



# IHD BULLETIN

NEW ZEALAND

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The International Hydrological Decade Bulletin is an official publication of the New Zealand National Committee for the International Hydrological Decade and presents, twice annually, a survey of programmes, activities and findings of hydrology in New Zealand, carried out under the auspices of the IHD; and also a summary of international activities.

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## NEW ZEALAND PROGRAMME

The New Zealand National Committee last met on 26 March. It aims to meet twice yearly, which should suffice to meet the limited demands that the IHD overall programme makes on national committees.

Of the technical subcommittees originally established, only that set up to deal with experimental basins still functions, renamed the Working Group on Representative and Experimental Basins. Any IHD work needed in other specialist fields is dealt with by conveners who may, if they consider it necessary, convene study groups when some matter seems to need a co-ordinated contribution.

A second publication of the IHD catalogue of hydrological research is being arranged, following a good response from New Zealand scientific workers to enquiries about research completed or in progress.

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## PARIS SECRETARIAT

The Secretariat continues to keep in touch with national committees which, however, are not being asked to make any extensive contribution of data or opinion during the present comparatively quiet phase of the 1965-74 Decade.

Representation on the Co-ordinating Committee for the Australasian region has passed from New Zealand to Australia for the period 1970-72.

National committees are kept informed regularly of the activities of the eight working groups. Information from recent meetings of certain of these working groups is set out below.

### **Long-Term Programme of International Co-operation in Hydrology**

A special group set up in 1970 has a responsibility for outlining a long-term programme. Drafts have been circulated for comment.

A main objective is the enhancement of national capabilities, through international co-operation, so as to enable every nation to cope with water problems. The programme will recognize that each nation must set its own standards and pace of development.

Proposed subdivisions of the programme are:

- Water balance problems; global, regional, and national.
- The effects of man's activities on hydrological factors.
- New developments in hydrology.
- Supporting activities, e.g. education and training, exchange of information, and conferences and symposia.

After consultation with national committees, the proposals will be referred to the General Assembly of UNESCO and may become the subject of an inter-governmental meeting of experts at the conclusion of the Decade programme.

### **Working Group on the Influences of Man on the Hydrological Cycle**

Chaired by J. S. G. McCulloch (U.K.), the group met in January 1971, and decided:

- To prepare a publication, of 50 to 100 pages, aimed primarily at those making critical planning decisions.
- To publish general guidelines on the prevention and correction of undesirable imbalances in the hydrological cycle, with factual examples.
- To prepare a separate special technical report on changes produced in the hydrological cycle through urbanization, industrial development, and water management structures.

## **Working Group on Representative and Experimental Basins**

A sixth meeting of the group took place in June 1971, chaired by C. Toebes (N.Z.).

The work plan of the group for the second half of the Decade comprises:

- Assisting regional co-operation in the establishment and operation of research basins.
- Promoting national publications of catalogues.
- World-wide classification of hydrological regions and of representative basins.
- Selection of a world-wide network of bench-mark basins.
- Classification of mathematical models for use in representative and experimental basins, and promotion of the exchange of standard data sets.
- Studies on the extrapolation of results, application of statistical design of experiments, and the degree of accuracy in relation to the duration of experiments.
- Promoting the publication of summaries of research results.
- Planning a third international symposium on research on representative and experimental basins.

The publication schedule includes 13 substantial technical documents and papers, included among which is a draft manuscript by G. J. Blake (N.Z.) and F. A. Branson (U.S.A.) on root survey methods.

Following the IASH symposium in Wellington, the working group decided that the exchange of standard data sets would be a feasible proposition for comparing and testing mathematical models. By invitation, R. P. Ibbitt (N.Z.) prepared a paper on representative data sets for complete testing of conceptual catchment models. After the inclusion of comments from consulted specialists, this will be circulated to all national committees, and participation in exchanges of standard sets of data will be invited.

## **Working Group on Floods and Their Computation**

The Fourth Session of this group was held in May 1971, the chairman being Prof. A. A. Sokolov (U.S.S.R.).

Publications and studies in the work plan for 1971-74 include:

- An international guide for collection and processing of data for the study of floods (1971).
  - A world catalogue of very large floods.
  - An annual summary of catastrophic floods.
  - A casebook of world experience on flood-flow computation.
  - A generalization of experience in low-flow computation.
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