

FOREWORD

The new, 19th issue of „Papers on Global Change IGBP” 2012, published by the Polish Academy of Sciences, contains four scientific articles which are important for evaluating changes of the environment. Moreover, the Polish National Committee IGBP PAS informs about very significant, key events, connected directly with the IGBP (**I**nternational **G**eosphere-**B**iosphere **P**rogramme) activity, which took place in 2012. The world conference „Planet Under Pressure” in London accepted one more, III Declaration (the previous ones – I Declaration was announced within the Amsterdam World Conference, II Declaration was established at the Capetown conference); in all of them an appeal was made to all people to take intensive action concerning protecting the future of the environment of the Earth as a planet in order to counteract its disadvantageous changes. A necessity was expressed of taking such action especially by scientists, decision-makers, politicians and economists managing the global scale economy. This declaration is a platform pledge and a commission that every citizen, as well as all humanity, should take on in order to protect the Earth’s environment for future generations.

In the “Research Notes” part we inform about developing cooperation between National Committees IGBP within the European Alliance concerning global changes of the environment, including those of climate, which was also discussed at the conference in London. It should be mentioned that the Polish National Committee IGBP PAS has been the member of the aforementioned Alliance since its creation, that is May 2008 in Copetown.

The main content of the volume are four articles, the first one prepared by authors from the University in Pune in cooperation with scientists from the India Meteorological Department, who evaluated multiannual tendencies of extreme air temperature in the North-East and West part of India. The two following articles written by Polish authors representing the University of Warmia and Mazury, Astronomy and Geodynamics Department and Space Research Center PAS, are of methodological character. They concern the issue of using satellite photographs to evaluate the snow cover water equivalent at the example of the area of Poland and the possibilities of using the evaluation to forecast the surge outflow of rivers influenced by spring or midwinter

melts, which, in the face of global climate changes, is an important issue in flood prevention.

In the last article, its authors from the Warsaw University use a mathematical model based on a scenario of Central Europe regional economical development to project regional scale changes in streamflow from a lowland catchment (the Liwiec river), caused by simulated climate changes (of daily air temperature values and precipitation sums), up to the year 2060. A Scandinavian model precipitation – outflow from the catchment in the operational version from 2005 and 2012, prepared by J. Seibert *et al.* was used.

At the end of the volume we can find reviews of three books: two volumes of a scientific monograph for the general public. The first volume is an atlas of extreme meteorological phenomena and their connections with synoptic situations in Poland. The second one refers to the theories of climate changes. The third book concerns the role of greenhouse gas emission by swamps and wetlands.

To sum up, the scope of the present, 19th issue is clearly narrowed to studying tendencies and changes in climatological and hydrological processes and their interconnections in order to forecast the influence of climate changes.

Małgorzata Gutry-Korycka
Editor in Chief