60 years of the Bramke research basins: history, major hydrological results and perspectives

SYBILLE SCHUMANN & ANDREAS HERRMANN
Institute of Geocology, Department of Hydrology and Landscape Ecology, Technical University Braunschweig,
Langer Kamp 19c, D-38106 Braunschweig, Germany
s.schumann@googlemail.com

Abstract The history of the Lange Bramke catchment, the longest operated small hydrological research basin in Germany, is summarized on the occasion of its 60th anniversary with a focus on the research history, the main research projects run in the catchment and their protagonists. The major hydrological results obtained in the Lange Bramke catchment are briefly outlined, while focusing on presenting an overview with respective references. It is shown that the operation of long-term hydrological research catchments, resulting in long-term high-quality measurements and data series, is fundamental for scientific progress in hydrology and for the characterisation of environmental changes.

Key words Lange Bramke; Upper Harz research basins (Oberharzer Versuchsgebiete); ICA (Integrated Catchment Approach); runoff formation process; tracer hydrology; environmental isotopes; groundwater; climate change; water balance studies; hydrological methodology