

Institutional Profiles

Wadia Institute of Himalayan Geology

Dehra Dun, Uttarakhand, India

The Wadia Institute of Himalayan Geology (WIHG) was named after the late Professor DN Wadia, the doyen of Indian geology. Established in 1968, it has a mandate to carry out basic research in the geosciences, and its application to the Himalayan orogenic belt. WIHG is a constituent member of the extended Department of Science and Technology (DST), Government of India. The Institute maintains a balance between pursuit of science for discovery, and application of knowledge in geodynamics for the benefit of society. The vision is 'Application of emerging knowledge about earth processes for fostering sustainable development and secured living in the Himalayan region'. The mission is 'Continuously strive to unravel the geological truth related to mountain building, particularly the Himalaya, for improving understanding of geodynamic processes, climate variability, natural resources, evolution of life, assessment and mitigation of natural hazards'.

Major objectives

The basic objectives relate to undertaking, aiding, promoting, guiding and coordinating interdisciplinary research in the geology of the Himalaya towards the development of new concepts and models; coordinating research activities among different institutions and universities; organising workshops, seminars, symposia and training programmes; and serving as the National Reference Centre for the geology of the Himalaya. Further objectives focus on collaboration with foreign research organisations and universities; dissemination of knowledge and information; affiliation with universities and centres of higher education to promote Himalayan geology; and inspiring and encouraging young earth scientists in the study of the geology of the Himalaya.

Research

The Institute carries out basic research in Himalayan geology and related fields which includes geodynamic evolution, mountain building processes, geoenvironment, natural hazards, mineral resources and glaciology. It has well-equipped state-of-the-art laboratories with sophisticated analytical instrument facilities for chemical, mineralogical and magnetic studies. The laboratories include XRD, EPMA, SEM, ICP-MS, TL-OSL and a range

of rock magnetic facilities. Recently, new laboratories and field stations were established for i) earthquake precursor research and real time monitoring of earthquakes with a VSAT connected network of broad band seismometers (BBS), and ii) Center for Glaciology (for the study of Himalayan glaciers). The facilities are available to universities and research scientists from all over the country.

Library

The Institute has a medium-sized specialist library with more than 25,000 titles of books, monographs, journals and seminar/conference proceedings on geology and mountain building processes with special reference to Himalayan geology. It subscribes to 58 national and 98 international scientific journals in the field of earth sciences not found in any other library in the region.



Museum

The 'S.P. Nautiyal Museum' exhibits geological maps, charts, rare samples, rare photographs collected from different parts of the Himalaya, models, and fossils, as well as various educational awareness exhibits including video films on the Himalaya and general geology. A special attraction – the 'Wadia Section' – contains field kits, medals, citations, and other objects that belonged to Prof DN Wadia.

**The Institute of Tibetan Plateau
Research, Chinese Academy of Sciences**
Lhasa, Beijing and Kunming



Namucuo lake field station, Tibetan Plateau



ITP laboratory and conference hall in Lhasa

The Institute of Tibetan Plateau Research (ITP) is one of the research institutions established by the Chinese Academy of Sciences (CAS) in 2003. It consists of three campuses located in Lhasa, Beijing, and Kunming. The Beijing campus hosts state-of-the-art laboratories for scientific research and analysis, provides a convenient platform for international academic exchange, and, in the spirit of teamwork, attracts outstanding talent from at home and abroad to engage in China's Tibetan Plateau research. The Lhasa campus acts as a base for fieldwork, facilitates the normal operation of field monitoring and observation stations on the Plateau, and serves Tibetan social and economic development. The Kunming campus, managed by the Kunming Institute of Botany, CAS, focusses on the study of life processes under extreme natural environments. The Institutes in Beijing and Lhasa are currently staffed by over 140 professionals, including one academician, 19 professors, and 32 associate professors. In addition, there are 120 graduate students (58 PhD and 62 master's candidates) and 16 post-doctoral students.

surface processes, environmental changes, biological adaptability under radical environments, and biological genetic resources. So far, ITP has succeeded in constructing quantitative interactive models between paleo-proxies and modern climate/environmental parameters through the study of stable isotopes in atmospheric precipitation, spores and pollen on ground surfaces over different regions, and the compositional study of micro-biological species in lakes. With these quantitative models, paleo-environmental reconstruction can be accomplished, which helps understanding of the unique land surface processes on the Tibetan Plateau and associated regional environmental effects.

ITP has already established three CAS key field stations: the Nam Co Station for Multi-sphere Observation and Research (NAMOR), the Southeast Tibet Station for Alpine Environment Observation and Research (SETS), and the Qomolangma Station for Atmospheric and Environmental Observation and Research (QOMS). In addition, ITP itself is initiating and financing two additional field stations: the Ngari Station for Desert Environment Observation and Research (NASDE), and the Muztagh Ata Station for Westerly Environment Observation and Research (MASWE). For laboratory research and analysis, ITP hosts the Key Laboratory of Tibetan Environment Changes and Land Surface Processes (TEL), Chinese Academy of Sciences, and the Laboratory of Continental Collision and Plateau Uplift (LCPU), Chinese Academy of Sciences.

The international ties and academic scope of established ITP research projects will continue the distinguished achievements of the Institute and will form the basis for leading scientific research into the twenty-first century.