



## From a Tweet to Forbes, The Diplomat and beyond

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Topics: Water & Development | Organisation & Staff

**Never did Jagannath Biswakarma think that a Tweet about one of his academic articles would receive attention from world-leading media outlets. Yet, that is exactly what happened and how his work was promoted internationally.**

Bioavailable iron is essential for all living organisms. Iron deficiency amongst plants influences agricultural production. In his doctoral work with Stephan Hug and Janet Hering at the aquatic research institute Eawag, Jagannath Biswakarma (now postdoc at Eawag) proposed alternative mechanisms by which plants or microbes can uptake iron directly from minerals under iron-limiting conditions. Eawag researchers conducted this study in close collaboration with the University of Vienna, Austria.

This research could assist farmers in the Global South, where climate change is heavily affecting agricultural productivity. For example, increasingly, dynamic environmental conditions lead to fluctuations in groundwater levels. These fluctuations in water availability change the chemical conditions and microbial activity in soils and water; thereby plausibly affecting the iron availability in plants. Jagannath's research explains how plants might uptake iron from minerals in adverse conditions, producing the nutrients people and animals need to survive.

### Great media interest

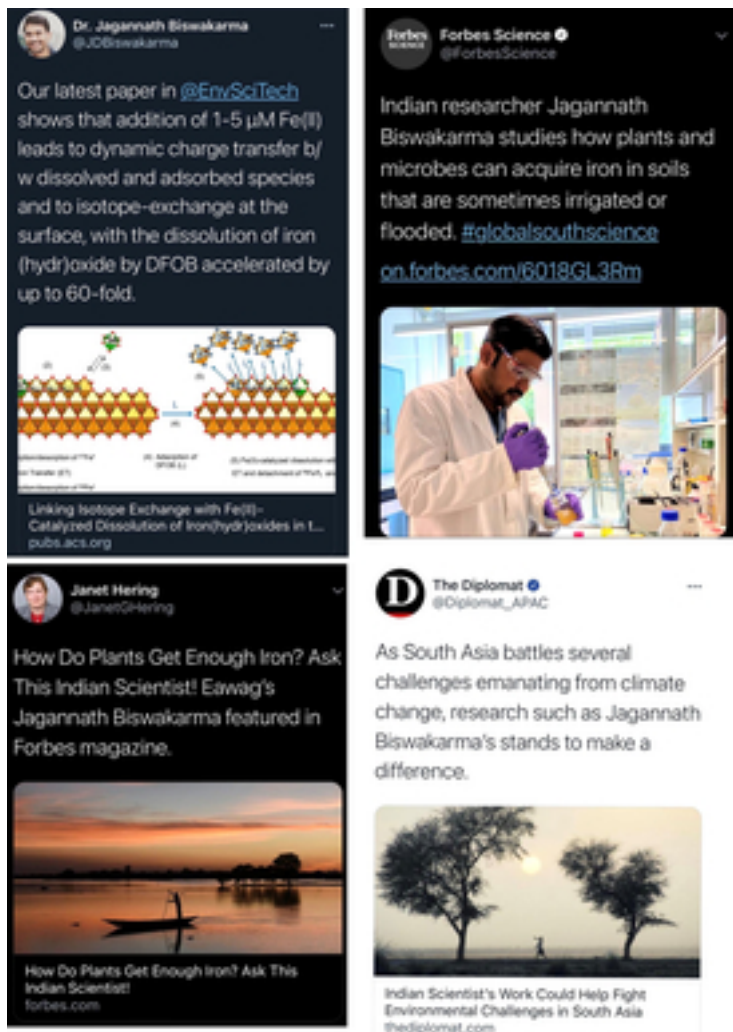
Jagannath Biswakarma reported on Twitter about the alternative mechanisms and the potential impact of his research on agriculture in the Global South, especially South-East Asia and Latin America. His tweet caught the eye of the Forbes journalist, Andrew Wight. Wight is an Australian science journalist based in Medellin, Colombia. He was interested to know from Biswakarma directly about his research.

Interviews with Wight led to an article published on September 30, 2020, on Forbes. Janet Hering

tweeted about its publication. Jagannath Biswakarma re-tweeted her Tweet, which led to the discovery of the Forbes article by Arun Budhathoki, a Nepalese journalist and Editor-in-Chief of the Kathmandu Tribune. His work appears in The Guardian, Financial Times, and The Diplomat Magazine, where following an article about Jagannath Biswakarma's research in the Kathmandu Tribune, an article about his work was published. Since then, articles about his research have been published in six other media outlets. And the interest in it is only continuing to grow.

### Science in social media

Clearly, social media can impact the dissemination of scientific research. It can ensure that scientific work is not only seen and read but also talked about. As a result, the research can have an impact more widely than that possible by academic publications alone. In the long term, the research results can also influence practitioners who need this knowledge, such as agriculturalists and policymakers in countries facing increasingly adverse environmental conditions.



Tweets about Jagannath Biswakarma's research on Twitter. (Graphics: Jagannath Biswakarma)

Cover picture: Eawag, Jagannath Biswakarma

### Original publication

Biswakarma, J.; Kang, K.; Schenkeveld, W. D. C.; Kraemer, S. M.; Hering, J. G.; Hug, S. J. (2020) Linking isotope exchange with Fe(II)-catalyzed dissolution of iron(hydr)oxides in the presence of the bacterial siderophore desferrioxamine-B, *Environmental Science and Technology*, 54, 768-777, [doi:10.1021/acs.est.9b04235](https://doi.org/10.1021/acs.est.9b04235), [Institutional Repository](#)

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[Indian Scientist's Work Could Help Fight Environmental Challenges in South Asia](#)

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