



UNITED NATIONS  
ECONOMIC AND SOCIAL COUNCIL

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Distr.  
LIMITED

E/CN.14/CART/341  
23 November 1972

Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA

Third Regional Cartographic Conference  
for Africa

Addis Ababa (Ethiopia) 30 October-10 November 1972  
Provisional agenda item 4

REPORT OF ITALY

Submitted by the Government of Italy

1. Italian official cartography is based on the national agencies listed below:

- (a) Commissione Geodetica Italiana: this agency is responsible for co-ordinating and promoting geodetic, topographic, photogrammetric and cartographic projects, stimulating and maintaining scientific and technical research, and representing Italy to certain international organizations.
- (b) Istituto Geografico Militare (IGM) depending from the Ministry of Defence, Army, with its offices in Florence. This agency is responsible for executing and supervising all geodetic, topographic and cartographic work related to the official maps of the country. These maps fall under the following headings:

Field survey maps scale 1 : 25,000

Maps derived from the above scale 1 : 50,000

" " " " " scale 1 : 100,000

The series of these maps is now completed. The actual tendency of IGM is to abandon the 1:25,000 scale series, and to publish and update a 1:50,000 scale and smaller scale series only.

The reason for this policy is that the 50,000 map is deemed sufficient for military purposes and that the 25,000 map is insufficient for engineering purposes at the present technological state, and very costly to update.

- (c) Direzione Generale del Catasto e Servizi Tecnici Erariali: depending from the Ministry of Finance, this agency is responsible among others for producing, revising and maintaining the cadastral maps of the Italian territory. The cadastral maps are drawn to the scale between 1:1,000 and 1:4,000, showing the division of ownership and the use to which the land is put.

- (d) Istituto Idrografico della Marina: depending from the Ministry of Defence, Navy, with its offices in Genova, this agency is responsible for producing, revising and maintaining the charts of the Italian coastline and ports. The nautical charts vary in scale:

General charts, scale 1:750,000  
to 1:4,000,000

Nautical charts, scale 1:25,000  
to 1:250,000

Coastal charts, scale 1:1,000  
to 1:10,000

- (e) Servizio Cartografico dell'Aeronautica: depending from the Ministry of Defence, Air Force, with its offices in Rome, this agency is responsible for producing airport maps and aeronautical charts.
- (f) Servizio Geologico: depending from the Ministry of Trade and Industry with its offices in Rome, this agency produces, revises and maintains Geological Maps of the country, on a 1:100,000 scale.
- (g) Servizio idrografico, servizio dighe, servizio bonifiche e servizio acquedotti (hydrographic, dams, reclamation and aqueducts services) of the Ministry of Public Works with seat in Rome, entrusted with levellings for special purposes.

Geodetic operations in Italy were started about 100 years ago by the IGM and are completed now. Recently the levelling net covering the country and amounting to 36 polygons totalling 12,700 km has been reobserved.

Recently new measurements of the bases and some of the sides of the trigonometric network have been made using the very latest electro-optical distance measuring equipments. Among others the sides of a chain running the length of Italy from the Alps to Sicily have been measured as the last part of the European calibration baseline Tromso-Catania of the world-wide satellite triangulation network, Catania being one station of the said worldwide net.

In co-operation with some universities, IGM is also carrying out measurements to set up a local satellite triangulation network both in Europe and in the Mediterranean area. This international co-operation project also includes astronomical measurements.

The experience has proved that the 25,000 map series covering the whole of the country is insufficient for the needs of civil engineering projects, planning, reclamation and of the conservation of soil and natural resources. The need of general maps at larger scales as 1:10,000 or 1:5,000 is therefore increasingly felt.

The production of such maps falls beyond the scope of the national agencies and is left to the initiative of the Regional Governments that share with the National Government the responsibility of the administration of the country.

Some of the Regional Governments have already initiated the production of aerophotogrammetric maps at large scales, have drawn the specifications for such maps, and have subcontracted the work to specialized firms.

2. Besides the official organizations, co-ordination in surveying and mapping is also provided by several private associations such as:

- (a) SIFET, Società Italiana di Fotogrammetria e Topografia, (Italian Society for Topography and Photogrammetry). This society represents Italy in the International Society for Photogrammetry. It publishes a quarterly bulletin containing technical and scientific articles on topics related to photogrammetry and topography.
- (b) AIC, Associazione Italiana di Cartografia, (Italian Association for Cartography), represents Italy in the International Cartographic Association; it publishes a bulletin containing original contributions on the field of cartography.
- (c) ANIAF, Associazione Nazionale Imprese Aerofotogrammetriche, (Association of Italian Aerial Photogrammetry Enterprises) recently established, grouping 24 private firms working on map-making by aerial photogrammetry. Some of these have or had branches in African countries.

3. Italian tradition in surveying goes back to the names of Ignazio Porro, who invented tacheometry and established fundamental principles in photogrammetry, of Pio Paganini, who first produced an official map by photogrammetric methods, Ermenegildo Santoni and Umberto Nistri who designed and constructed most advanced and perfect instruments in photogrammetry, recently the first existing stereoscopic comparator with automatic recording and the first analytical plotter.

This longstanding tradition is continued by several firms constructing surveying and photogrammetric instruments, and by research groups in the universities and in the national agencies. The most advanced techniques in surveying, map-making and updating, such as analytical triangulation, numerical cadaster, orthophotomapping, digitising, photointerpretation are therefore followed and applied in Italy by both official and private agencies.

Italy has been present in the recent development of surveying and cartography in African countries through contracts established with governments on the base of international tenders, through co-operation with firms of other countries, and through contracts established with International Organizations.

The prospects of the Italian participation in the development of African Cartography are considerably increased since a more effective law than was available in the past has been recently passed by the Parliament.

The law aims at encouraging the technical, cultural, economic and social progress of the developing countries, and contemplates, besides other means of implementation, the possibility to send to the developing countries experts, advisers, technicians and instructors; the vocational training of citizens of the developing countries by promoting through agreements with universities, duly qualified organizations and agencies, courses of study, specialization and training; the supply of installations, equipments, materials and services under favourable terms or, in special cases, free of charge; the promotion and where necessary the subsidizing on the request of the countries concerned, of studies and projects of Italian experts, technicians, companies and enterprises specially in the frame of the technical co-operation and programs drawn by International Agencies or Organizations.

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