

## **GAS HYDRATES RESEARCH**

The Department of Energy, United States, has an ambitious programme of gas hydrate research and development for the next 10 to 15 years. The plan includes focused efforts in five major components of gas hydrate research (resource characterization, production, global climate change, safety and seafloor stability) and is being conceived as a combined industry, academia and government effort aimed at determining the efficacy of methane hydrate as a resource by the year 2010. Some of the scenarios concerning the role of gas hydrate in rapid climate change and slope instability have been touched upon, but many major questions remain unanswered. Whether clathrates will prove to be an enormous untapped source of energy for the future, as many hope, can only be resolved after a better knowledge of the gas hydrate reservoir and more meaningful global estimates have been acquired. This underscores the need for more focused and accelerated research on this issue of fundamental importance to sedimentary geology.

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## **GEOLOGY INCLUDED IN THE HIGHER SECONDARY CURRICULUM**

Geology has been included as an optional subject in the Higher Secondary Curriculum by the Education Department of the Government of Kerala. The Curriculum Committee recommended the appointment of Geology teachers, and fixed their minimum qualifications as M.Sc. Geology or equivalent, without insisting on B.Ed.

This decision has come as a welcome step in popularizing geology among the young generation, and in learning earth sciences as an independent subject. Presently, students have the chance to learn only few topics related to earth sciences, that too as part of the geography curriculum. The recognition of geology as a separate optional subject in the higher secondary level would now enable young minds to understand Earth history, resources and environment in a holistic view, and to utilise this knowledge for the betterment of human society. This step would also happily provide job opportunities for several geology candidates.

The decision of Kerala government in introducing geology at the school-level is a welcome step to be noted and followed by other States. Appropriate steps for this have to be initiated by the earth science community at the required levels.

The above steps and recognitions, however, place tremendous responsibilities on our shoulders. School-level pursuit on earth sciences requires adequate books for reference, both at the high school and higher secondary level. Appropriate laboratory facilities have also to be identified and established. Unlike the limited number of students and the available library and laboratory facilities in graduate and post-graduate colleges, the demand in schools is going to be high, the time frame limited, and the requirement specific. It is a fact that we have no adequate reference material in geology, authored and published in our country, and freely available in the market at affordable prices to students. We have mostly been depending upon books from foreign sources for graduate and post-graduate teaching and learning. The immediate requirement therefore is to have adequate and well-illustrated reference books in geology, broadly following the school curriculum. The Geological Society of India is initiating pioneering steps in this direction.

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