

Statement (India) at the 1st High Level Forum Meeting of United Nations Global Geospatial Information Management held at Seoul on 24th October 2011

T Ramasami, Secretary to The Government of India, Ministry of Science and Technology, Government of India, New Delhi

1. Expression of Delight

Excellencies, The Minister of Land, Transport, and Maritime Affairs of the Republic of Korea and our host for this high level meeting, the Ministers of Chile, Finland, Malaysia, Mongolia, Namibia, Niger and various countries participating in the Forum, Dr Lawrence from UK; ladies and gentlemen, distinguished guests and friends, representatives of the media and all in this august assembly; let me first of all express my deepest sense of delight in being able to participate in this meeting and represent India.

Let me congratulate His Excellency the Minister of Republic for Korea for his leadership and inviting the 1st High Level meeting to this wonderful city and hosting this historical event. Let me also greet all those who have worked hard in making this high level forum meet for designing and developing a framework for global partnerships in the area of Geospatial Information Management. This is an extra-ordinary thought. People associated with the thought should be extra-ordinary too. Let me express as to how happy I am in participating in this extra-ordinary event on behalf of India. I am delighted.

Our Minister Mr Vilasrao Rao Deshmuk ji was planning to attend this forum meeting himself and he could not personally participate on account of last minute compulsions of people in public life. He sends his greetings and well wishes.

2. Historical Perspective of Geospatial Science and Technology in India

Indian civilization is ancient. There are historical evidences that the concept and practice of mapping the surface of earth have been parts of civilizations that inhabited India since 2500-1900 BC and in more recent times in Mogul history. The scholar Sadiq Isfahani compiled a 32 sheet atlas of the world, which he held was suitable for human life in 1647. British Raj established Survey of India in 1767 AD. Therefore, surveying and mapping have become activities closely linked to the Governance in India for more than three centuries.

We recognized that mapping and surveying techniques would remain connected to changes in sciences and technologies. Survey of India is one of the oldest departments of our Government. They bring to the table a level of accuracy in mapping and surveying that remains a hall mark. Survey of India has mapped the entire country with some practical resolutions and accuracy supported by ground truthing. After 244 years, the organization is still evolving and embracing technological changes in Geospatial Science and Technology.

3. Management of Geospatial Information for National Needs in the Global Economy: Some Indicative trends in India

Changing Motivation for Geospatial Information Management: Motivation behind the collection of Geospatial data and information is changing in the current context of development of the country. British Raj established Survey of India for serving the needs of the ruler for defining the boundaries and mapping of natural resources. Survey of India is changing its mandate from serving the Government of India to the People of India. Therefore, it is not without wisdom and logic that the Survey of India is being governed by the Ministry of Science and Technology. Geospatial science and Technology is a major area of national interest in India.

Some Recent Efforts: We have focused on building human and institutional capacities and provide the right policy framework. Map products developed with care by Survey of India used to remain protected and were not easily accessible to general public because of the security sensitivity. Recently, the Sol has classified map products into Open series and Defence Series maps and decided to provide access to Open Series Maps in public domain through Web Map Services. Sol has also taken policy decisions to embrace digital mapping techniques and provide to the country maps with resolutions of 1:10000 within the next three years.

As most of you are aware, several Indian intellectuals were fascinated by astronomy and astrophysics in the human history. Our engagement with space research and technology is more a logical extension of social aspirations. Today, Indian competence in space related technologies and remote sensing is well appreciated globally. The constellation of Indian satellites serving different functions is large and even unmatched in some areas.

In India, there are many data sources in both state and central governments. As many as 18 departments and their organizations similar to Survey of India like for example Geological Survey, Forest Survey, Botanical Survey generate geospatial data and information. While Indian strength in Remote Sensing is continuously value added through National Remote Sensing Centre under the Department of Space, the Geospatial world demands features and ground truth information to be stitched over the imagery data from Remote sensing.

Development of Architecture and Platform: In order that all the Geospatial data are collated and presented in a format which is standardized and common to all, India has established National Spatial Data Infrastructure (NSDI), which is domiciled currently in Department of Science and Technology. NSDI has provided a lead platform for data sharing and creation of meta data. NSDI has taken a lead in the standardization of data quality and format for information generation. Interoperability of data has remained an issue. NSDI has addressed such technical issues. However, there was a need to devise a policy framework which would enable data sharing and access. State level Spatial Data Infrastructures are being established. A network of state level infrastructures coupled to National Spatial Data Infrastructure would provide the necessary architecture and a platform for Geospatial Information management in the country.

Policy Framework: India has very recently enunciated a National Data Sharing and Access Policy (NDSAP). Development of the policy required extensive inter-ministerial consultation among the data owners. The policy has now been drafted fully. Some important features of the policy include making provisions of inclusion of all data which is not excluded through a negative list and budgetary provisions for all data owners for data digitization and conversion into machine readable forms. Policy framework for data sharing and providing access is in place. Department of Space has recently revised the national policy on Remote Sensing Data sharing. Increased resolution imageries would now become available for civil society use.

New Plans on the Anvil: In several economies where Geospatial technology industry is strong, access to government owned data would suffice. Conversion of data into data and further information products is performed by private sector in a market economy. Geospatial information management systems needed for public and social good values seem to require different governance models. NSDI has demonstrated to various State Governments the possible roles and power of State level SDIs. A funding pattern for resource sharing between National and State Governments is being currently worked out. Experience gained in enrolment of States in establishing State SDIs with widely differing governance practices has been valuable. There are plans to link through low latent connectivity all 600,000 plus villages. Democratization of information is high in the priority list of Government of India.

India is currently proposing to establish National Geospatial Information System through deployment of public funds. National GIS, NSDI and National Remote Sensing Centre would work closely and provide geospatial information management system that offers the civil society in India hitherto unavailable opportunities for use of geospatial information for meeting the developmental needs.

NSDI in the Changing Indian Geospatial Information Space: NSDI India of the future proposes to aid in the development of e-governance plan. Indian strength in Information Technology in general would be leveraged into the implementation of e-governance and democratization of information, right to Panchayati Raj levels. Geospatial Information management in India will be focused on Decision Support Systems needed for an emerging economy like India.

Policy framework and coordination, capacity building, reliable services and dissemination system with hardware and software backing and setting of standards meeting international guidelines seem four verticals demanding effort and attention. NSDI in India is engaged in developing all those four verticals.

4. Geospatial Information Management Needs of the Future

As the countries become more reliant on the use of Geospatial information products, there will arise a need for capturing and generation of geospatial information products followed by value creation activities and development of right sized service industry. Governance for data sharing and access will become one of the most crucial steps. Geospatial Technology is still evolving and the Geospatial information in emerging and developing economies would change rapidly. Therefore a reliable updating mechanism for geospatial products is critical. Standardization and interoperability issues would need to be resolved in early stages of Geospatial Information based societies. The roles of community based organizations for delivering public and social goods of geospatial information and private sector for geospatial services in market economy would need to be defined well. Building human and institutional capacities for meeting the needs of Geospatial Information society and avoiding digital divides among various sections of the society form the most important challenges ahead.

5. India in the Geospatial Information World

India has taken a large number of initiatives relating to geospatial information management. Our institutions have gained significant experience in the area. The diversity of India poses great governance related challenges in standardization and data sharing. Challenges of Global Geospatial Information Management are perhaps in full measure faced by national efforts in India on daily basis. We propose to establish institutions which address the issues relating to Geospatial Information management.

Any global effort to enable Geospatial Information Management would call for common principles of governance, data sharing and access and a frame work for collaboration among various stake holders. Therefore experience and lessons learnt from national efforts would need to be shared freely. Capacity building in the area would play a key role.

Indian experience in Geospatial Information Technology and in development of e-governance principles is growing. We will be happy to share our experience and lessons learnt with other countries and participate in the training of people and other capacity building exercises. What we would need is a framework for such global partnerships to be fostered and nurtured.

6. Concluding Remarks

Ladies and gentlemen, I have articulated to the extent possible the culmination of efforts of India in managing development and use of Geospatial Information assets. To some extent, this is a report of work in progress. Indian diversity is well known. All problems of the world from different centuries co-exist simultaneously. Governance challenges of such systems are large. We have learnt to cope with and manage several challenges and are at a stage where Geospatial Information products are entering into developmental programmes. We will be happy to share our experience with other countries and participate in capacity building programmes. I extend an open arm for healthy and mutually helpful cooperation and partnerships in the area. I wish all the delegates a gainful and sharing experience from this meeting.