In the version of this Letter originally published, in the final paragraph, the section of text including ‘Earth system models should … nutrient cycling’ was misleading and should have been:

“Models simulating the dynamics of the terrestrial biosphere currently consider the effects of nitrogen on vegetation and soils \(^{25,26}\) but they still do not consider the effects of other nutrients such as phosphorus or potassium. Future models should consider the interactions of nitrogen as well as these other nutrients with the entire forest carbon balance. The relationship between GPP and NEP appears to be so strongly controlled by the nutrient status of the forest that terrestrial biosphere models may be unable to accurately predict the carbon balance of forest ecosystems without information on background nutrient availability \(^{27}\)—soil nitrogen, phosphorous, potassium, pH—and on changes in soil and plant nutrient cycling resulting from human activities (such as nitrogen deposition, climate change and elevated CO\(_2\)).”

To accommodate these changes, the original ref. 27 (W. De Vries and M. Posch, M. Environ. Pollut. 159, 2289-2299; 2011) was removed and the remaining references renumbered. The original references numbered 31–33 have been moved to the Supplementary Information, as they are uncited in the main text.