

**AFREF STEERING COMMITTEE MEETING HELD IN CAIRO DURING FIG/GSDI**  
**On 18<sup>TH</sup> APRIL 2005-13.30-15.30**

**Attendance (see Group Photo below)**

**AFREF Steering committee**

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|------------------------|--------------------------------|--|
| 1. Wilber K. Ottichilo | RCMRD, Kenya                   | <a href="mailto:ottichilo@rcmr.org">ottichilo@rcmr.org</a> , Chairing      |
| 2. Richard Wonnacott   | Survey & Mapping, South Africa | <a href="mailto:rwonnacott@sl.wcape.gov.za">rwonnacott@sl.wcape.gov.za</a> |
| 3. Karim Owalabi       | Survey & Mapping, Namibia      | <a href="mailto:kowolabi@namibia.com">kowolabi@namibia.com</a>             |
| 4. L.L Mollel          | Survey & mapping, Tanzania     | <a href="mailto:smd@raha.com">smd@raha.com</a>                             |
| 5. Jide Kufoniya       | RECTAS, Nigeria                | <a href="mailto:kufoniya@skanet.com">kufoniya@skanet.com</a>               |

**ECA-CODI GEO Secretariat**

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| 6. Dozie Ezigbalike | ECA, Ethiopia, AFREF Secretariat | <a href="mailto:ezigbalike.uneca@un.org">ezigbalike.uneca@un.org</a> |
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**Guest**

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|----------------------|--|--|
| 7. Muya Kamamia      | RCMRD, Kenya                                   | <a href="mailto:muyack@rcmr.org">muyack@rcmr.org</a> , taking minutes          |
| 8. H. O. Farah       | RCMRD, Kenya                                   | <a href="mailto:farah@rcmr.org">farah@rcmr.org</a>                             |
| 9. Ruth Neilan       | IGS/JPL, USA                                   | <a href="mailto:ruth.neilan@jpl.nasa.gov">ruth.neilan@jpl.nasa.gov</a>         |
| 10. Hermann Drewes   | DGFI/IAG Comm. 1                               | <a href="mailto:drewes@dgfi.badw.de">drewes@dgfi.badw.de</a>                   |
| 11. Laora Sanchez    | South American Reference frame                 | <a href="mailto:sanchez@dgfi.badw.de">sanchez@dgfi.badw.de</a>                 |
| 12. Ivan Deloatch    | Federal Geographic Data Committee, USA         | <a href="mailto:ideloach@fgdc.gov">ideloach@fgdc.gov</a>                       |
| 13. Junichi Kaneko   | JICA Expert, Survey & Mapping, Kenya           | <a href="mailto:mapkaneko@hotmail.com">mapkaneko@hotmail.com</a>               |
| 14. Ganiy Agbaje     | National Space Research & Dev. Agency, Nigeria | <a href="mailto:ganiy_janacs03@yahoo.co.uk">ganiy_janacs03@yahoo.co.uk</a>     |
| 15. Moh. Hisham Nasr | Egyptian Survey Authority                      | <a href="mailto:ESA@IDSCI.NET.EG">ESA@IDSCI.NET.EG</a>                         |
| 16. Gerhard Beutler  | IAG  | <a href="mailto:gohard.beutler@aiub.unibe.ch">gohard.beutler@aiub.unibe.ch</a> |
| 17. Jacques spikes   | GIM International                              |  |
| 18. Salah Mahmoud    | NRIAG, Egypt                                   | <a href="mailto:salahm55@yahoo.com">salahm55@yahoo.com</a>                     |
| 19. Ian Dowman       | ISPRS  | <a href="mailto:idowman@ge.ucl.ac.uk">idowman@ge.ucl.ac.uk</a>                 |
| 20. Z. Y. Masele     | Survey & Mapping, Tanzania                     | <a href="mailto:adma@ardhi.go.tz">adma@ardhi.go.tz</a>                         |
| 21. T. G. Gachoki    | Roads & Public Works, Kenya                    | <a href="mailto:tgachoki@roadsnet.go.ke">tgachoki@roadsnet.go.ke</a>           |
| 22. Kombo Mwero      | Survey & Mapping, Kenya                        | <a href="mailto:sok@gt.co.ke">sok@gt.co.ke</a>                                 |
| 23. Cyril Rotieu     | FIG Comm. 5, IGN, France                       | <a href="mailto:cyril.romieu@ign.fr">cyril.romieu@ign.fr</a>                   |
| 24. Mihael Lilje     | FIG Comm. 5,                                   | <a href="mailto:mikael.lilje@lm.se">mikael.lilje@lm.se</a>                     |
| 25. Matt Higgins     | FIG Comm. 5, Australia                         | <a href="mailto:matt.higgins@qlp.gov.au">matt.higgins@qlp.gov.au</a>           |
| 26. Ian Dutoit       | Astrata SA                                     | <a href="mailto:idoit@astratagroup.com">idoit@astratagroup.com</a>             |
| 27. Stephen Djaba    | Geotech/SOKISHA                                | <a href="mailto:Stephen@ghana.com">Stephen@ghana.com</a>                       |
| 28. Bode Adeaga      | NISI   | <a href="mailto:bodeadeaga@yahoo.com">bodeadeaga@yahoo.com</a>                 |
| 29. Milan Konecny    | ICA, Austria                                   | <a href="mailto:konechy@geogr.muni.cz">konechy@geogr.muni.cz</a>               |
| 30. Yola Georgiadou  | ITC Netherlands                                | <a href="mailto:georgiadou@itc.nl">georgiadou@itc.nl</a>                       |
| 31. Mustafa Radwan   | ITC Netherlands                                | <a href="mailto:Radwan@ITC.NL">Radwan@ITC.NL</a>                               |

**Agenda**

- Opening remarks by Co-chair AFREF Steering committee, Dr. W. Ottichilo
- Background and status of AFREF by Mr. Richard Wonnacott

- Principles of Participation in the implementation of AFREF by Dr. H. Farah
- Statement from IGS, by Ms R. Neilan
- General comments/Discussion/reactions
- Announcement of Technical meeting on AFREF by Mr. Richard Wonnacott
- Closing Remarks by Dr. Dozie Ezigbalike

## Opening remarks

Welcomed the participants, and gave briefs on the meetings agenda as above.

And a short statement on AFREF; An African initiative to establish a uniform and modern African reference frame and coordinate system based on Global Navigation Satellite Systems (GNSS). The project shall be undertaken by African in support of African development initiatives including NEPAD and UN Millennium goals.

## Background and status of AFREF

- Governing Council (GC) meeting for member states (15) of Regional Centre for Mapping of Resources for development (RCMRD), held at Windhoek, Namibia, resulting in Windhoek Declaration ([www.rcmrd/AFREF](http://www.rcmrd/AFREF)), later adopted by UN ECA CODI GEO
- United Nations Office of Outer Space Affairs/ United States of America (UN OOSA/ USA) sponsored Global Navigation Satellite System (GNSS) meeting at Lusaka Zambia, July 2002
  - Various presentation on AFREF and GNSS related activities
  - Formation of AFREF working group formed (UNOOSA)
  - Tentative AFREF structure proposed
- UN OOSA/USA sponsored GNSS meetings held in Austria Vienna, December 2003
  - UN OOSA AFREF working group proposed the budget for AFREF implementation
- UN OOSA/USA sponsored GNSS meetings held in Austria Vienna, December 2004.
  - Progress and status of AFREF presented and discussed.
  - FIG invited AFREF steering committee to attend FIG/GSDI meeting thus providing forum for discussion on AFREF. Recommended that UNOOSA to sponsor travel and accommodation of steering committee members.
  - Proposed/tasked some members to draft the call for participation (cfp) paper for discussion during FIG/GSDI meeting
  - Proposed a technical meeting in Cape Town late 2005 or early 2006
- **African Association of Remote Sensing AARSE International Conference at RCRMD, Nairobi, Kenya, 17<sup>th</sup> October 2004.**
  - AFREF and GNSS related topics presented
  - A pre conference workshop on AFREF where regional and national reports on status and progress on AFREF were presented. AFREF structure amended and TORS for Steering committee and Regional Centers formulated for adoption by UN ECA CODI during their meeting (April 2005)
- IAG/IGS meetings support AFREF, under commission of frames/third countries/Africa and chaired by Richard Wonnacott, South Africa (SA).
- FIG support as evidenced now (FIG/GSDI Cairo)

## Principles of participation

The principles of participation of AFREF were formulated by heads of national mapping organizations for eastern and southern African countries during RCMRD governing council meeting in Windhoek, Namibia December 2002.

The principles were presented and adopted by 53 African countries during the third United Nations Economic Commission of Africa, Committee on Development Information (UN ECA-CODI) meeting held at Addis Ababa, Ethiopia, May 2003.

The main principles include;

- Participation of all African countries via national mapping organizations
- Coordinate implementation at sub-regional and continental levels
- Seek international support including - technical, bilateral and multilateral partners
- Establish network of permanent Continuous Operating GNSS stations
- Establish a steering committee to oversee the implementations of the project

#### **Areas of participation**

- Tracking station networks and centres
- GNSS hardware and software, ancillary equipment, communications infrastructure
- Data Holding Centres
- Data Analysis Centres
- Coordination Centres
- Capacity Building Resources
- Technical support of international geodetic and related scientific bodies
- Industry Partners
- Financial and support in-kind

#### **Statement from IGS**

- IGS celebrated its 10 years since it started establishing global GPS networks for various applications.
- IAG/IGS looking for partners in Africa in its endeavors and AFREF initiative is a good opportunity to establish such partners. IGS/IAG will therefore strongly support AFREF particularly in technical expertise.
- AFREF has opportunity to borrow experiences from already established systems including EUREF in Europe and SIRGAS in America
- GNSS networks have apart from establishment of references frames has a lot more potentials including applications in atmosphere, crust dynamic, earth rotations amongst etc which National Mapping Organization could begin benefiting from.

#### **General comments/Discussion/reactions**

Some of the comments and queries from attendees included:

- IGS strongly supports and endorses the project as the scarcity of reference points within Africa is seen as a major short-coming in the global context. AFREF can learn from similar projects such as EUREF in Europe and SIRGAS in South America.
- ICA and ISPRS are keen to assist but largely on capacity building.
- FIG( comm.5) have working relationship with IAG(comm.1) to assist with the project to promote the use of a unified reference frame and the use of GNSS
- FIG reported that UNOOSA are also working together with the aviation industry to move towards the adoption of an “Open Air” policy for Africa which will include the adoption of a unified reference frame for Africa.

- IAG has included AFREF within their structure through Comm. 1 on frames/third countries/Africa (AFREF) and have a strong commitment to the project. IAG comm. 1 has held discussions on how to support AFREF and one suggested means is for National Mapping Organisation to establish partnerships directly with IAG and partners including IGS, GGOS, IERS, UNAVCO, NASA, etc .
- **Requests made that**
  - A project plan (route map) be prepared to set out the way ahead. It is envisaged that the project will be of reasonably long duration (up to 10 years) and that a project plan for the immediate future will be prepared;
  - A questionnaire be prepared soliciting information on the reference frame or frames used in each country, in-country resources and expertise to be presented during the proposed technical meeting in Cape Town in form of country report.
  - A costing of the project be prepared which must include not only capital costs but also running costs;
  - The organisational structures of NEPAD need to be made aware of the project;
  - A clear set of specifications and standards should be prepared. In this respect, the IGS has published standards and specifications that can be directly adopted for the project.
  - Available documentation on the project must be made easily available through a website or electronic mail.

The meeting was informed of the planned technical workshop to be held in Cape Town in January 2006. During the meeting, it is expected that African participants will give country reports on geodetic status in their country and progress on AFREF if any. Participation from international community including IAG/IGS, EUREF and SIRGAS will give their experiences.

