Making the SDI Concept Relevant to Asia-Pacific Countries - the PCGIAP Experience

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Background on the UN sponsored PCGIAP

Background

- 13th United Nations Regional Cartographic Conference for Asia and the Pacific (UNRCC-AP) held in Beijing, China in May 1994.
  - Resolution 16 "Permanent regional GIS infrastructure committee" was adopted.
  - Inaugural formation meeting held in Kuala Lumpur, Malaysia on 12-14 July 1995.
  - The "Permanent Committee on GIS Infrastructure for Asia and the Pacific" (PCGIAP) was formally established.
- Membership of the Committee consists of the directorates of the national survey and mapping organizations and equivalent national agencies of the nations from Asia and the Pacific.

Asia and the Pacific Region

Asia and the Pacific region is:
- largest region in the world
- 60 per cent of the world’s population / 3.5 billion people
- 55 countries as defined by the UN

Membership

Asia-Pacific region has complex social and political environments, typified by competing and often conflicting priorities and motivations.

Every case in this region is unique
- national context,
- language and characteristics (size, population, political systems, varied infrastructures and skills),
- national traditional and cultural attitude, and
- the people who participate, develop and use SDIs
PCGIAP- Aims

“To maximize the economic, social and environmental benefits of geographic information in accordance with Agenda 21 by providing a forum for nations from Asia and the Pacific to:

• cooperate in the development of a Regional SDI.
• contribute to the development of the Global SDI.
• share experiences and consult on matters of common interest.”

Asia-Pacific SDI

- The PCGIAP believes that a spatial data infrastructure for the region is needed to support the region’s economic growth, and its social and environmental objectives, backed by standards, policies and exchange network on easy access to those data.
- Key Components of APSDI
  1) Data exchange Networking
  2) Fundamental Datasets
  3) Legislation & Standardization
  4) Institutional Framework

Organizational Structure

UNRCC-AP
PCGIAP
Secretariat
Executive Board
Working Groups
WG1
WG2
WG3
WG4
Head of NMOs

Linkages with other organizations

The Permanent Committee seeks to establish links with other relevant United Nations programs and international agencies such as the:

- International Federation of Surveyors (FIG);
- International Steering Committee for Global Mapping (ISCGM);
- Global Spatial Data Infrastructure (GSDI);
- Permanent Committee on Spatial Data Infrastructure for the Americas (PCIDEA);
- International Association of Geodesy (IAG);
- International Society of Photogrammetry and Remote sensing (ISPRS);
- International Cartographic Association (ICA);
- ISO/TC211
- International Society on Digital Earth (ISDE)

Committee Meetings

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<tr>
<th>Meeting</th>
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<td>1st UNRCC-AP</td>
<td>Beijing, China</td>
<td>May 1994</td>
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<td>1st PCGIAP</td>
<td>Kuala Lumpur</td>
<td>July 12-14, 1996</td>
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<td>2nd PCGIAP</td>
<td>Sydney, Australia</td>
<td>Sept. 29-Oct. 4, 1996</td>
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<td>3rd PCGIAP</td>
<td>Bangkok, Thailand</td>
<td>Feb. 1-7, 1997</td>
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<td>4th PGCIA</td>
<td>Harbin, China</td>
<td>Feb. 28-March 4, 1998</td>
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<td>5th PGCIA</td>
<td>Beijing, China</td>
<td>April 19-22, 1999</td>
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<td>6th UNRCC-AP</td>
<td>Kuala Lumpur, Malaysia</td>
<td>April 11-14, 2000</td>
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<td>7th PGCIA</td>
<td>Tsukuba, Japan</td>
<td>April 24-27, 2001</td>
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<td>8th PGCIA</td>
<td>Bandar Seri Begawan, Negara Brunei Darussalam</td>
<td>April 16-19, 2002</td>
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<td>9th UNRCC-AP</td>
<td>Okinawa, Japan</td>
<td>July 14-18, 2003</td>
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<td>10th PGCIA</td>
<td>Bangalore, India</td>
<td>Jan 30-31, 2004</td>
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<td>11th PGCIA</td>
<td>Bali, Indonesia</td>
<td>May 18-21, 2005</td>
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Working Groups of PCGIAP

Working Groups are established, where required, to undertake projects in pursuit of the PCGIAP aims and objectives

- **WG 1:** Regional Geodesy
- **WG 2:** Fundamental Data
- **WG 3:** Cadastre
- **WG 4:** Institutional Strengthening

**Highlights of PCGIAP Activities**

- Successful regional geodetic observation campaigns to expand number of key geodetic sites in the region using GPS etc;
- Pilot project on administrative boundary data;
- Policy on Sharing Fundamental Data;
- APSDI clearinghouse Data Nodes Taskforce;
- Cadastral Template Project;
- Marine Administration Template
- PCGIAP Hainan Tainting base;

**WG1 : Regional Geodesy**

- The primary objective of the WG1 has been to facilitate cooperation in geodesy amongst national agencies in order to build a common geodetic framework across the region.
- A current project work plan is operational with identified responsibilities and milestones for the period 2003 –2006.
- WG 1 now expanding its geodetic referencing into the activities of the other PCGIAP WGs to enhance the building of an integrated SDI on a common geodetic base.
- The recent tsunami disaster places greater emphasis on the wider identification of hazards across the region whilst the provision of material from the regional SDI for regional disaster management across national borders takes on a role of urgency.

**GPS observation sites (WG1 : Regional Geodesy)**

APRGP (Asia Pacific Regional Geodetic Project)
WG3 was established in 2000. It has been recommended that the UN, within available resources, and in cooperation with the WG, and with the expert assistance of relevant organisations such as FIG and IHO, undertake work into and facilitate discussion on:

- Development of the Asia-Pacific SDI;
- Development of regional marine administration infrastructure;
- Realisation of economic, social and environmental benefits for the region; and
- The implementation of the United Nations Conference on Environment and Development (UNCED) Agenda 21; and that

WG3 also has an objective to explore the relationship between the operations of the cadastre or land administration system in each member country and the development of their SDIs at local, state and national levels.

The major activities of WG3 over the past 3 years include:

- Development of a cadastral template;
- Development of a marine administration template;
- Running an international SDI short course; and
- Hosting two international workshops on the cadastre and marine administration.
One of the projects that WG3 has aimed and proposed to work on next three years is the relationship between cadastres and SDI's and particularly the relationship and integration of cadastral and topographic datasets.

Strategic Issues

✦ Relationship with the United Nations
✦ Participation rates in the committee and its organs
✦ Progress on the implementation of the APSDI
✦ Working groups are the engine-room of the PCGIAP. Significant outputs have been generated by all working groups. Yet the PCGIAP continues to have difficulty in effectively mobilizing these groups, particularly in maintaining enthusiasm and activity levels. Much of the reason for this problem lies in the voluntary nature of working group efforts.
✦ Continuing requirements for capacity building

Strategic Objectives

✦ The aims of the PCGIAP and its method of operation are generally still valid. They should be subject to continuous review.
✦ Participation rates must improve. Innovative approaches should be tested.
✦ Members must want to be involved. There must be benefits to members from their participation.
✦ Outputs must continue to focus on the ultimate objective of the APSDI. They must be achievable.

The relationship with the UN must be strengthened, but not at the expense of independence of action.
✦ Links must continue to be forged with external bodies, to assist learning and to avoid duplication.
✦ Outputs of the PCGIAP must be defined and tested in consultation with stakeholders to ensure they are satisfied.
The mission of the PCGIAP is to establish a SDI across the Asia-Pacific region. This cannot be fully achieved without the active involvement and support of the countries in the region.

The PCGIAP has found that it is most effective when its activities not only address its own mission, but also address the problems faced by the individual countries in the region.

The tragedy of the tsunami event that struck Indian Ocean countries on 26 December 2004, and the crucial need for support in re-building infrastructure (particularly SDI) in affected countries, is likely to have an enduring influence on the role of the PCGIAP in the future.

Thank You

For details, visit http://www.pcgiap.org/