Interpretation and Mapping Software (AIMS) is under production (by MATRA). This will provide the capacity for the photo-interpreters to undertake the interpretation and classification on screen using digital images on a PC.

LCCS is already operational and already used for the interpretation of Somalia and Kenya, while AIMS will be delivered in March 1998. It will be operational as from April 1998 and remain under evaluation for the rest of the year.

All countries will receive the software and national photo-interpreters will be trained on it during the interpretation work.

The actual sequence of country interpretation is: Somalia, Kenya, Egypt, Tanzania, Rwanda, Burundi, Djibouti, Sudan, Ethiopia, Eritrea, Democratic Republic of Congo and Uganda. The interpretation of some countries will be performed in parallel.

The Geometric Committee will seek to ensure that uniformity within the countries and between countries is maintained in the whole region. The national committees will evaluate the accuracy of national maps as a source of Ground Control Points (GCPs). Decide on the method to be used to obtain GCPs when existing maps are not satisfactory such as use of GPS campaign. Following experience gained in Egypt, the project should find if the Russian Photography could be made available for other countries.

The National Coordinator or the National Working Group (NWG) should motivate the different ministries/ counterparts in the country to have an interest in national databases. The national land cover database will be made accessible in a homogeneous manner at national level to other national institutions.

One function of the NWG is to identify national and international organizations that can benefit from the Africover database output. The activities of these organizations and/or projects will depend on the information they use and therefore the Africover database will enhance their effectiveness. The NWG can be seen as a promoter for the data and has to liaise with other organizations to see how this data can be used on a wide scale [Ministries; Non Governmental Organisations (NGOs); private sector].

The NWG also has the knowledge to disseminate the more suitable information to the different users.

The country should provide the toponomy layer. The NWG should also provide the Africover project with the administrative internal boundaries. These are important because of their link to the administration statistics.

The polygons that cross the international boundaries will be handled in the following way:

Land cover has no boundary. Therefore in the full database the polygon will not be influenced by a national boundary during the interpretation. Extra attention should be given during the interpretation of different countries to match the polygons on both sides of existing international borders. In the national land cover databases the boundaries will close the polygons shared by different countries.

The following are additional operational conclusions/recommendation:

AFRICOVER E. Africa distributes the Report of Geometry Working Group of Addis Ababa to each National Co-ordinator, including the draft report from Economic Commission for Africa (ECA).

Each country select national photo-interpreters possibly from different institutions/users (wider land cover/user knowledge).

AFRICOVER E. Africa prepares and disseminates to National Co-ordinators list of needed ancillary data. Each National Co-ordinator prepares a list of existing ancillary data and existing land cover initiatives.

4.0 PRESENTATION OF ACTIVITY FROM EACH COUNTRY

Each country represented at the meeting presented the status and progress of national activities and the relevant future plans as synthetically detailed in what follows. Each country will provide the Regional Project Office with a written report on the relevant activities and plans and on the National Working Group meeting outcomes.

The available reports at the time of the meeting are attached as Annex VIII.

BURUNDI

The National Focal Point Institution (NFPI) and the National Coordinator were established. CV's for photo-interpreters have been received. The first meeting of NWG will be held in the near future.

The main expectations are the assistance from Africover to establish land cover maps and for training for national experts.

The NFPI Institut Geographique du Burundi, the national co-ordinator is the director of the Department of Cartography; The main statutory activities are: topomaps; thematic maps; In 1984 a geodetic network was established (WGS 72) but destroyed. Most of the points can be re-established again with an accuracy of 1 m. The use of GPS is highly recommended in Burundi in order to calibrate the whole geodetic network. 75% of the leveling network has been recovered this way. An aerial photo coverage of the whole country was done in 1972 and 1984 at 1/50.000. A topomap coverage of the country based on 1972 photos exist of 42 sheets on 1/50.000

The NFPI started a land cover mapping per province based on the 1984 photo coverage. Is not very detailed and is not according to the Africover LCCS

DEMOCRATIC REPUBLIC OF CONGO

The NFPI and the National Coordinator were nominated. The NFPI is the Institute Geographique du Congo the National Co-ordinator is the same as (Regional Environmental Information Project (REIMP). The main statutory activities are topomaps. The topomap coverage at 1/50.000 covers 2% of the country; 1/200.000 covers 56% of the country.

Available data are the Land cover map (1/2.5 million); based on Landsat MSS from 1975 and 1984; visual interpretation (interpretation scale 1/250.000 and 1/400.000); ground truthing has been done with field samples and aerial surveys. Digitisation was done using Arc/Info.

The main expectations are: co-operation with the FAO coordinated REIMP project. For the execution of the national 3-year workplan basic information (topomap; land cover map) is needed for the planning of infrastructures. A document including methodology and yearly workplan has been prepared for the establishment of a collaboration between REIMP and Africover E. Africa.

EGYPT

NFPI, National Coordinator and photo-interpreters were nominated. The available topomaps delivered to FAO Rome/AFRICOVER – E. Africa.

Expectations: comparison of Africover maps and existing land cover maps based on SPOT interpretations for the cultivated areas.

Proposition: scale of maps 1/100.000 for agriculture areas (5% of the country) and 1/250.000 for the rest of the country.

The selected Photo-interpreters have experience on interpretation of aerial photos, images, and sound knowledge of land cover in agricultural area. Four interpreters were selected.

Egypt is interested in a detailed mapping of some desert areas to be chosen and pointed out for future detailed interpretation (groundwater; intensity of future distribution of population in now isolated areas).

about available ancillary data at the ministries of the different participants.

Available data : CCT as from 1987 for Western Sudan
 Aerial photos of the Blue Nile South of Khartoum
 Topomaps + control points network

Remarks : There is a high degree of enthusiasm on senior levels

The federal ministry of Agriculture already planned for a land use map and therefore is very positive about the Africover initiative

TANZANIA

Activities: Participated at IWG 1 and IWG 2
Nomination of NFPI (presided by National coordinator)
NWG established (6 institutions)

First meeting to be held soon. C.T.A. is invited for introduction to the project.
Data : topomaps 1/50.000 and 1/250.000 are available. Some maps are already at FAO Tanzania. There could be financial problems for reproduction of maps no longer in stock. Some maps have already been scanned.

Maps produced under Forest Resource Management for land cover and land use at 1:250,000 are available in both hard copy and digital form, but elevation is not represented.

UGANDA

Activities : The NWG is established (Department of Forestry, Ministry of Agriculture, the Ministry of Water Resources, Department of Wildlife, Geological Survey and Mines; National Environment Management Authority; Department of Surveys and Mapping).

CV's have been received for the posts of national photo-interpreters.

The first meeting of NWG was held on 2 December 1997. Minutes will be sent to AFRICOVER project.

The second meeting is planned for 16 December 1997 to inform partners about the results of the first NCM. Minutes will be forwarded to AFRICOVER Project.

The NWG will be made more broad based in the future. AFPI is the Department of Surveys and Mapping.

5.0 DISCUSSIONS/RECOMMENDATIONS

5.1 Objectives and procedures of NCM/Country involvement

The IWGs 1 and 2 established a basis for the Africover standards. However the refinement of these standards will only be achieved when there is an active participation of the NWG with the Africover project in an iterative way.

The geodetic committee is not yet fully operational. There is a need to have the NCM stimulating its activity. The activities of this committee will be accelerated.

Early in 1998 :

- the committee will be formed and convened
- a workplan will be developed
- CV's for a national expert to be recruited for a geometrical survey will be collected
- an evaluation should be made of possible assistance of international agencies on geodetic/geometry issues

International Agencies to consult are: NIMA; IGN; IGM; IFAg; Russian geodetic committee; International Association of Geodesy, Ordnance Survey of United Kingdom.

AFRICOVER does not have the financial means to establish a full WGS 84 geodetic network in all participating countries. The project will provide through the International Agencies for of classification of points.

The NWG or the sub-committee has to prepare a national report describing the existing geodetic situation in their country and ongoing activities. Based on these reports cooperation on a regional scale (cost-effectiveness) has to be promoted with international agencies.

Links with other initiatives are encouraged : e.g. WGS 84 points established for aviation purposes on airports

The geodetic committee has to follow up :

- how to make a geo-correction in areas where no topomaps are available
- the situation country per country, since the production chain of interpretation is already operational.
- how to match different solutions for geo-correction in one database

5.2 Financial Support by the AFRICOVER E. Africa Project for the Activities of the National Coordinator and the NWG

Originally the project document has no budget line for the financial support of NFPI and NWG. The regional project had no large national capacity building component. This was based on the fact that due to the regional approach of the project the achievement of a product and training of high quality could be reached at the national levels at relatively low cost (considering the high costs for a decentralised approach of 12 countries).

The 286-project in Uganda has a system of monthly payment for their national coordinators. The two projects can not be compared (even though they are financed by the same donor). The 286 project can not be seen as a precedent since it has a

different, national oriented approach. The 287 project has not such an elaborated reporting requirements and has a more technical approach which considers more the liaison activities of the national coordinator or NFPI.

The increase in costs for the national activities might influence the budget reserved for technical procurements.

The project has established a yearly amount for each NFPI of US\$2500 as an annual contribution concerning logistics (photocopies, diskettes), transport and nominal allowances for the National Working Group members.

Every NFPI will receive the equipment and other facilities to have an e-mail connection by June 1998.

Technical/Methodological issues: Workplan

A larger scale 1:100,000 will be adopted for small countries like Burundi, Djibouti and Rwanda. These countries already have land cover maps on 1/50.000.

National land cover legends: During the workshop at the Africover offices, the national photo-interpreters develop a list of virtual classes based on the LCCS and specific information of the country's existing vegetation.

Mainly Landsat TM data will be used for the following reasons: both the scales are used for reconnaissance surveys. The actual interpretation of the classes will hardly change with this scale difference. Also the use of 20 m pixel resolution will not improve substantially the quality of the interpretation done based on a 30 m resolution. Moreover, since the interpretation process also depends on the band used and the TM images have a better band combination used for the interpretation of the land cover it makes up for the higher resolution of the SPOT images. Also, one TM scene covers approximately 9 SPOT scenes and the price of a SPOT scene is not substantially lower. FAO also obtained an agreement to have the TM scenes at 50 % of their commercial value. Therefore the use of SPOT scenes would dramatically raise the costs of procurement of scenes (more than 9 times). Next year, September 1998, NASA will have the Landsat 7 operational and will deliver images at a commercial cost of 475 US \$. This will make the use of TM scenes even more attractive.

The digitisation of the road network/hydrographic network/administrative boundaries:

A decentralised approach is preferable. The workload will be too big for the execution of these activities when done centralised in the Africover E. Africa offices. The work can be done by the NFPI, another member of the NWG or by the private sector. It has to be executed according to the international standards. Africover can be the driving force to create a national and international accepted set of digitised administrative boundaries, roads and rivers to which other users can refer.

The AFRICOVER will cover the costs for the digitisation work, provided that quality meets standards and expenses are competitive. In case there are more candidates for the digitisation work in one country, an official tender has to be made.

International Boundaries

The countries will provide the international boundaries. A disclaimer statement such as "AFRICOVER is not an authoritative statement on international boundaries", will be added to the maps and database.

After the creation of the database, a workshop to discuss the output products with the different prospecting users is proposed.

Procedures used to guarantee a consistent continuation at the same level of detail of interpreted classes when crossing international boundaries: the concept of minimal mappable area per class will assure that the same level of detail is used in neighbouring countries. The interpretation is done scene by scene. So first a consistent interpretation of the scene is done and only later the national boundaries are superimposed.

AIMS: While using AIMS, the photo-interpreter will have to make a visual interpretation on screen of the image. This has been found to be more reliable than the automated pattern recognition in automated software.

Number of photo-interpreters that will be selected per country. Depending on the size of the country and the availability of qualified candidates the number of national photo-interpreters will vary from 2 to 4. The photo-interpreters should be selected from a cross section of members of NWG, not all from the same organization.

Other Topics.

Newsletter

More emphasis will be given on Eastern Africa on the picture on the first issue. Mailing list per country will be given by the members of the NCM.

It is important for good continuity of the NCM meetings to have the same nominees attend future NCMs, where possible.

Each country is requested to provide a ministerial or alternative ministerial structures organogramme and a more detailed organogramme in which each NFP is located.

Training

In the beginning from 1998 the project will start a training for decision-makers. In the future a joint training program with GTZ is planned.

The participants of the NCM will brief the NWG of their country on the outcomes of the meetings.

5.6 Date and venue of the next meeting

The NCM meetings will be held every 9 to 10 months

Two options for the place to hold the NCM are proposed :

- to rotate between countries in order to stress the regional approach and to take advantage of the fact that once the land cover database for the hosting country is ready or under progress, extra attention can be given to the value of it to the local users.
- To hold it in Nairobi at the Africover E. Africa base to take advantage of the fact that all members of the NCM can have a good insight in the progress made of all countries and to see which new developments have taken place. (e.g. operational use of AIMS)

Tanzania proposes to host the next NCM in October 1998 in Dar-es-Salaam. In case the delegates from some Countries by that time are not able to obtain the needed travel documents for Tanzania, another solution will be chosen, if necessary.

The delegates from Egypt will enquire for the possibilities to act as a host for a next NCM.

6.0 CLOSURE

A closure address was given to the participants from the representative of FAO - Headquarters, Mr. John Latham, Project Backstopping Technical Officer. The closing address is in Annex IX.