# Article information:

Scale effects in conceptual hydrological modeling - Merz - 2009 - Water Resources Research - Wiley Online Library  
<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2009WR007872>

# Article summary:

1. Water balance models are important for managing water resources and understanding the water balance dynamics of catchments.

2. There is debate over whether the same model structure and parameters should be used for small and large catchments, as the functional behavior of catchments may differ with scale.

3. Studies have been conducted to examine whether model performance and parameters change with catchment scale, with some studies finding that model performance does not change significantly with scale.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article “Scale Effects in Conceptual Hydrological Modeling” by Merz (2009) is a well-researched and comprehensive overview of the debate surrounding the use of different model structures and parameters for small and large catchments. The article provides an in-depth analysis of existing studies on this topic, including Perrin et al. (2001), Bergström and Graham (1998), Beven (1989, 1991), Blöschl and Sivapalan (1995), Grayson and Blöschl (2000), Singh and Frevert (2001a, 2001b), Jakeman and Hornberger (1993), Refsgaard and Knudsen (1996), Fenicia et al. (2008) Gottschalk et al. (2001) and Sivapalan (2003). The article is written in a clear, concise manner that makes it easy to understand the key points being discussed.

The article is reliable in its presentation of evidence from existing studies on this topic, providing a balanced view of both sides of the argument without any bias or partiality towards either side. It also acknowledges potential risks associated with using different models for different scales, such as data quality issues or differences in hydrologic conditions between small and large catchments. Furthermore, it presents both sides equally by exploring counterarguments to each point made throughout the article.

In conclusion, this article is trustworthy due to its comprehensive coverage of existing research on this topic as well as its balanced presentation of both sides of the argument without any bias or partiality towards either side.

# Topics for further research:

* Scale effects in hydrological modeling
* Conceptual hydrological modeling
* Perrin et al. (2001)
* Bergström and Graham (1998)
* Beven (1989, 1991)
* Blöschl and Sivapalan (1995)

# Report location:

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