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**ESTABLISHMENT OF A GEOGRAPHIC DATABASE FACILITY
FOR AFRICA***

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**THE NEED TO BUILD A REGIONAL
GEOGRAPHIC INFORMATION DATABASE FACILITY**

EXECUTIVE SUMMARY

Reliable and timely geographic information empowers the user to better document current conditions and to monitor what is happening; to draw from past experience so as to improve on future performances, and; to establish linkages and balance between economic, environmental and social capital in order to improve upon the basis for societal response. There is availability of satellite and other geographic data in many African countries but the capacity to absorb and process the data into useful information is not there. However, in the last few decades, the world has seen major changes and advances in spatial data systems and technologies. A range of powerful technologies has been developed, technologies that can become real tools in furthering environmental and human development objectives. The full realization of their benefits require large financial investments to acquire the technologies and to develop high level skills, capitals that African countries lack.

There is a growing international sympathy for the need to give affirmative development assistance to developing countries to acquire some of these technologies and develop skills in areas that support the Rio Principles of the Earth Summit, 1992. But there cannot be realistic multilateral interventions that would reach out and empower all the 53 African countries effectively with the required capital to build individual technical capacities and for development. A better initiative would be one which develops an African Regional Facility, that would in time, nurture and stimulate the growth of capacity building at national level. Such integrative approach at regional co-operation would be in the spirit of the 1980 Lagos Plan of Action and the 2000 Lome Agreement on African Union, the mechanism of which were adopted by the Organisation of African Unity.

There is an urgent need to build such a geographic information database Facility (The African Regional Facility) that would provide for African countries, the capacity to acquire and process spatially referenced information on topical issues such as natural resources endowment, environment, development and monitoring of natural and technological hazards. Indeed, in most African countries, the work of charting their underlying resource endowment by means of systematic surveys is just now getting underway. In so far as most African countries' economic progress is substantially associated with the location, opening up and exploitation of additional primary resources, the African Regional Facility shall bring about, with rapidity, depth and constancy, the discovery of more resources and their economically effective supply.

Secondly, The African Regional Facility would contribute the prerequisite spatially referenced earth information needed to undertake comparative research and analysis of the terms of the multitude of the ever-increasing international multilateral conventions and agreements. The periodic studies by expert, multi-disciplinary committees shall monitor and assess the actual performance as opposed to the designed objectives of the multilateral agreements and conventions as they affect African economies. The studies shall propose through UN Economic Commission for Africa (UNECA) and African Union mechanisms, informed response of creative policy initiatives on trade, environment and development interface. They would articulate and design cross-sectoral reforms on the structures and terms of the multilateral conventions and agreements that must guarantee the integration of the aspirations of African countries.

But perhaps the distinguishing need for the African Regional Facility shall be manifest more in the role the African Union and UNECA must play in moderating and influencing peaceful resolution of boundary conflicts amongst African states. As the most influential Africa wide institutions, African Union and UNECA must avail their executives with the tools and skills encapsulated in an up-to-date geographical information database, to enable them evolve innovative and sustainable solution to Africa's wide range of problems. The Facility shall advance regional co-operation and development through capacity building in the member countries that are not immediately endowed with such technical skill base.

Global and Regional Geographic Databases are the engine room for the development of geographical indicators for all sustainable human development in the new millennium. The United Nations General Assembly at its 1997 Earth Summit+5 has confirmed their status when it accepted the Santa Barbara Statement on Global Mapping for the Implementation of Agenda 21, presented jointly by the United States and Japanese Permanent Representatives to the UN. The Statement, prepared from the Inter-regional Seminar on Global Mapping for the Implementation of Multilateral Environmental Agreements, aims at fostering international cooperation in the development of the Global Map for the Implementation of Multilateral Environmental Agreements.

By the year 2002, when the UN General Assembly meets to consider the 10 years review of the Earth Summit, many more global and regional geographic databases would have come on-stream including the Global Spatial Data Infrastructure (GSDI), the UN Geographic Database, the Permanent Committee on GIS Infrastructure for Asia and the Pacific (PC GIAP), the Permanent Committee on Spatial Data Infrastructure for the Americas (PC-IDEA), and the European Organisation on Geographic Information (EUROGI). According to the UN Cartographic Section, Library and Information Division, there are four operational regional geographic databases by Dec., 2000 – already functional and integrated in to the family of those regional organisations that are hard at work making the our world a better place. Whether or not African countries and their organisations participate in these global efforts, global and regional datasets shall be produced – of course leaving the African datasets inaccurate and incomplete, if by our acts of commission or omission we are left behind. The African Regional Facility should be operational in time for the Earth Summit +10 review meeting of the General Assembly in 2002, to give African countries and experts an additional platform upon which to contribute meaningfully to sound global resources management.

PRINCIPAL OBJECTIVES OF THE REGIONAL FACILITY

The African Regional Facility shall lead African stakeholders in the development of the African Geospatial Data Infrastructure. It shall:

- i. Develop intra-regional policy, institutional framework and administrative arrangements that provide mechanisms for sharing experience, technology transfer and coordination of the development of the core geographical datasets;
- ii. Develop common technical standards including common geodetic reference frames data models, data dictionaries and data quality, so that data from numerous databases can be harmonized;
- iii. Create, maintain and develop data, meta-data and exchange standards, feature codes, topological structures and data formats, interoperability, open systems and other protocols;
- iv. Become the clearinghouse for appropriate data and metadata; and develop policy framework for accessing data custody, distribution, confidentiality, copyright and royalty structure by member states and other users;
- v. Assist member states to develop their National Topographic Database Infrastructure based on harmonized geodetic framework;
- vi. Strengthen the regional mechanisms for technical cooperation and promote partnership for development to support policies, standards and procedure for the collection, production, archiving and dissemination of spatial data between African NMOs, ECA committees and organisations, universities, international bodies, African Unity permanent working committees, Inter-Agency committees on geomatics, at regional level;
- vii. Stimulate, promote and co-ordinate African countries' participation in international initiatives on the development of regional and global spatial data infrastructure:
 - ISO Technical Committee on geomatics standards;
 - Open GIS Consortium;
 - UN Geographical names;
 - International Steering Committee for Global Mapping;
 - Global Spatial Data Infrastructure Group;
 - Other international arrangements.

CONCLUSION

This paper sets out the vision of a Facility, the African Regional Geographical Information Database, and the uses to be derived from it that is required to support activities undertaken by African nations at national and regional levels, to achieve their common economic and social objectives. The memo also suggests the need for African countries to co-operate to build one Facility immediately, from which to spew off in the future, more national units: spatial data are expensive to generate,

maintain and integrate with other data; the change of mapping technology requires the re-equipping and retraining of African countries' stock of instruments and personnel, an undertaking currently beyond the means of individual African countries.

According to the Director UN Statistics Division of the Department of Economics and Social Affairs, "The mandate for the development of Global (and by implication national and regional) map products are clearly spelled out in the document adopted at the Special Session of the United Nations General Assembly on the status of Agenda 21 in June 1997... The Global (national and regional) map product itself, and the products that may be derived from it will be of value to decision makers as they seek to assess the status of on to monitor environmental conditions. It will also contribute to the establishment of conditions that will lead towards sustainable improvement in Global environmental conditions..." In the context of the African region, the use of the products of Global (national and regional) geographical database goes beyond the environmental issues. There is need for regional indicators of spatial nature for example, to track the effects of refugees, and internally displaced people on food production and security in the non combat zones adjoining combat areas; to anticipate and monitor the unmet needs of sheltering the teaming populace in the emerging Megapolis and Metropolis on our continent; or to simply record the disaggregated achievements made in child immunisation, education or employment. The uses of spatial indicators in all fields of social, economic and environment are limitless. All these and many more themes in any human endeavour within the African region can be modelled using geographical indicators and datasets from the African Regional Facility.

The Facility shall catalyse the development of national geospatial data infrastructures through capacity building, and through the co-ordination of regional efforts for the development of institutional frameworks, data standards, and clearinghouse and on metadata. It shall provide for each participating country, the factual scientific spatial data and the analytical framework to study Multilateral Environmental and Trade Agreements themes and ensure that each country has exercised its rights and met its obligations. It shall foster peaceful co-existence between African countries by providing African Union and ECA with the wherewithal to intervene effectively to manage boundary issues between member states. It shall provide to the international community, the relevant spatial data to model regional and global environmental themes and to monitor natural and technological hazards.

PRAYER

It is our prayer to the distinguished CODI members to:

Bear in mind that reliable and timely geographic information empowers states to take sound decisions on sustainable developments and trade, and promotes harmony between states;

Note that accurate up-to-date maps and spatially referenced data sets about Africa and its 53 states, needed to support sustainable development, do not exist;

Note further that most African countries have weak institutional capacity to acquire, process, store and distribute information and an even weaker capacity in technical personnel and investment capital to take advantage of new technology;

Observe that it would be unwieldy for all 53 nations to seek ODA and technical assistance to simultaneously develop their individual national data set. It is more practical for development partners, and more useful for African countries to have one holistic regional Facility that would later on, strengthen the national structures;

Recall the June 1997 General assembly Summit has already accepted that the 1990 Lagos Plan of Action and the 2000 Lome African Union Community agreements have provided the mechanism for such regional integration.

Pass a Resolution establishing the African Regional Database Facility and its structure.

Convene a Working Group to work out a 10 years Action Plan for the establishment of the OAU geographical information database Facility. The 1st phase of the African Regional Facility must be functional by March 2002, in time for the UN General Assembly Review Seminar on Earth Summit +10.

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