Aswathnarayan Achutha Rao
(1932-2020)

Dr. Aswathnarayan Achutha Rao (popularly known as Achutha Rao), former Director of Central Ground Water Board and a renowned hydrogeologist passed away on 3.1.2020 at his Bangalore residence deeply mourned by his son Sirish, daughter-in-law, grandson, and an extended family of friends, colleagues and admirers. He left behind a rich legacy of academic excellence to his posterity. His wife predeceased him a few years back.

Born on 21.8.1932 at Chikkaballapur, Karnataka, Rao had an outstanding academic career. He did his Masters in Geology from Benares Hindu University in 1956, and was awarded PhD from the Mysore University in 1969. Beckoned by a sparkling career ahead, Rao joined National Council of Applied Research, New Delhi as a geologist in 1966 and later Exploratory Tubewells Organisation (renamed as Central Ground Water Board in 1970). Even in those early years he came into prominence as an exploration geologist for his work on 'Anisotropy of Lathi Aquifers, Jaisalmer district, Western Rajasthan'. In 1968 he joined United Nations Development Project (UNDP) Phase-I at Jodhpur, Rajasthan as Chief Hydrogeologist. After successful completion of the Project (1968-1971), Rao headed two more benchmark groundwater projects successively, – as Project Hydrogeologist in Canadian Project in Andhra Pradesh (1971-75), and as Chief of the indigenous Vedavathi Basin Project in Andhra Pradesh and Karnataka leading multidisciplinary teams of hydro-geologists, geophysicists, hydrologists, hydrometeorologists and chemists. One of the project objectives was to develop versatile teams of ground water scientists capable of meeting the future needs of the country for groundwater development and management aiming at optimal utilization of the resource for food and drinking water security. With his vast knowledge of hydrogeology, and leadership ability he groomed and nurtured young scientists of the three benchmark projects. His planning and execution of the time-bound projects with the support of motivated scientists, and Project staff, bear testimony to his profound knowledge of the subject, administrative skills, matchless commitment and involvement in implementation of the Projects.

The Canadian Assisted Project (1971-1975), a maiden Groundwater project in the hard rock terrain of India (peninsular gneissic complex and Deccan Traps), envisaged development of groundwater investigation technology to assess the groundwater potential of hard rock aquifers, and specific methodology of estimating dynamic and static groundwater resources. The study demonstrated the groundwater flow conditions in the recharge and discharge areas of the hard rock terrain. The concept of static and dynamic resources, too, was evolved in the project studies.

Following successful conclusion of the Canadian Assisted Project, Dr. Rao was entrusted with the responsibility of steering another groundwater exploration project in the hard rock area of the Vedavathi

river basin. It was an indigenous project wherein the methodology developed in Canadian Project was successfully utilized to develop a regional groundwater flow model in collaboration with the scientists of the Indian Institute of Science, Bangalore. It was also a pioneering work under Rao's leadership, – developing mathematical model for a hard rock area on a 'double porosity' concept. In addition, tracer studies were carried out in association with the National Geophysical Research Institute, Hyderabad using tritium injection technique to compute recharge capacities of the terrain. Radio carbon dating revealed the age of groundwater as 4500 years.

After completing the three projects successfully Dr. Rao was deputed on foreign assignment as a hydro-geologist in Nigeria. On return he worked as Director (Headquarter), CGWB at Faridabad, and as Director CGWB, Northern Region, Lucknow. As Director (Headquarter), he rendered his dynamic leadership in administering, planning and executing Action Programs at the national level. Finally in October 1988, he took over charge as Director of South Western Region at Bangalore covering states of Karnataka and Kerala under its jurisdiction. He was credited with the publication of the Hydrogeological Atlas of Karnataka, acclaimed as another pioneering achievement under his stewardship, – a valuable document for planning groundwater development and management in the State. He retired from service on 31st August 1990. Even after his superannuation from government service he remained active as a Hydrogeological Consultant.

Rao was a prolific writer. He had several scientific publications to his credit including valuable reports of the three Groundwater Studies Projects. The reports of Canadian Project and Vedavathi River Basin Project serve as manuals for all hard rock hydrogeologists. The reports earned him international fame. A charming personality, Dr. Rao was very popular with his colleagues and fellow scientists. Humor was hallmark of his character easing work tension. His abiding interest in latest developments in geosciences led to his long association with Geological Society of India.

Dr. Rao established himself not only as a pioneer in hardrock hydrogeology in India, but also as a peer among the stalwarts of hydrogeoscience round the world. He laid the foundation of hard rock hydrology in the country.

Geological Society of India pays homage to this legendary hydrogeoscientist.

Formerly CGWB, SWR, Bangalore

D.S.S. MURTHY

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