

to the program. The operational planning and implementation of the IFYGL has been conducted in a spirit of such cooperation that it is operating as one coherent program rather than two parallel programs. This was not accomplished without difficulties, but the results show that, if sufficient sustained effort is made, willingness to cooperate can overcome difficulties.

Today we hear much about the need for the interdisciplinary approach in science where different disciplines work together as a team, each supporting and learning. The IHD program has intentionally taken the interdisciplinary approach and many projects provide excellent examples.

Perhaps the best examples are found in the 31 representative and 18 experimental basin studies where research goes beyond the water aspects into, for example, land use, wildlife, farming practices, erosion control, and even the potential for economic development of saline lakes.

Another, more specific, example is a combined study by hydrologists, biologists, and zoologists of ground water flow systems as related to plant and animal associations in the prairie environment. This study has resulted in a better understanding of why certain associations occur where they do and how they can be used as indicators of groundwater flow systems, thus reducing the need for extensive and costly drilling programs. Conversely, an understanding of the groundwater flow systems aids prediction of where certain plants could be expected to grow and, in one case, it led to the discovery of the reason why cattle in a pasture area were being mysteriously poisoned.

Such interdisciplinary studies lead naturally into environmental studies, such as those concerned with the forest environment and the best way to harvest its produce of timber, water and wildlife with the least change in the environment.

More detailed knowledge of Canada's immense water resources is another benefit of the IHD program. In answer to national and international studies of water balances, initial inventories have been made of Canada's glaciers and lakes. Both are continuing studies as new and better knowledge is becoming available all the time. Canada's estimated 70,000 glaciers cover an area of 79,000 square miles (204,000 km²) and contain about 9,600 cubic miles (40,000 km³) of ice, a large resource when one considers that the volume of the Great Lakes is 5,400 cubic miles (22,500 km³). Canada's lakes larger than 38.6 square miles (100 km²) number 543 and an inventory to show just what is known of each lake is now nearing completion. A Hydrological Atlas of Canada is being compiled which will present data on Canada's water in a form that can be related from one map to another — the water balance approach.

No research program is of full value unless the information is disseminated and trained people are available to make use of it. The Canadian National Committee, through its Secretariat and in cooperation with a number of universities, has conducted a series of workshop seminars designed to provide an opportunity for researchers interested in a specific topic to get together to exchange views and propose improvements. The results are usually published, though not always, since the value of some meetings is entirely in the discussion and exchange of experience. These seminars serve both as inform-

ation exchange and education.

More formal encouragement of education was provided by the Familiarization Seminar, an intensive three- to four-week course for practising hydrologists, designed to refresh and broaden their knowledge of the whole field of hydrology and to bring them up to date on the latest developments. This ran for five years and more than 200 persons attended. A French-language Familiarization Seminar was held at Laval University in August, 1972. The Canadian National Committee has also sponsored Canada-wide lecture tours by visiting hydrological experts and the Ontario IHD Committee arranged a program under which visiting professors lecture for one year at Ontario universities.

To help spread information, the IHD Secretariat publishes annual progress reports. It has conducted surveys of hydrological courses at Canadian universities and of films about water and published the results of these surveys. Results of individual research projects are published through regular scientific and technical publications. A count shows that they have appeared in 33 different journals and government series.

All publications of the IHD Secretariat are distributed to all 108 participating countries, to UNESCO and to other appropriate specialized UN agencies.

Voluntary cooperation by large numbers of dedicated persons from a broad variety of organizations and scientific disciplines has been responsible for the continuing success of the Canadian IHD program. The organization responsible for guiding and encouraging the program on this scale appears superficially conventional but is in fact especially adapted to this purpose.

Drilling for stratigraphic information and installation of groundwater instruments in the Delta area of Manitoba. • Forage pour obtenir des renseignements stratigraphiques et mise en place d'instruments d'étude des eaux phréatiques dans la région de Delta, au Manitoba.

