

# Review of: "Quantifying the Environmental Impact: A Comparative Analysis of Consensus Algorithms in Blockchain for Carbon Footprint Reduction and Mitigating Climate Change"

Giuseppe M.L. Sarné<sup>1</sup>

<sup>1</sup> University of Reggio Calabria

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The problem addressed has its own relevance, but if the objective of the manuscript is " Quantifying the Environmental Impact: A Comparative Analysis of Consensus Algorithms in Blockchain ...", as the title would suggest, this paper completely fails the target. This is mainly due to the absence of any real quantitative analysis, only three examples are presented (i.e., example 1, example 2, example3 ), without specifying what they refer to. If instead we refer to the proposed formulation, the Carbon Intensity Factor, central in the formulation, it is strictly dependent on the nature of the energy source. In the examples, this is not even specified. It is trivial to point out that this parameter will weight differently if the energy is derived from fossil or renewable sources, thus changing the perspective of the problem. Furthermore, if the comparison is made on algorithms, it is good practice to provide an analysis of the computational complexity of the compared algorithms. If, on the other hand, the comparison is made only on the number of transactions conducted, then, in such cases, one should at least provide information on the platform adopted for the comparisons.

In general, although the manuscript has good intentions, it totally fails in its purpose. It does not give a quantitative analysis and the qualitative analysis is insufficient. Furthermore, the range of algorithms potentially, but not really, compared is too limited. In sum, the manuscript does not appears to be ready for publication yet.