

No. 14742

**UNITED STATES OF AMERICA
and
ZAIRE**

Memorandum of Understanding on remote sensing: Acquisition of satellite data. Signed at Washington on 6 January 1975 and at Kinshasa on 31 January 1975

Authentic text: English.

Registered by the United States of America on 7 May 1976.

**ÉTATS-UNIS D'AMÉRIQUE
et
ZAÏRE**

Mémorandum d'accord relatif à la télédétection : acquisition de données de satellites. Signé à Washington le 6 janvier 1975 et à Kinshasa le 31 janvier 1975

Texte authentique : anglais.

Enregistré par les États-Unis d'Amérique le 7 mai 1976.

MEMORANDUM OF UNDERSTANDING¹ BETWEEN ERTS-ZAIRE AND THE UNITED STATES NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

1. The purposes of this agreement are to set forth the responsibilities of the parties and the procedures for providing for: (a) direct access, by a ground station to be built and operated in Zaire by ERTS- Zaire, to NASA ERTS-1 and ERTS-B satellite data and to the data from any future ERTS experimental satellites which NASA may launch, and (b) availability to NASA of data acquired by the Zairian station pursuant to (a) above, subject to the provisions which follow.

2. For its part, ERTS-Zaire will use its best efforts to:

- (a) Develop and operate a facility near Kinshasa, Zaire for acquisition and processing of ERTS data as well as other non-space data of interest to ERTS-Zaire entirely at its own cost, including the cost of the necessary communication links with the NASA ERTS OCC/NDPF (Operations Control Center/NASA Data Processing Facility) at the Goddard Space Flight Center.
- (b) Provide during Phase B, as described below, processed data to ERTS Principal Investigators duly selected by NASA whose test sites are in range of the Zairian data acquisition station for the period of coverage promised to them and under the same conditions as NASA provides data to Principal Investigators. Should another country in the region establish ERTS facilities, ERTS-Zaire's obligation to provide data to Principal Investigators in that country will terminate as soon as the new facilities are capable of providing this service. ERTS-Zaire will continue to serve Principal Investigators in countries within range of the Kinshasa Station which do not have ERTS facilities, unless and until alternative arrangements are concluded.
- (c) Provide, to the best of its ability, any support requested by NASA in a spacecraft emergency condition, such as the provision of data indicated in paragraph 2 (e) below, should the on-board tape recorders fail.
- (d) Provide quarterly reports in English to NASA on the progress and results of the ERTS-Zaire experimental program with respect especially to the ability to apply data and analyses obtained to real-time decision making, and the principal applications made.
- (e) Make available to NASA, on a cost-free basis and in the NASA-preferred format (negative imagery format with identifying annotation) such copies of the ERTS data it acquires and processes as NASA may request in reasonable quantities (except in emergency conditions as noted in paragraph 2 (c) above). These data provided to NASA by ERTS-Zaire will be made available to the public from US sources on precisely the same terms as data acquired directly by NASA. These provisions apply as well to selected duplicate computer compatible tapes. Public requests (for data) from the area covered by Kinshasa Station will be referred as appropriate to ERTS-Zaire, or to other regional facilities which may be established in the area. Coordination among such facilities would be highly desirable.
- (f) Include as output data from the Kinshasa Station computer compatible tapes (CCT's) and 70mm roll film.

3. For its part, NASA will use its best efforts to:

- (a) Program ERTS-1 and any subsequent experimental ERTS-type satellite to acquire data in areas accessible for direct read-out by the Zairian Station. The frequency of such

¹ Came into force on 31 January 1975 by signature, in accordance with article 7.

- programming will be subject to mutual agreement by the Project Managers (see below). It will be limited to test purposes in Phase A, and expanded as agreed in Phase B.
- (b) Provide to ERTS-Zaire as necessary antenna pointing elements for acquisition of the ERTS spacecraft transmitted signal and updated definitive orbital information for use in processing the data.
 - (c) Process, on a time-available basis and as may be agreed by the Project Managers, a limited number of data tapes acquired by the Zairian Station in Phase A for initial evaluation and calibration of the station's performance.
 - (d) Provide, during Phase A, ERTS data to any NASA-selected Zairian Principal Investigators to the extent of the time-coverage promised for them.
 - (e) Make available, for comparison purposes, a limited number of selected NASA data tapes covering portions of the area accessible to the Kinshasa Station.
 - (f) Keep ERTS-Zaire informed of other prospective ERTS facilities in the area so that regional coordination can be effected.

4. The course of the project will be divided into two phases. Phase A is for the test and checkout of the Kinshasa Station. Phase B is for the following period of routine data acquisition and processing at the Kinshasa Station. Phase A will begin when the Project Managers agree on the readiness of the technical and operational interfaces required to carry out the project and on a schedule for accomplishing Phases A and B. Phase A will be concluded and Phase B begun by mutual agreement of the Project Managers.

5. To implement the agreement, ERTS-Zaire and NASA will each designate Project Managers to be responsible for coordinating the agreed functions and responsibilities of each side with the other. The Project Managers will be co-chairmen of a Joint Working Group which will be the principal instrument for assuring the execution of the project and for keeping both sides continuously informed of the project status. The Joint Working Group may establish such committees as required to carry out the project.

6. The following additional understandings are confirmed:

(a) ERTS-Zaire will resolve any radio frequency difficulties in the region to the satisfaction of the parties concerned so this cooperation can proceed without difficulty.

(b) The responsibility for spacecraft control, health and status will remain with NASA throughout the program.

(c) There will be no exchange of funds between ERTS-Zaire and NASA for ERTS-1 operations. This agreement assures ERTS-Zaire access to the ERTS-B satellite without charge for a six-month period from the date the ERTS-Zaire ground station begins to acquire ERTS data. It is understood, however, that NASA may thereafter establish some cost-sharing arrangement, such as users' fees, for participating Ground Stations.

(d) It is understood at this stage that NASA cannot make a firm commitment for future ERTS-type satellites.

(e) Decisions taken by the International Telecommunication Union require that radio frequencies for future operational ERTS satellites will differ from those currently used for experimental satellites.

(f) It is understood that ERTS-Zaire and the other Zairian agencies participating in the program will pursue an ERTS open-data policy comparable to that of NASA and other US agencies participating in the program, particularly with respect to the public availability of data. ERTS-Zaire will thus ensure unrestricted public availability of the earth resources satellite data at a fair and reasonable charge based on actual cost.

(g) Training and exchange of technical personnel will take place as mutually agreed.

(h) ERTS-Zaire and NASA will freely share and exchange technical information as mutually agreed, and consistent with the export regulations of the two countries.

(i) It is understood that this project is experimental in character and subject to change in accordance with changes in technical requirements and opportunities.

(j) ERTS-Zaire and NASA may each release general information to the public regarding the conduct of their own portion of the project as desired and, insofar as participation of the other agency is concerned, after suitable coordination.

(k) ERTS-Zaire and NASA will assure that the project is appropriately recorded in still and motion picture photography, and that the photography is made available to the other agency upon request for public information purposes.

(l) It is understood that the ability of ERTS-Zaire and NASA to carry out the responsibilities of this agreement is subject to the availability of appropriated funds.

7. This Memorandum of Understanding shall enter into force upon signature by ERTS-Zaire and NASA and shall continue in force for four years, subject to extension as may be agreed by ERTS-Zaire and NASA.

For ERTS-Zaire:

[Signed]

BISENGIMANA RWEMA

Directeur du Bureau du Président¹

Date: 31 janvier 1975²

For the National Aeronautics
and Space Administration:

[Signed]

JAMES C. FLETCHER

Administrator

Date: 1/6/75³

¹ Director of the Office of the President.

² 31 January 1975.

³ 6 January 1975.