Prof. Patrick J. Mc Keever
Secretary of the IGCP

ANNUAL SUMMARY REPORT OF THE NATIONAL IGCP COMMITTEE OF UKRAINE ACTIVITY IN 2015

1. Members of IGCP committee

Professor, doctor of geological sciences D.P. Khrushchov, vice-president of the Lithological committee of Ukraine.

Chairman

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The Committee Board includes leaders of Ukrainian working groups of IGCP projects (see below).

2. The Committee activity

The Committee coordinates the investigations in the area of Earth Sciences being carried out by a number of geological institutions in Ukraine within the limits of IGCP activity. Simultaneously the priorities of IGCP projects ,having been an object of the Ukrainian IGCP Committee activity, meet prior problems of Earth Sciences in Ukraine.

In 2015 three projects have been carried out.

1. The project No. 610 “From the Caspian to Mediterranean: environmental changes and human response during the Quaternary”,2014-2017 (a new project, proposed with participation of Ukraine). Leader of the Ukrainian working group – Dr. Sc., Prof. V.V. Yanko (Odessa National University, Odessa). As a result of studies of the main stratotypical sections in Black Sea, Mediterranean and Caspian regions (including field trips), the evolution changes of fauna (mollusks, foraminifera, ostracoda), as well as spore and pollen complexes have been observed. The data obtained have been used for stratigraphic correlation and paleoreconstruction of climate changes in Quaternary, considering its impact upon human vital activity.

2. The project No. 598 “Environmental change and sustainability in carst systems”, 2011-2014. The leader of Ukrainian working group – Dr. Sc. A.B. Klimchouk (Institute of Geological Sciences, Kyiv). . Despite of formal finishing of the project the investigations in this direction were continued.In collaboration with the Federal University Rio Grande do Norte (Natal, Brazil), a multidisciplinary study was performed in the South America’s largest cave system Toca Da Boa Vista – Barriguda, resulted in revealing its hypogene origin, geologic controls and functional organization. This study has implications for interpreting porosity and permeability features in carbonate reservoirs, important for prospecting/development of petroleum and ore deposits and assessment of sites (seal integrity) for CO_2 sequestration and gas fracking in deep-seated formations.

In the framework of the International Conference on Groundwater in Karst (Birmingham, UK, June 22-26, 2016), an extensive discussion has been conducted between members and leaders of several international karst-related bodies (Karst Commission of IAH, Commission on Karst Hydrogeology and Speleogenesis of UIS, and IGCP-598 Project) about coordination of activities of their respective bodies.

An agreement has been reached and signed with the Springer publisher about preparation of an internationally contributed book “Selected Hypogene Karst Regions and Caves of the World (an executive editor Dr. Alexander Klimchouk), to be released in the end of 2016.

3. Project No 632 “Continental crisis of the Jurassic: major extinction events and environmental changes within lacustrine ecosystem” (2014-2017). Project leader of Ukrainian working group – Phd. O.A. Shevchuk.

On the basis of target oriented palinological investigations of Jurassic stratotypic sections the features of continental basins (as well as synchronous marine basins) of the East European platform

south-western (Ukrainian) part were revealed, the evolution of sedimentation and ecological conditions during Jurassic period were reflected.

According to main issues of the project the major changes of terrestrial and marine flora at the border of Jurassic and Cretaceous in Ukraine have been revealed. Basing upon results obtained the correlation of near border Jurassic and Cretaceous sediments was carried out, that resulted in modernization of regional stratigraphic schemes. The data obtained were used for characterization of climate evolution at the border of Jurassic and Cretaceous: the correlation with global climate changes has been traces.