L'aménagement des ressources en eau souterraine. Méthodes de recherche et de modélisation. Impact sur l'environnement et aménagement optimum des aquifères. Nombreuses cartes, courbes et études de cas. G 11465.

PROCEEDINGS

INTERNATIONAL CONFERENCE
on
GROUNDWATER RESOURCES MANAGEMENT

AIT, BANGKOK, THAILAND
NOVEMBER 5 - 7, 1990

Organized by

The Division of Water Resources Engineering
Asian Institute of Technology
and
The Deparment of Mineral Resources
Ministry of Industry
The Royal Thai Government

November, 1990

PREFACE

In many parts of the world, groundwater extracted for a variety of purposes has made a major contribution to the improvement of the social and economic circumstances of humans. Historically, groundwater has been utilized for major schemes, mostly in the arid and temperate zones. However, it is increasingly being used in tropical areas. The continuously rising level of human activities has made the problems of rational use of the natural resources,particularly water resources, most urgent. As surface water resources have become more fully developed in response to increased demands for water, interest has increased in the development of groundwater resources and their integration with surface water systems.

Over the past two to three decades, scientific and technical understanding of groundwater flow mechanisms,resources evaluation and development methodology has improved enormously for many climatic and geologic environments. Additionally, over the past decade or so, there has been a considerable increase in knowledge of groundwater quality in the context of environmental impact. Development of the groundwater resources implies pumping, given the stress on the system, the question becomes what should be the location, spacing and sizing of the well, and the rates and time patterns of pumpage to provide the yield that balances the demand ? Should the resource be mined, or should the demand be tampered consonant with the system's recharge capabilities. These and other questions involving legal, environmental and socioeconomic issues that affect investment decisions are concerns of groundwater resources management. A broad scientific, engineering and economic application is required, based upon well founded conceptual principles and quantitative analysis.

Eventhough there is a large body of literature on groundwater resources management, there is a certain essence of application methodology that is missing. To facilitate the transfer of information from the research community to those engaged in the day-to-day problems of planning and managing groundwater resources, this International Conference on Groundwater Resources Management is organized. The Conference is sponsored jointly by the International Water Resources Association (IWRA), Asian Institute of Technology (AIT) and the Department of Mineral Resources (DMR) of the Royal Thai Government. The meeting is prepared and organized by the Division of Water Resources Engineering of AIT in collaboration with the Groundwater Division of DMR. This Conference is one of the annual events under the auspices of IWRA, whose involvement and support is gratefully acknowledged.

From a great number of submissions, papers of authors who have indicated their participation in the Conference are included in this Proceedings volume. Any of the remaining submitted papers, if presented, will be included in the Post-Conference Proceedings containing the manuscripts of Keynote Lectures, Special Lectures and the Conference records.

It has been found necessary to edit some of the papers to make them conform to the standards necessary for reproduction by a photo offset process. The members of the editorial body hope that they might be forgiven for any mistakes that have arisen as a result, but they accept responsibility for any misinterpretations of the author's original manuscript. Great care has been exercised in an attempt to avoid such mistakes.

We gratefully acknowledge the financial support for the organization of the Conference given by the United Nations Environment Program (UNEP), the Canadian International Development Agency (CIDA), the German Agency for Technical Cooperation (GTZ), the

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