

IPA Action Group Report: The Yedoma Region

by Jens Strauss and the Yedoma Action Group Members

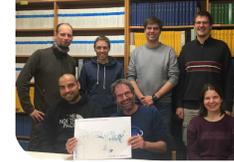
A Synthesis of Circum-Arctic Distribution and Thickness

This IPA Action Group was formed in February 2015 following a successful thematic session on “Yedoma origin, records and future projections in a changing Arctic” at the 4th European Conference on Permafrost. The Yedoma Action Group aims to synthesize existing information and generate new data on the circum-arctic distribution and thickness of Yedoma permafrost. Yedoma deposits, due to very high excess ice content, are especially prone to degradation under current climate scenarios in Siberia, Alaska and the Yukon Territory. Due to the very large frozen carbon pool in the permafrost deposits of this region, increased permafrost thaw could cause a positive carbon feedback loop to climate with global significance. Therefore, a detailed assessment of the Yedoma deposit volume (coverage and thickness) is of importance to estimate its potential response and relevance to future climate.

The quantification of the Yedoma coverage is based on the digitization of surface geological and Quaternary geological

maps and the analysis of remote sensing data. This information is merged with data on Yedoma thickness extracted from drilling records and outcrop observations reported in the scientific literature.

The Yedoma Action Group started its activities with a presentation of the Action Group’s goals at the Melnikov Permafrost Institute Yakutsk, Russia in March 2015. A side meeting of the Action Group was held during the Permafrost Carbon Network Working Group Lead meeting in Flagstaff, USA, in May 2015. A follow-up event for Action Group coordination and discussions of the first results was held in Potsdam, Germany, in November 2015. Side meetings and contributions were planned for the AGU Fall Meeting 2015 in San Francisco, USA and the results of the Action Group were presented and discussed at the 5th Annual Assembly of the Permafrost Carbon Network (December 2015) immediately prior to the AGU conference. The preliminary results of the Action Group, including a first new preliminary pan-Arctic Yedoma map, were presented at the



Top left: Logo of the Yedoma IPA Action Group. Bottom left: Action Group meeting in Potsdam, November 2015; Right: Itkillik Yedoma exposure, Alaska. Picture: J. Strauss, May 2012

AGU conference itself. Currently, the group is preparing a first Yedoma synthesis manuscript.

The Action Group is organising a workshop immediately prior to ICOP 2016 in Potsdam. Members then intend to compile a scientific paper on the Yedoma database as well as publish a comprehensive Yedoma map for educational and scientific use.

If you are interested in becoming involved in the Yedoma Action Group activities and in contributing data or sharing your ideas, please contact jens.strauss@awi.de.

IPA Action Group Report: A Frozen-Ground Cartoon

by Frédéric Bouchard

Explaining international permafrost research using comic strips

Apart from people in cold region communities and a limited – although steadily growing – scientific community, the general public knows very little about permafrost properties, its dynamics in response to climate change, and the research going on in the field. ‘A Frozen-Ground Cartoon’ is a scientific outreach project that aims at presenting and promoting international permafrost research via a series of comic strips and illustrated media products.

The project is officially supported by the International Permafrost Association as a targeted ‘Action Group’ (<http://ipa.arcticportal.org/activities/action-groups>) and will run from January 2016 to January 2018. The scientific aspects will be coordinated by a core group of permafrost early-career scientists from Canada

and Europe (Germany, Sweden, and Portugal). The final outcome of the project will be a series of comic strips showing the diversity of permafrost research activities at the international level, with a special emphasis on fieldwork. The target audience is the general public, focusing more specifically on teenagers and young students who have to choose career paths at the high school or college levels.

Comic strips will be released both electronically and on paper media through national and international research networks. Final products and selected portions of the strips will be disseminated as a web site, on social media, and in the form of posters and graphic novel magazines for schools and libraries. All generated material will be released under a creative



commons licence (CC) and made available to the public.

The Action Group is looking for one or two comic artists to build a narrative and to create characters and content within a framework of scientific context. The artist(s) will be working closely with the scientists, who will overview the scientific outreach content, but will be free to create the surrounding backstory and characters. An application call will be released in mid-January via international networks of permafrost researchers (IPA, PYRN). For more information: frozengroundcartoon@gmail.com.