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Most of the changes in runoff regime caused by man-made factors, and even the existence of the changes, cannot be readily determined and proved. It is also difficult to prove the natural status of the basin, because there is no place on the Earth without at least one anthropogenic impact on water regime changes. This is conditioned by the fact that anthropogenic actions are mainly in harmony with the basin characteristics, so it is not possible to provide the evidence for the existence of the changes, even after a long-time monitoring.
The changes can be observed in experimental basins. In Serbia, in the first half of the 20th century, several experimental basins were established to monitor, in addition to water regime, also the changes of erosion intensity and sediment regime in the function of land use changes. The basins were established after the complete denudation of the entire basins and the resulting occurrence of numerous torrential floods.
The task of the experimental basins was directed to the determination of anthropogenic influences on water and sediment regime. For this reason, the selected basins had a small catchment area on which the anthropogenic changes could be easily controlled. The results of monitoring pointed to the impact of the characteristic anthropogenic influences on the changes in water regime.
Nowadays, the monitoring, which is still going on, is complemented with the monitoring of anthropogenic influences on water quality.
This paper will present the results of monitoring of anthropogenic influences on the changes of water and sediment regime and their application in practice.

Key words: Water regime, land use, experimental basin