# Article information:

Estimation of evapotranspiration using all-weather land surface temperature and variational trends with warming temperatures for the River Source Region in Southwest China - ScienceDirect  
<https://www.sciencedirect.com/science/article/abs/pii/S0022169422009180?via%3Dihub=>

# Article summary:

1. Accurate estimation of evapotranspiration (ET) is crucial for understanding global climate change and determining changing characteristics of runoffs.

2. The Surface Energy Balance System (SEBS) model is widely used for estimating ET, but faces challenges such as lack of input parameters and difficulty obtaining meteorological driving data.

3. Passive microwave remote sensing can generate all-weather land surface temperature (AWLST), which provides an opportunity to estimate all-weather ET, and has been applied in the River Source Region in Southwest China to study climate change and water cycle.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

该文章主要介绍了利用全天候地表温度和变化趋势估算蒸散发的方法，并探讨了SEBS模型在大范围应用中存在的问题。然而，该文章存在以下几个问题：

1. 偏见来源：文章没有提及其他估算蒸散发的方法，只介绍了SEBS模型，可能存在对其他方法的偏见。

2. 片面报道：文章只介绍了PMW遥感技术可以克服云污染的限制，但并未提及其它遥感技术或方法。

3. 无根据的主张：文章声称SEBS模型在全球范围内得到了成功应用，但并未提供具体证据支持这一观点。

4. 缺失考虑点：文章没有考虑到气候变化对蒸散发估算的影响，如降水量、温度等因素。

5. 主张缺失证据：文章提出AWLST可以用于估算“全天候”ET，但并未提供实验证据支持这一观点。

6. 未探索反驳：文章没有探讨其他学者对SEBS模型的批评和反驳意见。

7. 宣传内容：文章过分强调SEBS模型在估算蒸散发方面的优势，可能存在宣传内容的嫌疑。

8. 偏袒：文章没有平等地呈现SEBS模型和其他估算蒸散发方法之间的优缺点，可能存在偏袒的情况。

综上所述，该文章在介绍估算蒸散发方法和SEBS模型方面有一定的局限性和不足之处，需要更全面、客观地探讨这一问题。

# Topics for further research:

* Other methods for estimating evapotranspiration
* Other remote sensing techniques or methods for overcoming cloud cover limitations
* Evidence supporting the successful global application of SEBS model
* The impact of climate change on evapotranspiration estimation
* Experimental evidence supporting the use of AWLST for all-weather ET estimation
* Criticisms and rebuttals of SEBS model by other scholars

# Report location:

<https://www.fullpicture.app/item/1adeadba728ea0d8e4dad157672ad715>