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Report of the Permanent Committee on Geographical Information
System Infrastructure for Asia and the Pacific**

REPORT OF THE WORKING GROUP 4: INSTITUTIONAL STRENGTHENING

**Submitted by the Permanent Committee on Geographical Information
System Infrastructure for Asia and the Pacific (PCGIAP)
Working Group 4: Institutional Strengthening[*]**

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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

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Report of PCGIAP WORKING GROUP 4

Institutional Strengthening

Title: Working Group 4 - Institutional Strengthening

Role: The role of this working group is to address the following items:

1. Member involvement:

   o Articulation of Member development needs

   o Participation in PCGIAP meetings and Working Group activities

   o Participation in regional workshops

2. Education and training:

   o Survey of education and training facilities (including but not limited to programmes, frequency, costs, student numbers)

   o Development, publication and maintenance of an education and training information database for the region

   o Study of student movements following graduation

   o Glossary of spatial data infrastructure (SDI) terms

3. Sub-regional programmes:

   o Pacific Group (institutional strengthening, regional geodesy, remote sensing data library)

   o West Asia workshop

   o ASEAN activities

<u>Report</u>

Working Group 4 organized a workshop on 'Institutional Strengthening' at Mysore, India on February 1-2, 2004. The workshop 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 technologies in addition to the conventional technologies in geospatial data acquisition, handling, maintaining and problem solving. Though we have islands of excellence in various fields available with

different organizations, they need to get synergized so that they can achieve the common goal of capacity building in these areas.

Training Programme conducted in India in 2005

Development of spatial data infrastructures at the national level being initiated by many countries in the region further necessitated the additional requirements due to dissemination of geospatial data for decision support and to empower people in handling geospatial data to meet their requirements. An international course on spatial data infrastructure was held at Indian Institute for Surveying and Mapping (formerly known as Survey Training Institute, Hyderabad during October 12-28, 2005. Participants from the PCGIAP member countries were parted knowledge and skills for evolving and managing SDI. The cost of training, accommodation, lodging and boarding was borne by the Indian Government. The candidates/their respective countries met the international travel and per diem expenses. This course provided a step-by-step approach to realize the NSDI as and the difficulties and obstacles. The candidates have acquired enough knowledge and skills to enable him to steer the activities of NSDI in his home country after his return. We would also like to make it a regular feature so that this training is continuously imparted and the updates could be provided regularly.

It is also necessary that we 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 emphasis in the Geo-Information Management Programme is on linking the **Technology environment, Market environment, Technology strategy** (type and range of available systems, system reliability, connectivity, flexibility), and **Business strategy**(market evolution, products and services provided, partnerships, pricing, quality, VA services) to each other in a strategic alignment, and to fit it to **Technological architecture** (System models and workflows for data acquisition, processing, storage, presentation, methodology for building and implementing information systems) and **Organizational infrastructure** (organizational design supporting business strategy, production processes, key activities), linked in **Operational alignment.** The goal of the Geo information management programmed 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**.**

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. **Institutional strengthening must be oriented to** create further facilities amongst concerned units, update the databases, standardize the database among units across the globe, educate, train and generate new thematic visuals.

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)

By following the "Parallel Processing " Approach, whereby Development of Infrastructure, Man-power development and Updation of Databases take place parallely, 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, where the trend holds Web based applications, WAP enabled services, E-learning, E-transactions, on-line data processing-classified users, E-security

Points discussed during the working group meeting held at Kuala Lumpur, MALAYSIA 19-22 August 2008

During the conference, we will be discussing the issues related to international cooperation amongst member countries and sharing the data sets for issues beyond the national territories such as environment, and will be coming out with the final report at the end of the working group meeting and would like to chalk out a plan of action for implementation in the next two years.

Specifically the following points will be discussed;

- 🕐 **Identification of institutions in the region which will be networked for capacity building**

- 🕐 **Development of knowledge portal with special emphasis on e-learning and use of local languages**

- 🕐 **Prepare a plan for the conduct of training programmes**

- 🕐 **Sharing of training material and training aids amongst member countries**

- 🕐 **Preparing a roadmap for capacity building in PCGIAP member countries**

PCGIAP passed the following resolution at its 14th Meeting held at Kuala Lumpur, MALAYSIA 19-22 August 2008

"5. Institutional Strengthening"

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,

Recommends 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.

Actions Taken

1. Action was initiated to organize the workshop, however it can not be held during the 18th UNRCC meeting in Bangkok, for various administrative reasons.

2. The standardization of the contents of the training programmes will be done during the workshop.

3. Draft syllabus is ready and an Advanced Lab in Geospatial Information Science & engineering is established at IIT Bombay and will be part of the porgramme.

4. It is proposed to have the workshop during the 16th PCGIAP meeting.

5. 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.

6. 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.