

REPORT
26TH CONGRESS OF THE INTERNATIONAL
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The 26th Congress of the International Geographical Union was convened at the University of Sydney, August 22-26 1988. The IGU Congress dates back to 1871, and the 1988 meeting was only the second to be held in the southern hemisphere. Over 1400 delegates attended the meeting, with roughly 650 oral and poster presentations during the five-day event. Although no formal hydrological working groups were assembled, specialised Pre-Congress meetings were conducted in New Zealand and Australia with 14 commissions, 17 working groups and 12 study groups in most areas of geographical research.

The scientific programme of the Main Congress was divided into 14 sections (3 physical geography, 11 human and environmental geography), each with a number of specialty subgroupings. 17 papers were presented during a one-day hydrology session, with roughly 15 other "hydrological" papers interspersed within other specialty sessions. The content and quality of papers presented in the hydrology meeting varied greatly, and overall the session lacked focus and direction. This was evident particularly during question periods in which the varied nature of talks often inhibited discussion. Speakers presenting in the session came from around 10 different countries. English language problems were evident in some papers, while scientific content was strongly lacking in others. Some notable exceptions are discussed below; the first 3 were more general papers and the later 2 were process-based studies.

Dr. Ming-Ko Woo, McMaster University, gave an overview of the hydrological characteristics of sub-arctic wetlands, in which he drew on his several years' work on arctic and subarctic hydrology and snowmelt processes. Dr. Woo showed that the water balance components of runoff and evaporation are strongly related to freeze-thaw conditions and the storage mechanisms of the sub-arctic wetlands. Dr. Al Hope, San Diego State University, provided some insight into the International Satellite Land Surface Climatology Project (ISLSCP), which was initiated to look at research problems associated with satellite data interpretation for land surface moisture and energy conditions. Dr. Hope showed close estimates of both surface moisture availability and evaporation using a spectral vegetation index and canopy temperature. Dr. Blair Fitzharris, University of Otago, continued the theme of large-scale modelling, with a presentation on the effect of greenhouse gas warming on New Zealand's seasonal snowcover. Although his model predicted a decrease in total water stored as seasonal snow, and a decrease in snowcovered area to about 50% of present values, he demonstrated that these changes are at least as large as the current year-to-year variability in snow storage.

Dr. Steve Riley, Macquarie University, gave an overview of a project in progress and outlined mainly instrumentation and experimental techniques for monitoring

sediment and water discharge from an expressway during its construction. Although much of the instrumentation was similar to that used the New Zealand Forest Research Institute in its experimental catchments (i.e. data loggers, automatic samplers, solar panels etc.), Dr Riley's use of capacitance rods in many different water level applications (with an accuracy of 5 mm!) was new and should prove useful elsewhere. Dr. Mike Bonell, James Cook University, presented a paper on the infiltration and re-distribution of overland flow in a tropical rainforest environment. Dr. Bonell showed how saturation overland flow dominates in the north Queensland rainforest situation, and drew on his 15 years of experience in the region.

My own paper dealt with the effect of macropores on runoff production and groundwater-streamflow interactions. The paper proposed a mechanism that links the idea of macropore flow with the notion of old water displacement, which satisfies information on soil water physics and groundwater isotope concentrations.

Overall the conference was worthwhile, even though the hydrology portion was not comparable to other general meetings of this size (e.g. American Geophysical Union meetings). A general view held by most conference attendees was that the specialised Pre-Congress commissions and meetings were the most effective in communicating research findings and ideas. It is interesting to note that the IGU Working Group 10 on International Hydrological Programmes did not meet, nor did it inform participants of its status. This may be some indication of the general health of hydrological research within geography departments world-wide.

I am most grateful to the New Zealand Hydrological Society and the New Zealand Commonwealth Scholarship fund for providing financial assistance for me to attend the meeting. The next Congress will be held in Washington, D.C. in 1992, and I would advise anyone planning to attend to seek information first on the likelihood of a Pre-Congress hydrology commission.