




OPEN

Author Correction: Novel Hybrid Evolutionary Algorithms for Spatial Prediction of Floods

Dieu Tien Bui, Mahdi Panahi, Himan Shahabi , Vijay P. Singh, Ataollah Shirzadi, Kamran Chapi, Khabat Khosravi, Wei Chen, Somayeh Panahi, Shaojun Li & Baharin Bin Ahmad

Correction to: *Scientific Reports* <https://doi.org/10.1038/s41598-018-33755-7>, published online 18 October 2018

This Article contained errors.

In the Introduction, in the sentence:

“Each year flooding affects around 200 million people and causes economic losses of about \$95 billion around the world³.”

Reference 3 was to Chapi et al. 2017. It should direct the reader to Cealo et al. 2014. This has now been corrected, and the references were re-ordered as a result. Cealo et al. is now the cited Reference 3 in this sentence, and Chapi et al.—Reference 24, cited elsewhere in the article.

In the section “Description of the Study Area”

“The average annual rainfall is around 770 mm.”

now reads:

“The average annual rainfall of Mazandaran province is 770 mm, and for the Haraz watershed case study, it is 430 mm.”

There was a typographical error in the last row of Table 1, where class “535–471” now reads “535–741”. This table contains data published contemporaneously in another publication from the authors. This is now acknowledged in the table legend, which reads:

“Spatial relationship between flood and conditioning factors of SWARA model. Table republished from Reference 27.”

In the Materials and Methods section, subheading ‘Data collection and preparation’.

“Additionally, DEM and geological maps in the Haraz watershed were also used in data collection and preparation.”

now reads:

“Additionally, DEM (derived from the Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) Global DEM (<https://gdex.cr.usgs.gov/gdex/>) with a resolution of 30 × 30 m), and geological maps in the Haraz watershed were also used in data collection and preparation.”

Figure 1 displayed incorrect scale (the scale bar itself was correct). The incorrect scale is now removed.

Published online: 20 July 2021

Figure 2 contained images obtained from press sources and re-used without appropriate permissions. Since the original source cannot be established and these were used for demonstrative purposes only (to visualise the severity of the floods for the readers), the figure was now removed. Additionally, original Fig. 3 was now moved towards the end of the Article. Figures 3–9 were renumbered accordingly.

These changes do not affect the conclusions of the Article.



Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

© The Author(s) 2021