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

**Report of the Permanent Committee on Geographical Information  
System Infrastructure for Asia and the Pacific to the  
19th United Nations Regional Cartographic Conference for  
Asia and the Pacific (UNRCC-AP)**

**Submitted by the Permanent Committee on Geographical Information  
System Infrastructure for Asia and the Pacific (PCGIAP)\***

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

Established in 1995 by a United Nations Resolution



# Report of PCGIAP to the 19<sup>th</sup> United Nations Regional Cartographic Conference for Asia and the Pacific (UNRCC-AP)

UN Conference Centre (ESCAP) Bangkok, Thailand, 29 October - 1 November 2012

Dr. Li Pengde, PCGIAP President

## 1. Introduction

This report covers the major activities of the Permanent Committee on GIS Infrastructure for Asia and the Pacific (PCGIAP) in 2009-2012 since the 18<sup>th</sup> United Nations Regional Cartographic Conference for Asia and the Pacific (UNRCC-AP) and the 15<sup>th</sup> PCGIAP Meeting held on 26-29 October 2009 in Bangkok, Thailand.

## 2. Background

National mapping agencies around the Asia and Pacific region regularly met under the auspices of the UNRCC-AP, where diverse aspects of cartographic activities were discussed and experiences were shared across regional boundaries. In response to the rapid socio-economic changes and huge technological progress, a resolution was adopted at the 13<sup>th</sup> UNRCC-AP in Beijing in 1994 to the effect of establishing a permanent committee dedicated to the development of a regional GIS framework. Thus the Permanent Committee on GIS Infrastructure for Asia and the Pacific (PCGIAP) was formed in 1995 in Kuala Lumpur to make the resolution a reality.

As an institution for national mapping agencies in Asia and the Pacific, PCGIAP operates under, and reports to, the UNRCC-AP. It aims to maximize the economic, social and environmental benefits of geographic information, by providing a forum for nations in Asia and the Pacific to cooperate in the development of a regional SDI, contribute to the development of a global SDI, share experiences and consult on matters of common interest, and participate in other activities such as education, training, and technology transfer. Membership of PCGIAP comprises 56 nations of the Asia-Pacific region. Member nations are represented by heads of national mapping agencies. The Permanent Committee pursues its aims and objectives through an Executive Board and three Working Groups on Geodesy Technologies and Applications, Geospatial Data Management and Service, and Spatially Enabled Government and Society. During the past 18 years since its foundation, PCGIAP has established its presence as a representative regional organization in the international geospatial information community.

### **3. Major Achievements**

Important achievements of the PCGIAP from 2009-2012 include:

#### **3.1 Development of Regional Geodetic Reference Framework**

Mandated by Resolution 1 of the 18th UNRCC-AP, PCGIAP launched the Asia-Pacific Reference Frame (APREF) project in 2010 in order to improve the reference frame. The number of the countries participating in APREF has steadily grown. Currently, there are approximately 420 GNSS network stations contributed by 28 countries. The data and analysis results are available at <http://www.ga.gov.au/earth-monitoring/geodesy/asia-pacific-reference-frame.html>.

Along with the APREF project, annual one-week GNSS campaigns (APRGP) have been conducted and will continue for some time in order for countries without Continuously Operating Reference Station (CORS) to connect their reference stations to the regional and global network. The analysis reports for these campaigns have been distributed to the participant member countries and reported at the PCGIAP meetings held during 2010-2012.

#### **3.2 Survey on the SDI Status of Member Countries**

In order to review and make necessary adjustment to the PCGIAP activities, a survey questionnaire was distributed in September 2011 to each member country. The questionnaire was designed to capture the status of Spatial Data Infrastructure (SDI) development. The questionnaire covers topics such as responsibilities of government institutions, relevant legislation, strategy on SDI development, technical standards, online data services, coordination mechanism on SDI, and geospatial industry. As of September 2012, 19 out of 56 member countries have responded to the questionnaire. The result shows that there is much difference among the member countries. Some have been making progress in establishing institutional and legal framework under SDI strategies to facilitate their SDI development with international technical standards and online data services in place, while the others have not yet initiated their SDI programs. The questionnaire helped to identify the need for knowledge and information exchange for technical support and transfer to the latter group.

#### **3.3 Capacity Development in Disaster Management**

PCGIAP and the National Administration of Surveying, Mapping and Geoinformation of China (NASG) jointly organized the International Training Workshop on Geospatial Support for Disaster Management in Wuxi, China in 2011. Twenty two participants from the national mapping agencies of ten countries in Asia and the Pacific attended the training workshop. The workshop provided the opportunity for knowledge sharing and technical support on disaster management.

In West Sumatra earthquake on 30 September 2009, post-disaster data collection was supported by Australia-Indonesia Facility for Disaster Reduction (AIFDR) which is a joint initiative between the governments of Australia and Indonesia. The collected data facilitated the development of Indonesia's reconstruction policies. The initiative also facilitated the development of a more integrated geospatial capability of Indonesian and the Asian region to support the disaster management through the partnerships with APEC, ASEAN and the United Nations.

Over the period between July 2009 and June 2010, Geoscience Australia provided a targeted technical assistance to the Philippine National Mapping and Resource Information Authority (NAMRIA) in the delivery of fundamental spatial data for enhanced natural hazard identification and risk modeling.

### **3.4 Spatially Enabled Government and Society**

Mandated by Resolution 6 of the 18th UNRCC-AP, PCGIAP facilitated the Land Administration Forum for the Asia and Pacific Region in October 2011. The forum was jointly organized by the Centre for SDIs and Land Administration (CSDILA) at the University of Melbourne, GSDI Association, Geoscience Australia, the International Federation of Surveyors (FIG) and other Australian federal and state organizations. The event was attended by over 110 participants representing 15 countries and 14 organizations. The forum well demonstrated the importance of the ubiquity of spatial information and helped to identify the challenges among the member countries which differ in the levels of maturity in use and management. The outcome of the event provided input to several international initiatives including the 1st UNGGIM High Level Forum and contributed to developing the foundation for these initiatives.

In February 2012, an International Symposium on Spatially Enabled Government and Society – “Towards Spatial Maturity” was held in Kuala Lumpur, Malaysia. This Symposium was hosted by Malaysian Government and sponsored by PCGIAP in cooperation with FIG, the Global Spatial Data Infrastructure Association (GSDI), The International Cartographic Association (ICA) and the International Society for Photogrammetry and Remote Sensing (ISPRS). Over 270 participants representing 19 countries and 108 organizations attended the symposium. The symposium identified 3 key areas: the spatial needs of societies; the role of land administration, management and governance in Spatially Enabled Society (SES); and the key elements for SES. The symposium adopted “Kuala Lumpur Declaration on Spatially Enabled Government and Society.” The Declaration reflects the future vision of the community towards transcending the concept of spatial enablement to unlock the wealth of the existing knowledge that are foundational towards informed policies, frameworks, decisions and actions.

### **3.5 Contribution to the UNGGIM Initiative**

Since its establishment in 1995, PCGIAP has been closely involved with various international

activities in the UN systems in addressing regional issues. Its recent contribution to the UN initiative on Global Geospatial Information Management (GGIM) illustrates PCGIAP's vital role as one of the important UN partners in the global geospatial information community, representing Asia and the Pacific region.

At the inaugural session of GGIM held in Seoul, Republic of Korea on 24-26 October 2011, PCGIAP provided input for developing regional agendas and supported the First High Level Forum on UNGGIM. These inputs are reflected in the Seoul Declaration on GGIM, adopted at the First High Level Forum. In its papers submitted to the First High Level Forum and Second Session of UNCE-GGIM, PCGIAP identified major issues pertaining to the region based on the experiences in developing the regional spatial data infrastructure and on the results of preliminary analysis of a questionnaire conducted in September 2011.

PCGIAP leads effort to reaffirm the importance of UNGGIM initiatives and identify priority issues through in depth discussions at a number of forums such as International Symposium on Spatially Enabled Government and Society in 2012 in Malaysia, which is detailed above, and Hangzhou Forum on UNGGIM in 2012 in China. PCGIAP substantively supported the Hangzhou Forum on UNGGIM jointly organized by the Secretariat of UNGGIM and the National Administration of Surveying, Mapping and Geoinformation (NASG) of China. The forum attracted more than 100 participants from 24 countries as well as international organizations. The regional implementation strategy of the UNGGIM initiative was discussed at the Forum. Particular attention was given to priority issues such as institutional arrangements, technology, statement of ethics, and the need for an improved regional cooperation.

For the 19th UNRCC-AP, PCGIAP proposed a theme of "UNGGIM vision for Asia and the Pacific Region," which articulates its understanding that UNGGIM activity will inspire countries in the region to enhance their geospatial information management, including the adoption of a common regional geodetic framework. PCGIAP will continue close cooperation with UNGGIM and other regional bodies and will exert utmost effort for improved geospatial information management in the region.

### **3.6 Liaison with other Global and Regional Organizations**

Recognizing the ongoing need and importance for coordinated efforts with international organizations for the development of the regional SDI, PCGIAP has established and been sustaining a formal cooperative relationship with various organizations including the Permanent Committee on SDI for the Americas (PC-IDEA), the GSDI Association, FIG, International Association of Geodesy (IAG), International Standards Organization Technical Committee on Geomatics (ISO/TC211), Asian Development Bank (ADB) and other organizations within and beyond the regional boundary.

As one of the cooperative efforts, the GSDI Association, PCGIAP and Singapore Land Authority

jointly held the GSDI 12 World Conference and the 16<sup>th</sup> PCGIAP Meeting in 2010 in Singapore. The conference explored the roles of government, industry and the academia in realizing better mechanisms for sharing geographic data and technologies. The conference also considered developing improved location-based services to meet real world demand.

These networks built upon linkages with other global and regional organizations, and associated liaison activities, have been very effective and productive. The relationships facilitated and promoted information and data sharing, and implementation of collaborative projects across national and regional boundaries. These relationships become more important than ever before as new challenges emerge from rapidly changing world. PCGIAP recognizes its significance and will actively promote and maintain relationships with these organizations.

### **3.7 Review of Strategic Directions**

The aims and objectives of PCGIAP were defined in its Statutes in 1995 and have remained virtually unchanged since then. However, the member countries recognized the need for reconsideration in order to address and rapidly respond to key global challenges including climate change, disaster management, peace and security, and environmental quality.

In this context, the amendment to the Statutes was proposed and considerable discussions were conducted among the member countries. The new articles focused mainly on the best way to incorporate the UNGGIM initiative into the PCGIAP aims and objectives in order to enhance further global coordination between member countries and international organizations with a formal mechanism under the auspices of the United Nations. The new Statutes will come into effect after the adoption at the 18th PCGIAP plenary meeting to be held on 1 November 2012 in Bangkok, Thailand in conjunction with the 19th UNRCC-AP.

## **4. Conclusion**

The cooperation, goodwill and dedication of many countries, organizations and people in the region have enabled the PCGIAP to make important achievements in the last three years. However, the situation in the global geospatial information community has changed dramatically since its inception. Arising cross-border problems like climate change and natural disasters and rapidly developing new technologies present new challenges to the geospatial information community of the Asia Pacific region.

As a representative of the largest and most populous region in the world with possibly highest economic development potential, the PCGIAP will be committed to playing a key role to foster and strengthen national, regional, and global cooperation among member countries and the United Nations. PCGIAP will continue to be an important regional entity for the development of an inter-connected global geospatial information management community under the auspices of the United Nations.

To continue the path of progress nothing is more essential than the support from the United Nations and involvement and contributions from the 56 members. The PCGIAP is determined to steadily move forward and meet the challenges ahead through cooperation at all levels, from among the PCGIAP members to regional to global.