

# Conclusion

In this conclusive message we would like to underline again that the book does not exhaust the wide diversity of hydrological problems related to water quality but deals adequately with the basic concepts concerning the recognition of (1) the effect of transient rainfall–runoff–infiltration partitioning on the chemical response of drainage areas to excess precipitation under certain field conditions determined by soil and hillslope characteristics and contaminant properties; (2) soil erosion as a key factor, which enhances the potential of adsorbed chemical transport in runoff; (3) common tendencies in radionuclide behavior in the near-surface environment contaminated by radioactive fallout from the sadly remembered accidents at nuclear units, as well as the consequences of the nuclear weapon tests in the atmosphere since 1952.

On the other hand, from the book one can get a sense that despite the ongoing exponential growth in modeling approaches to study the mentioned problems, the selection of an appropriate mathematical model for a specific area is still a matter of uncertainty and the various models exhibit a large spread. Much of this uncertainty results from the lack of specificity in characterizing the structure of a watershed hydrologic system. The heterogeneity of soil structure and input random variables, which are usually assumed uniformly distributed, are among the main obstacles to the implementation of different models to actual catchments. Many of these issues are out of scope of this study, and therefore a fundamental question whether the mathematical model used is appropriate can be addressed in other specific publications.

Meanwhile, the author hopes that the book's goal to provide a conceptual foundation to enable readers to apply scientific knowledge for solving practical problems in environmental hydrology and radiology has been reached.

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