



# **Permanent Committee on GIS Infrastructure for Asia and the Pacific (PCGIAP)**

**Working Group 4**

**Institutional Strengthening**

**Report for the 18th UNRCC. Meeting**

**Bangkok, Thailand**

**26-29 October 2009**

# ROLE OF WG-4

## 1. MEMBER INVOLVEMENT

- Articulation of Member development needs
- Participation in PCGIAP meetings and Working Group activities
- Participation in regional workshops

# ROLE OF WG-4

## 2. EDUCATION AND TRAINING

- Survey of education and training facilities(including but not limited to programmes, frequency, costs, student numbers)
- Development, publication and maintenance of an education and training information database for the region
- Study of student movements following graduation
- Glossary of spatial data infrastructure (SDI) terms

# ROLE OF WG-4

## 3. Sub-regional programmes:

- Pacific Group (institutional strengthening, regional geodesy, remote sensing data library)
- West Asia workshop
- ASEAN activities

# WORKSHOP AT MYSORE -2004

clearly brought out the urgent need for

- building up relations between the national mapping organizations, industry and the academia FOR developing the requisite human resources to handle the emerging as well as conventional technologies handling, maintaining and problem solving.
- Synergizing islands of excellence in various fields available with different organizations, so that the common goal of capacity building in these areas is achieved

## TRAINING AT IISM, HYDERABAD - 2005

- An international course on spatial data infrastructure was held at IISM, Hyderabad from October 12-28, 2005.
- The cost of training, accommodation, lodging and boarding was borne by the Indian Government.

# OBJECTIVES AND ACHIEVEMENTS OF TRAINING

- Development of SDIs in many countries necessitated training on use of SDI
- Participants from the PCGIAP member countries were parted knowledge and skills for evolving and managing SDI.
- Knowledge and skills were provided to candidates to enable him to steer the activities of NSDI in his home country after his return.

# FUTURE REQUIREMENTS

- Make training a regular feature so that skills and updates could be provided regularly
- build relationship between training organizations in the academic institutions in the region so that the network of institutions could promote the geospatial data activities for the benefit of people of this region which constitute almost half of the world population.



# ISSUES IN INSTITUTIONAL STRENGTHENING

- The goal of the Geo information management programme is to enable Governments
  - to govern at all levels.
  - Improve the performance of large volume data providers.
  - Strengthen the management capacity of organizations that are committed to change.
- The emphasis in the Geo-Information Management Programme is
  - on linking the **Technology environment, Market environment, Technology strategy** and **Business strategy**
  - Fitting it to **Technological architecture**
  - Fitting it to **Organizational infrastructure** linked in **Operational alignment.**

# STRATEGY

This can be achieved by

- organizing business processes that support availability of, and accessibility to geo-information in the right place, at the right time, and for the right person, and creating and maintaining system models and databases from which information can be extracted, processed and shared by many stakeholders at any given time.
- **Orienting the Institutional Strengthening to** create further facilities amongst concerned units,
- Updating the databases, standardizing the database among units across the globe, educating, training and generating new thematic visuals.

# Strategy for Institutional Strengthening – Contd.

This can be done in two phases:

- **Identifying the Stake holders**

- Analyse -physical infrastructure

- Assess- the needs for furtherence

- Enumerate the list of experts and other personnel

- Network the stake holders

- Plan for implementing strategies

- Training matrices- courseware

- **Manpower Development:**

- Trainers training

- Institutions of training

- Involvement of contents in regular curriculum ( primary, secondary and higher education levels)

# Strategy for Institutional Strengthening – Contd.

- By following the “Parallel Processing “ Approach, whereby Development of Infrastructure, Man-power development and Updation of Databases take place parallelly, Capacity building would be meaningful and practical.
- Networking of Stakeholders and cross partner portals would go a long way in building the new generation of GIS World,
- Modern trends - Web based applications, WAP enabled services, E-learning, E-transactions, on-line data processing-classified users, E-security should be Integral Part of Institutional Strengthening

## WG meeting at Kuala Lumpur, MALAYSIA 19-22

August 2008

- *The Committee,*
- Recalling the success of the training course on NSDI conducted by PCGIAP WG4 in India in 2005,
- Recognizing the importance of Institutional Strengthening for the NSDI development in the member countries,
- Recognizing also the interest expressed by the participating countries and the necessity of continuing the work of institutional strengthening effectively,

# WG meeting at Kuala Lumpur, MALAYSIA 19-22 August 2008 – Contd.

- Recommended that
  - a) A workshop, on the theme of institutional strengthening and conforming to the needs of the member countries, be organized at the 18th United Nations Regional Conference for Asia and the Pacific in October 2009 in Bangkok;
  - b) WG4 conduct a survey of the needs of the member countries, analyze the results and design a program for the workshop above accordingly;
  - c) WG4 standardize the training program conducted in India in 2005 in contents to encompass diversified disciplines needed for NSDI development, and submit a draft standardized syllabus to the workshop above;
  - d) WG4 identify the training institutions in the Asia and Pacific region for the development of an institutional strengthening mechanism to facilitate the NSDI initiatives in the member countries.

# ACTION TAKEN

- Action was initiated to organize the workshop, however it could not be held during the 18th UNRCC meeting in Bangkok, for various administrative reasons.
- Draft syllabus is ready and an Advanced Lab in Geospatial Information Science & engineering is established at IIT Bombay and will be part of the programme.
- A workshop on research issues on the subject is being held from 16th to 18th December 2009 at IIT Bombay and member countries are requested to participate the same. Draft programme of the workshop is enclosed.
- It is also proposed to conduct another course in NSDI for member countries in the Indian Institute of Surveying Hyderabad India during the first half of 2010.

# WORK SHOP AT IIT, MUMBAI

## Workshop on Geospatial Information for Developing Countries: Science and Technology

Department of Computer Science and Engineering

Indian Institute of Technology, Bombay, India

16th - 18th December 2009





# WORKSHOP AT IIT MUMBAI

- **Organizers**

- [N. L. Sarda](#) ( IIT Bombay )
- [Shashi Shekhar](#) ( University of Minnesota )

- **Co-ordination**

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## **Speakers**

(Some awaiting confirmation)

A. K. Gosain (IITD), India  
Alan MacEachern(UPenn),  
USA  
Budhendra Bhaduri (ORNL),  
USA  
Hemant Kumar(KCST), India  
Michael Goodchild (UCSB),  
USA  
N. L. Sarda (IITB), India  
P.S. Acharya(DST), India  
Sam Bacharach(OGC), USA  
Sharad Mehrotra(UCI), USA  
Shashi Shekhar(UMN), USA  
Siva Kumar(DST/NSDI),  
India  
Vipin Kumar(UMN), USA  
Umesh Bellur(IITB), India

# SCHEDULE OF WORKSHOP AT IIT MUMBAI, INDIA

## SCHEDULE

<b>16th December</b>	Inaugural Session	ST Modeling and Analysis	OGC: From Spatial to Spatio- temporal		NRDMS and Spatial Data Infrastructures	Indigenous Geospatial tools	Large scale data acquisition
<b>17th December</b>	Volunteered Geo Info.	High resolution population datasets			Emergency technologies	Interoperability in Data and applications	Industry applications showcase
<b>18th December</b>	Data Mining for Climate Change	Geo- visualization and visual analytics	Water Resource Management		Large geo- spatial applications: Disaster mgmt. Transportation	GIS in Defense Technologies	Panel Discussion

**Thank You**