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HYDROGEOLOGICAL MODEL "LARGE RIGA". ATLAS OF MAPS.

Spalvins A., R.Janbickis, J.Slangens, E.Gosk, I.Lace, Z.Viksne, J.Atruskievics, N.Levina, J.Tolstovs. Hydrogeological Model "Large Riga". Atlas of Map. - Riga: Riga Technical University, State Geological Survey of Latvia; Copenhagen: Geological Survey of Denmark and Greenland, 1996. - 102 p. (Boundary Field Problems and Computers; 37-th issue; bilingual: Latvian and English). ISBN 9984-552-39-X.

In April, 1996 an atlas of digitally computed hydrogeological maps has been published. The atlas contains maps of the groundwater system being simulated on the computerised REgional MOdel (REMO) "Large Riga". REMO provides a semi-three dimensional solution for the piezometric levels and the corresponding groundwater movement within the modelled area. It comprises $168 \text{ km} * 156 \text{ km} = 26,208 \text{ km}^2$ and includes the central part of Latvia, the Northern part of Lithuania and a large fragment of the Gulf of Riga. In the vertical direction REMO contains 9 aquifers separated by semipervious strata and the spatial REMO approximation grid contains $40 * 43 * 9 = 15480$ nodes. If REMO is run on PC 486/66 then it takes 10-20 seconds to compute the piezometric groundwater levels for one time step at nodes of this grid. Such a comparatively fast REMO response enables a hydrogeologist to examine various scenarios during a short time and to participate actively in the REMO calibration process.

REMO has been jointly designed and developed since 1993 by the Environment Modelling Centre of the Riga Technical University and the State Geological Survey of Latvia. The development of REMO depended strongly on help provided by the Geological Survey of Denmark and Greenland.

The atlas presents results of the first try to process and organise rather scattered hydrogeological data of Latvia in a computerised model. Information included in the atlas describes the simulated multiaquifer geological environment as an united hydraulically balanced system. It can be also regarded as an activated complex data base enabling not only to examine and prognose real hydrogeological processes but to check and correct initial monitored data as well. The atlas may be useful for geologists and hydrogeologists during the

work with a wide range of practical problems. The atlas and REMO are good educational tools which can be used not only by students but also by experienced hydrogeologists.