

Working Group 2 Report: Regional Fundamental Data

Recommendations from Kuala Lumpur Meeting:

- One. *Recognizing* the progress made by the PCGIAP Working Group on Regional Fundamental Data in its spatial data (or geographic information) infrastructure (SDI) projects in the past three years;
- Two. *Endorses* the policy for sharing fundamental data as tabled at the meeting;
- Three. *Endorses* the continuation of the PCGIAP Working Group on Fundamental Data and
- Four. *Recommends that* the Working Group develop and implement a work plan that takes account of the following:
 - a. A monitoring system for the policy on sharing fundamental data that takes into account new developments in policies from both member countries and regional initiatives;
 - b. Complete the analysis of responses to the technical questionnaire on fundamental data and publish the results;
 - c. Complete the pilot project on an administrative boundary dataset;
 - d. Complete the analysis of regional fundamental datasets being developed in other regions particularly the Barents and Baltic Sea regions in Europe;
 - e. Develop specifications and an implementation plan for regional fundamental datasets;
 - f. Complete the APSDI Data Node pilot project;
 - g. Develop a specification and implementation plan for a Data Node network for the region, with priority given to metadata, data dictionary and clearing house issues;
 - h. Publicize the GIS application demonstration developed by Russia and further develop GIS application demonstrations to support those in the region that are involved in the development of SDI;
 - i. Establish links with organizations involved in standardization such as ISO TC211 and the Open GIS Consortium and develop a program of technical seminars to involve scientists and other stakeholders in Working Group matters.

Activities undertaken since 6th Meeting, Kuala Lumpur, Malaysia, April 2000

At the 6th Meeting in Kuala Lumpur, it has been set up that the Working Group 2 would propose its work plan in the Executive Board Meeting, Hiroshima, Japan, Nov. 2000. In the Executive Board meeting, WG2 recognized the progress made during the past three years and continued to uphold the policy of sharing of fundamental data.

WG2 had to restructure the workplan to make the *strategy of the workplan* on three-year basis and the *activity plan* on a one-year basis. The four main tasks for WG2 have not changed in the 6th Meeting and highlights from each tasks are listed below.

Attachment 1 lists activity plan for 2001 and attachment 2 lists strategy of the workplan for 2001-2003.

1. Policy for Sharing Fundamental Data

- Since Policy, as presented at 6th meeting, was endorsed, there may be a need to review it, based on the outcomes of the pilot project on administrative boundaries, and to add more specific issues to general policy.

2. Develop Fundamental Data

- The research in the University of Melbourne, under contract to AUSLIG, is going on into relationships of SDI's with a particular focus on the APSDI. Mr. Abbas Rajabifard, from Iran, makes major contribution to this project in the next two years.
- Administrative boundaries pilot project- The pilot project executed by Mr. Abbas Rajabifard, Department of Geomatics, the University of Melbourne, and its report has been prepared to present in the 7th meeting of PCGIAP as a part of WG2 activities for the Development of the Fundamental Data project. The aim of the pilot project was to reveal problems and difficulties encountered when integrating administrative boundary data from member countries. As part of this pilot project Abbas developed a technical Specification and User guide for running this pilot project. This specification was developed based on the results of a comprehensive technical questionnaire which he designed and distributed to all 55 member nations of PCGIAP in 1999. This specification and user guide has been submitted to the PCGIAP-Executive Board meeting held in Hiroshima, Japan November 2000, in which the Executive Board has been decided this document to be distributed to the all member for reviewing and comments.

Five countries in the pilot area has provided their dataset to the project. These countries are China, Japan, Korea South, Nepal and Sri Lanka. The full report of the pilot project will be presented by Mr. Abbas Rajabifard as part of WG2 Report. Discussion is required on the contents and the procedures.

- WG2, with help of the secretariat, is contemplating a way to complete the sub-task of collecting the completed technical questionnaire from member countries which has not done it yet. Running workshops/symposiums independently and/or in conjunction with PCGIAP meeting has been proposed by WG2.

There is a possibility to hold a workshop in Tehran, if the secretariat may support it. The main object of the workshop would be to explain the role of PCGIAP and help countries to complete fundamental dataset questionnaire forms.

- Iran is testing the regional projects similar to the prototype Pan-European dataset PETIT, namely, Barents Sea and Baltic Sea projects. The results of analysis on both data and specifications will be presented in the next PCGIAP meeting. This is going to help WG2 in relation to the current pilot project on administrative boundaries and to development of a specification and an implementation plan for regional fundamental datasets.

3. Development Network of APSDI

- China has provided a paper on Design of the APSDI Data Node. This paper includes two parts, namely, Reference Model for the APSDI Data Node and Technology Detail. Discussion is required on the establishment and operation of the Data Nodes as well as technical issues, such as design and architecture. Mr. Rajabifard, from Iran, is currently working on a technical model and framework in which it can facilitate the Asia-Pacific nations to exchange their datasets through this model. This model will be completed and submitted to the next PCGIAP meeting.

4. GIS Applications

- The 6th meeting endorsed the publication of the Russian activities, as a PCGIAP publication, and that Russia undertake research into projects similar to project done in Baikal region.

Acknowledgments

It is really my pleasure to act as a chair in PCGIAP Working Group 2 which has very important role in the Committee activities. Its success in policy for sharing fundamental

data, development of fundamental dataset, Development of network of APSDI data nodes and demonstration of GIS applications has great impact in the future of the development of the APSDI.

Working Group Members and other people interested in the WG activities have had major role in this success, and I extend my thanks to them and their host organizations.

Of course, it is not possible to state the names of all contributors to the Working Group, but I feel that some, however, must be acknowledged undoubtedly – Professor Jun Chen, Professor Jiang Jingtong, Mr Victor N. Aleksandrov, Mr Abbas Rajabifard and Mr Glenn Johnstone have showed their great contributions.

Work plan Summaries

Activity plan for 2001 and strategy of the workplan for 2000-2003 can be found as attachment 2 respectively to this report.

PCGIAP Working Group 2 on Regional Fundamental Data

Activity Plan for 2001:

No.	Project	Responsibility	Target Date	Comments
1	Discuss the idea of running a workshop/symposium on APSDI Clearinghouse in conjunction with PCGIAP meetings to allow more participants to understand the work that the WG undertakes.	The Secretariat and WG2 - Chair, Project Coordinators and other members	To be discussed in the 7th PCGIAP Meeting	(Symposium on Development and Maintenance of Regional Clearinghouse for fundamental Datasets). Bear in mind that lots of datasets being produced by non-NMA's. A proposal has been prepared and submitted to the PCGIAP, and will be discuss at the meeting.
2	Informing member nations about the results of the analysis of regional fundamental datasets being developed in other regions, particularly the Barents and Baltic sea region in Europe.	Iran and Australia	8th PCGIAP Meeting	A report will be prepared and delivered to the meeting on what activities have been undertaken within this project
3	Demonstrate the Administrative Boundaries pilot project and presentation of its report	Mr. Abbas Rajabifard, from Iran in the University of Melbourne	7th PCGIAP Meeting	The main items reported on will be: An explanation of the integration process of data from different countries Identification and analysis of the problems encountered Recommendations on possible changes to the policy of sharing fundamental data, if required To define draft APSDI specifications for regional fundamental data
4	Receive administrative boundaries maps from other countries of the pilot area, i.e., Mongolia, India, Bhutan, North Korea, and integrate them into the current pilot project.	Iran, Japan and Australia	Dec. 2001	
5	Receive the completed fundamental dataset questionnaire from the countries that have not done it yet.	Iran (WG2) and Japan (the Secretariat)	Dec. 2001	There is a possibility to hold a workshop in Tehran, if the secretariat may support it. The main object of the workshop would be to explain the role of PCGIAP and help countries to complete fundamental dataset questionnaire forms.

No.	Project	Responsibility	Target Date	Comments
6	Develop a specification and an implementation plan for Data Node network for the region, with priority to metadata, data dictionary and clearinghouse issues.	China and Iran	Dec. 2001	Mr. Rajabifard is currently working on a technical model and framework in which it can facilitate the Asia-Pacific nations to exchange their datasets through this model.
7	Publicize the result of GIS Application Demonstration to member countries.	Russia	7th PCGIAP Meeting	
8	Discuss the results of pilot project, especially problems and difficulties encountered, to draw future plan and strategy.	Mr. Abbas Rajabifard + All WG2 members	7th PCGIAP Meeting	
9	Discuss the benefits of publicizing the results of Administrative Boundaries pilot project.	Mr. Abbas Rajabifard	7th PCGIAP Meeting	
10	Discuss the development of a specification and an <u>implementation plan</u> for regional fundamental datasets (using pilot project specifications and other international experiences).	To be decided at the 7th PCGIAP meeting	December 2001	

PCGIAP Working Group 2 on Regional Fundamental Data

General , Work Plan for 2000 - 2003:

No.	Project	Responsibility	Target Date	Comments
1	Conduct an international symposium in Tehran, Iran, for WG2 activities concentrating on <ul style="list-style-type: none"> - Fundamental data production and manipulation. - Preparation and development of global, national and regional fundamental datasets. - Building clearinghouse and it's component (Metadata, Data dictionary, etc...) 	For discussion at 7 th PCGIAP meeting	Sept 2001	The symposium could include academic presentations, national (regional) reports and commercial exhibitions Investigate if support from related international organizations could be organized to assist with funding such a symposium
2	Discuss the idea of running a workshop/symposium on APSDI Clearinghouse in conjunction with PCGIAP meetings to allow more participants to understand the work that the WG undertakes.	WG2 - Chair, Project Coordinators and other members	7th PCGIAP Meeting	(for instance, symposium on Development and Maintenance of Regional Clearinghouse for fundamental Datasets). Bear in mind that lots of datasets being produced by non-NMA's.
3	Publicize the results of the analysis of regional fundamental datasets being developed in other regions, particularly the Barents and Baltic sea region in Europe.	Iran and Australia	7th PCGIAP Meeting	A report will be prepared and delivered to the meeting on what activities have been undertaken within this project
4	Discuss how to establish link with ISO/TC211 and OPEN GIS and widen cooperation with Global Mapping project.	WG2 - Chair, Project Coordinators and other members	8th PCGIAP Meeting	
5	Discuss cooperating with UN activities relating to WG2.	WG2 - Chair, Project Coordinators and other members	8th PCGIAP Meeting	A report will also be prepared and delivered to the 16 th UNRCC-AP meeting on what activities have been undertaken within this project.

PCGIAP Working Group 2 on Regional Fundamental Data

Project 1- Policy for Sharing Fundamental Data, Work Plan for 2000 - 2003:

No.	Project	Responsibility	Target Date	Comments
1	Review the outcomes of the pilot project and its implementation based on the policy of Sharing Fundamental Data and Custodianship of datasets (this gives practical exercises on the Policy).	Iran and Australia	December 2001	

PCGIAP Working Group 2 on Regional Fundamental Data

Project 2- Develop Fundamental Data, Work Plan for 2000 - 2003:

No.	Project	Responsibility	Target Date	Comments
1	Demonstrate the Administrative Boundaries pilot project and presentation of its report	Mr. Abbas Rajabifard, from Iran in the University of Melbourne	7th PCGIAP Meeting	The main items reported on will be: An explanation of the integration process of data from different countries Identification and analysis of the problems encountered Recommendations on possible changes to the policy of sharing fundamental data, if required To define draft APSDI specifications for regional fundamental data
2	Discuss the results of pilot project, especially problems and difficulties encountered, to draw future plan and strategy.	Mr. Abbas Rajabifard + All WG2 members	7th PCGIAP Meeting	
3	Discuss the benefits of publicizing the results of Administrative Boundaries pilot project.	Mr. Abbas Rajabifard	7th PCGIAP Meeting	
4	Receive administrative boundaries maps from other countries of the pilot area, i.e., Mongolia, India, Bhutan, North Korea, and integrate them into the current pilot project.	Iran, Japan and Australia	September 2001	
5	Receive the completed fundamental dataset questionnaire from the countries that have not done it yet.	Iran (WG2) and Japan (the Secretariat)	September 2001	There is a possibility to hold a workshop in Tehran, if the secretariat may support it. The main object of the workshop would be to explain the role of PCGIAP and help countries to complete fundamental dataset questionnaire forms.
6	Start on PCGIAP-wide dataset of Administrative Boundaries, by encouraging other member countries to participate in this exercise and to provide WG2 with their own datasets.	All members to provide data. Iran to compile PCGIAP Administrative Boundaries dataset.	2003	Discussions should be done in the 7th PCGIAP Meeting to encourage all member countries to supply their administrative boundaries. The general idea is to build a dataset such SABLE (Seamless Administrative Boundaries of Europe)

No.	Project	Responsibility	Target Date	Comments
7	Initiate pilot project to create clearinghouse / metadata directory for regional datasets. Aspects of metadata and/data dictionary are also need to be considered in light of those already developed in other regional or global SDI initiatives.	To be decided	8th PCGIAP Meeting	This project can help PCGIAP to create knowledge-based infrastructure for the region and also it can facilitate current communication channels between regional users.
8	Determine potential regional fundamental data layers other than administrative boundaries.	WG2 - Chair, Project Coordinators and other members	8th PCGIAP Meeting	
9	Discuss the development of a specification and an <u>implementation plan</u> for regional fundamental datasets (using pilot project specifications and other international experiences).	To be decided at the 7 th PCGIAP meeting	December 2001	
10	Discuss how to enrich the regional fundamental data with existing statistics (population, economy, etc.)	WG2 - Chair, Project Coordinators and other members	8th PCGIAP Meeting	

PCGIAP Working Group 2 on Regional Fundamental Data

Project 3- Development Network of APSDI, Work Plan for 2000 - 2003:

No.	Project	Responsibility	Target Date	Comments
1	Complete developing APSDI Data Nodes. Firstly, determine prototype Data Node for using and exchanging current pilot project datasets as a demonstration and then present a demonstration Data Node.	China, Australia, Japan and Iran	2003	
2	Develop a specification and an implementation plan for Data Node network for the region, with priority to metadata, data dictionary and clearinghouse issues.	China and Iran	December 2001	Mr. Rajabifard is currently working on a technical model and framework in which it can facilitate the Asia-Pacific nations to exchange their datasets through this model