



The Future of Metals and Sustainability

Hosts: Karin Olson Hoal (EAS) and Natalie Mahowald (EAS)

Date: Wednesday, September 16th, 2020; 3:00-4:00 PM

Zoom: (We will update participants).

Abstract: In order to reach low climate targets, the world will have to transition from obtaining its energy fossil fuel to renewable energy sources. The World Bank estimates a 2-fold to 10-fold increase in the demand of many metals due to a transition to renewables. Metal mining and processing are currently a large source of metals to the atmosphere, water and land down wind and downstream of mining facilities. These metals can act as pollutants or nutrients in different ecosystems, and may be toxic to humans. In addition, the high value of extracted metals can lead to exploitive labor practices, or environmental degradation in developed and developing countries. What will happen under a switch to renewables? Can we foresee and avoid the worst impacts? Are there easy changes that could be made to reduce impacts on humans and ecosystems?

Here we seek to create a new group at Cornell to discuss collaborative work to:

- 1) Better characterize metal demands from innovative new technology
- 2) Look for innovative technologies that avoid metal demands
- 3) Look for potentials to reduce emissions from metals mining and processing
- 4) Identify the impacts of metals on ecosystems and agriculture
- 5) Identify the impact of metals on humans downstream
- 6) Consider more equitable development pathways that include metals mining and processing

Please come with 1 lightning slide if you want visuals or ready to discuss your research in this area, and ideas for collaboration. If you can't make it, please feel free to send a grad student or postdoc and/or slide anyway. If you know of others who should be invited, please invite them, and cc Natalie and/or Karin to make sure they are included on future correspondence.

RSVP by [clicking here](#)

[The Carpenter-Everett Family Topical Lunches](#)

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