



NATO SCIENCE PROGRAMME
Cooperative Science & Technology Sub-Programme
ADVANCED RESEARCH WORKSHOP
Innovative Geological Cartography (IGC)
ARW 980147 - Poland 2003

Summary of Conclusions and Recommendations

PREAMBLE

In November 2003, 29 geological mapping experts from 4 continents met for three days in Kazimierz Dolny, Poland at the NATO ARW I.G.C. Workshop. The objectives of the workshop were to discuss innovative techniques for geological cartography and to make recommendations pertinent to constructing modern geological maps and information systems, maintaining key databases, and delivering relevant geological information to the widest possible range of users.

Five recommendations to NATO and governments are made to better ensure that society is provided with the geological information it requires and that nations have appropriate funding and support needed to make crucial water and resource decisions, ensure adequate environmental protection, and deal with earth hazards, such as earthquakes and landslides.

1) Products to Serve the Widest Possible Range of Users

Products of geological research and surveying need to be designed to provide services to meet the needs of not only earth scientists but also other potential users, in fields such as the environment, sustainable development, resources, education, public health and national security.

While conventional geological maps will remain an important geological product, there is an increasing need for user-defined, web-accessible geoscience information services.

Recommendation: Digital geological information systems that conform to international standards should be developed to deliver both standard and customized products and services.

2) Need for Standards

Digital geological datasets must be compatible with each other and also with other national and international map data to facilitate continuity and consistency across boundaries and to facilitate sharing and preservation of information.

Recommendation A: Geological agencies must define, agree, and adopt common standards. The International Union of Geological Sciences, Commission on the Management and Application of Geoscience Information (CGI) - (http://www.bgs.ac.uk/cgi_web), was endorsed by participants as an appropriate mechanism to encourage development of appropriate standards.

Recommendation B: Geological information delivery requires that high quality topographic and other base-map information be freely available to users.

3) Technology and Expertise Transfer

Different institutions and countries are at different stages in the progression from previous geologic mapping methods to new digital mapping and associated data management, analysis, and delivery systems.

Recommendation: There is an urgent need to accelerate transfer of technology and expertise among nations through workshops, staff exchanges, and inter-agency sharing of resources.

4) Geology for Public Health, Safety, and National Security

Geological knowledge provides key information to support analysis and mitigation of natural hazards such as landslides, earthquakes, and groundwater contamination. It also provides information about resources that are strategically important to all nations.

Recommendation: Geological information must be delivered with appropriate quality and accuracy statements. Information providers should work to establish and promulgate appropriate mechanisms for delivery of information that conveys the degree of confidence placed on the data provided.

5) Geological Information at Risk

Government geological survey agencies must establish a balance between new data acquisition and management of the existing information resource. It is a fact that large quantities of invaluable geological data representing billions of dollars of past investment are not being managed adequately or according to modern standards.

Recommendation: Measures must be taken to reduce the risk of valuable and unique information from becoming inaccessible or lost.



(Prof. Stanislaw Ostaficzuk)

for:

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