

Construction and Application of Thematic Database for Human-Earth System

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Thematic Database for Human-Earth System (TDHES) is one of the eight thematic databases in Scientific Database Program of Chinese Academy of Science (CAS) (2006 to 2010). The mission and objective of TDHES is to provide data service for basic research of human-earth system, national economic construction and development strategy. So it is an interdisciplinary database. TDHES is undertaken by Institute of Geographical Sciences and Natural Resources Research (IGSNRR) and constructed jointly by other three institutes of CAS.

TDHES is composed of three scales of data: national, regional and global. Key regions in China include Metropolitan district of Beijing-Tianjin-Hebei, Loess Plateau, Southwest Mountains and Northeast black soil zones. Global data cover neighbors of China and major countries and regions in the world. Data contents include geographical background, population, natural resources, environment and socio-economic. Internet based service platform of TDHES can provide: (1) online browsing or downloading of data; (2) interactive query between spatial data and attribute data; (3) online analysis of human-earth relationship and regional sustainable development; (4) integration of models for human-earth system. Rules and regulations has been drawn up to construct TDHES, including "Data Classification and Coding Standard", "Data Quality Management Standard", "Metadata Standard", "Specification for Data archives", "Technical Specification for Data Integration", "Technical Specifications for Service Platform Development" and "Service Regulation for Data Sharing".

Registered users of TDHES amount to 21,895 at the end of 2009. The web site has been visited 1,312,051 times. And 1052 off-line data services were provided. TDHES is providing data service for knowledge innovation program of CAS - Simulation and Decision Support Platform for Regional Sustainable Development in China.