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FOREWORD

PART TWO

The second part of Vol. 23/2016 begins with a series of studies linked closely to the subject matter of the aforementioned Kraków conference, in particular as regards the not-unlimited possibilities now allowed for by the Earth's natural resources. The limitation is particularly true of the non-renewable energy sources, and all the more so in the context of the desired sustainable economic development.

Such matters have in fact been expanded upon by the Popes of the three last Pontificates, i.e. Their **Holinesses John Paul II, Benedict XVI and Francis**, as they made reference – in Encyclicals addressed to the people of the world – to global-change issues involving climate, water resources, soil and nature across the 1978–2016 period. These issues, and the approaches successive Popes have taken to them, are addressed by **Prof. M. Gutry-Korycka**.

A global and regional approach is taken in a general presentation of the contemporary monitoring network for greenhouse gases from **Prof. K. Różański** and other authors. Attention is there drawn to the need for successive measurement – and hence the detection of long-term trends – when it comes to both emissions of GHGs and their ambient levels; as well as the principles underpinning measurement, and its scientific relevance. Naturally, the results obtained through monitoring are *inter alia* made use of in long-term forecasting.

The causes of changes in atmospheric composition as regards CO_2 are dealt with in relation to the historical greenhouse effect by **Prof. G.R. Demarée and R. Verheyden**, whose provided example concerns the city of Liège in Belgium, and pioneering researcher Walthère Spring.

This cycle of articles concludes with a presentation by **Profs M. and A. Czerny** of the consequences of urban sprawl for Bogota, Colombia. The authors also address social changes, as well the local-scale degradation of the environment that the sprawl process induces.

The chronicle of 2015 scientific events assuming international or national dimensions refers to a 2nd Conference – on Disaster Risk Reduction, (**Prof. A. Magnuszewski**)

as well as *Catastrophic visions of development*, (**Dr K. Prandecki**) which sought to depict world environmental disasters against which Poland's case is set. A third Conference (**Prof**. **W. Walczowski** and **Dr A. Beszczyńska-Moeller**) – international in reach and organised under cooperation between the Republic of Poland and the Kingdom of Norway – was entitled "*Climate and environment*", and dealt with research into climate change and other elements of the environment in polar areas – as set against technologies deployed there. The main aim of presenting results for polar areas was to allow participants and others to become better acquainted with the mechanisms underpinning global changes of climate and the exploitation of non-renewable raw materials. The contribution and role of Polish polar scientists in these fields was also summed up.

The volume ends with a brief review by **Prof. Z.W. Kundzewicz** of a monograph forming a further part of the *GeoPlanet: Earth and Planetary Sciences* series from *Springer*. This particular work – *A Stochastic Flood Forecasting System. The Middle River Vistula Case Study* is under the editorship of **Prof. R.J. Romanowicz and Dr M. Osuch**.

This next volume of ***Papers on Global Change IGBP*** conveyed to the reader thus deals with up-to-the-minute subject matter relating to contemporary environmental problems on the global, regional and local scales. The content makes reference to both positive and negative cause-and-effect mechanisms, as well as their consequences arising out of human impacts.

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