

Environment, Humans, and Mining in Northern Mongolia

July 27-August 14, 2020



Course Instructors:

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Course Overview:

Led by Mongolian geoscientist Gantulga Bayasgalan, Californian anthropologist Marissa Smith, and Montanan ecologist Rebecca Watters, this Field School focuses on intersections of “modern” (scientific and engineering) as well as “traditional” (including Buddhist and shamanic) knowledge and knowledge practices on human environment relations, especially with the emphasis of mining activities in the Northern Mongolian regions. Participants in this program learn from Mongolian experts and professionals about not only their goals and concerns, but also their ways of addressing and achieving them with special scope on environmental issues from mining. Participants will have the opportunity to interview and participate in professional meetings, discussions and activities of their interest, directed by instructors as well as local Mongolian counterparts.

After the orientation in Ulaanbaatar, the course will move to the Yoroo area of Selenge aimag. This region is not far from Ulaanbaatar and just east of Darkhan, and is one of the oldest and still most active areas of mining in Mongolia, as well as a natural area with beautiful scenery just west of the Khentii Mountains. Participants will stay at the Ecoland camp, where they will meet with scientists, conservation specialists, and policy-makers. These are planned to include speakers such as Members of Parliament who have worked to address mining-related issues, as well as experts from the nearby Khan Khentii Protected Area (Mongolia’s Protected Areas are in some ways analogous to American National Parks, though in other ways very different). Participants will visit Khuder and Bugant towns, where active mining takes place. This area is

also associated with Chinggis Khaan and his special relationship with the local mountains, a theme that will be explored with local Mongolian experts.

After several days of programming in Yoroo, course participants will head west through the second and third largest cities in Mongolia, Darkhan and Erdenet. Erdenet is a copper-molybdenum mining town dating from the Soviet era. The itinerary will include sessions with mining engineers, to learn about technologies of mining area reclamation, reforestation, and efforts to lower emissions in Erdenet. In addition, the participants will have an opportunity to meet with Buddhist monks for religious and spiritual understanding to deal with nature, human impact on the environment and its consequences. During this part of the field school, participants will stay at a ger camp near Erdenet in a forested area with wild berries, deer, and freshwater streams, and engage with Mongolian experts in the region. The ride back to Ulaanbaatar will be via overnight train through the famous and picturesque Orkhon Valley.

At the end of the course, students will have experience in human-environment relations with special emphasis on mining activities in Northern Mongolia. They will have an opportunity to properly analyze, plan, discuss and present the results with best management practices for many issues confronting locals. Students will be able to visit active mining areas and will be able to engage in meaningful discussions on common environment and sustainability topics with both professionals and the public. Furthermore, through their assignments, students will learn how to propose, design and implement a research project on environmental and social issues based on the knowledge they obtained. This is an inter-disciplinary course that incorporates aspects of environment, geology-mining, sociology, humanities, sustainability science, religion, cultural heritage and other fields.

Anticipated Course Activities:

July 27-July 30: Ulaanbaatar - Program and Course introduction. introduction to Mongolian culture and language, history, and contemporary issues. An introduction to the course leaders and methods, with site visits to and meetings with government ministries, NGOs and mining companies. Stay in hotel.

July 31-August 7: In transit/site visits - Visit to Yoroo Eco-Land camp, a summer camp in Selenge Aimag in west part of Khentii Mountains, and visit local mines in Khuder and Bugant, communities heavily involved with mining.

August 7-8: Visit to Darkhan, Darkhan-Uul Aimag - Visits with local officials and residents on environment and mining issues. Stay in hotel.

August 8-12 - Visit to Erdenet, the copper molybdenum mining town. Visit the Cu-Mo enrichment facilities and industry. Visits with local environmental engineers and Buddhist monks on environment and mining issues. Stay in hotel or tourist ger camp. Students will have the opportunity to discuss research projects and present within the group on findings and questions..

August 13 - Return to Ulaanbaatar.

August 14 - Final wrap up conference for Field School. Meet with students and faculty from other Field School courses to provide information on explorations, impressions and lessons learned. Explore connections between Field School topics and discuss next steps for further research and explorations in Mongolia and beyond.

About the Instructors:



Dr. Gantulga Bayasgalan is lecturer in the School of Geology and Mining Engineering, Mongolian University of Science and Technology. He is an environmental geologist specializing in the investigation of geologic-environment and human-environment relationships, geomorphology-active tectonics and earth surface processes. Dr. Bayasgalan utilizes a range of methods in his research, including field research, remote sensing and GIS analysis, geophysics and environmental impact assessment with focus on geo-environment. His main area of field research is Khangay Mountains in Mongolia where he has been working since 2000. Dr. Bayasgalan has a BSc in Environmental Science from National University of Mongolia, and a PhD in Geomorphology from the North Carolina State University.



Rebecca Watters is a wildlife biologist and writer from Bozeman, Montana. She is the executive director of the Wolverine Foundation and founder of both the Mongolian Wolverine Project and the Round River Conservation Studies Mongolia semester program, both of which work closely with protected areas in northern Mongolia. Rebecca served as a Peace Corps environmental volunteer in Kharkhorin, Mongolia, from 2000 – 2002, and currently divides her time between conservation work in the Western US and Mongolia. She has a master's degree in environmental science from the Yale School of Forestry and Environmental Studies.



Marissa J. Smith, PhD, is a cultural anthropologist based in California's Silicon Valley. She has conducted research on mining professions and national identity in Erdenet, Mongolia, international collaboration in cultural heritage work in Mongolia, and Mongolian politics. Dr. Smith has taught anthropological research methods at De Anza College and also at Princeton University while completing her PhD, and currently works as an applied ethnographer for a large tech company.

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