# Arctic Science as a Vehicle for STEM Education and Citizen Empowerment

Speaker biographies















# **MARK BRZEZINSKI**



Former U.S. Ambassador to Sweden Mark Brzezinski serves as Executive Director of the Arctic Executive Steering Committee (AESC). The AESC was established to oversee implementation of the U.S. federal government's National Strategy for the Arctic Region. The AESC convenes at the deputy secretary level to guide department and agency plans to assure federal activities in the Arctic are well-coordinated and better communicated to partners such as the State of Alaska, Alaska Native communities, U.S. Congress, the business community, international partners and other stakeholders.

As U.S. Ambassador to Sweden (2011-2015), Mark worked closely with the Swedish government during its Arctic Council chairmanship and made the Arctic a central focus of his tenure. Mark served on the National Security Council staff under President Clinton between 1999-2001, first as director for Russia and Eurasia, then as director for the Balkans. He received his undergraduate degree at Dartmouth College, his law degree at the University of Virginia Law School and a doctorate in political science from Oxford University. He was a Fulbright Scholar in Warsaw, Poland between 1991-1993. He was a partner at a Washington, D.C. law firm before joining the Obama Administration, and is a member of the Council on Foreign Relations.

# **JOSEPH CHEEK**



Joseph Cheek is the Senior Communications Manager at the Arctic Portal, a non-profit organization based in Akureyri, Iceland which acts as a comprehensive gateway to Arctic information and data. He is in charge of communication and outreach strategy at the Portal.

Mr Cheek has worked on polar issues for nearly a decade. Prior to working at the Arctic Portal, he spent many years at the International Polar Foundation in Brussels, Belgium, where he was in charge of organizing the annual Arctic Futures Symposium, the largest Arctic conference in Brussels, which involved high-level representatives from the European Institutions and key Arctic stakeholders. He was also the foundation's repre-

sentative to the EU Arctic Information Centre Initiative, which was led by the Arctic Centre at the University of Lapland.

Mr Cheek holds a Master's in International Relations from the University of Kent Brussels School of International Studies (BSIS).















### SUZANNE GOLDENBERG



Suzanne Goldenberg is an award-winning journalist and author who has covered war and social upheaval from India to Israel to Iraq. For the last seven years, she has been exploring one of the greatest challenges of this century: climate change.

Goldenberg is equally at home negotiating the politics of Congress and international climate diplomacy as she is operating in remote and hostile environments. She has written about the human cost of climate change from the Amazon to the Arctic to Abu Dhabi, as well as US and global responses to the rising threat. John Kerry cited her inside story of 20 years of climate change negotiations during his speech to the Paris climate summit in 2015.

She has appeared at the Aspen Ideas Festival, Harvard Kennedy School of Government, Princeton University, Georgetown University, Organization for Security and Co-operation in Europe, the World Affairs Council, the Society for Environmental Journalists, SXSWEco, think tanks and other venues, and is a frequent commentator on US and international radio and television.

# **MAX HOLMES**



Max Holmes is an earth system scientist who studies rivers and their watersheds and how climate change and other disturbances are impacting the cycles of water and chemicals in the environment. He is particularly interested in the fate of the vast quantities of ancient carbon locked in permafrost in the Arctic, which may be released as permafrost thaws, exacerbating global warming.

Dr. Holmes has ongoing projects in the Russian, Canadian, and Alaskan Arctic, and in the tropics in the Amazon and the Congo. He is committed to engaging students in his research projects and to communicating the results and implications of his research to

the public and to policy-makers. Dr. Holmes recently served for two years as Program Director of the National Science Foundation's Arctic System Science Program and in 2015 was named National Fellow of the Explorers Club.















# HALLDOR JOHANNSSON



Halldor Johannson is the executive director of the Arctic Portal, Iceland - the Gateway to Arctic information and data. Johannson has years of experience in communication, outreach, data management and policy in and around the Arctic. He is a member of numerous committees and projects on Arctic issues, ranging from information and data management, planning and environmental issues to economic development and policy including: Sustainable Arctic Observation Networks (SAON), the Iceland Arctic Cooperation Network, the EU Arctic Information Centre, the University of the Arctic, and the IASC-SAON Arctic Data Committee and the International Permafrost Association. He is a council member of the European Polar Board, Vice-Chair of the China-Iceland

Aurora Observatory Iceland, and an EU-PolarNet policy advisory board member.

Mr Johannson has attended and presented at numerous meetings, seminars and conferences on Arctic issues over a decade and a half, works closely on a daily basis with members of international organizations of high Arctic importance, giving them his personal knowledge and experience, and making use of his vast network of contacts. He is the Senior Communication Expert of the EU Arctic Information Centre, and leads communication and outreach for the EU 7/ Horizon 2020 projects PAGE21, EDU-Arctic and APPLICATE.

# **IGOR KRUPNIK**



Igor Krupnik (Ph.D. 1977) is the Curator of Arctic and Northern Ethnology collections and the Head of Ethnology Division at the Department of Anthropology, National Museum of Natural History, Smithsonian Institution. His areas of expertise include modern cultures, ecological knowledge, and cultural heritage of Arctic peoples; impact of modern climate change on Arctic residents and their cultures. Born and educated in Moscow, Russia, Igor worked with Arctic indigenous communities, primarily in the Bering Strait Region, on many collaborative efforts in the documentation and sharing of cultural knowledge, and in opening archival and museum collections to communities for education and heritage preservation.

Dr. Krupnik published and co-edited more than 20 books, collection volumes, catalogs, and community heritage sourcebooks, including many supporting the use of indigenous languages and ecological knowledge. He was instrumental in bringing the ecological knowledge and environmental observations of Arctic residents to the agenda of the International Polar year 2007–2008 and served on its Joint Steering Committee representing social sciences and the humanities. Igor was the science curator for the Smithsonian exhibit Arctic: A Friend Acting Strangely (2006–2007) that addressed the impact of climate, weather, and sea ice change on polar people and ecosystems.















# JOSIE OKALIK EEGEESIAK



Josie Okalik Eegeesiak was elected Chair of the Inuit Circumpolar Council (ICC) in July 2014. ICC represents the international interests of Inuit in Canada, Greenland, Chukotka (Russia) and Alaska (USA).

Ms. Eegeesiak was the President of Qikiqtani Inuit Association (QIA) from 2008-2014. QIA represents approximately 14,000 Inuit in 13 communities of the Qikiqtani Region. QIA's mandate includes protecting, preserving and promoting Inuit rights, interests, and aspirations.

Her background includes representing the Inuit community in various capacities through government and non-government organizations at the international, national, territorial and community level through boards and committees. Ms. Eegeesiak is fluent in written and oral Inuktitut, and was born, raised, and schooled in Iqaluit, the capital of Nunavut.

**NIVI OLSEN** 



Nivi Olsen is the Minister of Education, Research, Culture and Church of Greenland.

A graduate of the University of Greenland, Olsen worked in the municipality of Qaasuitsup Kommunia, first as a consultant, and then as a Mineral Resource coordinatior. She also has experience in teaching and business consulting.

# RAFE POMERANCE



Rafe Pomerance is Chairman of Arctic 21, a network of organizations focused on communicating issues of Arctic climate change to policy makers and the general public. Rafe is a member of the Polar Research Board of the National Academy of Sciences and an independent climate strategies consultant.

Rafe has spent much of his career on global warming, including as president at Friends of the Earth, as a senior associate for climate change and ozone depletion policy at the World Resources Institute, as a Deputy Assistant Secretary of State for Environment and Development, and as president of the Climate Policy Center. Rafe was a founder and Chairman of the Board of American Rivers, Chairman of the Board of the League of

Conservation Voters and of the Potomac Conservancy.















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## **GUNN-BRITT RETTER**



Gunn-Britt Retter is born and raised in the coastal Saami community Unjárga-Nesseby by Varangerfjord in north-eastern Norway. She is a teacher of training from Sámi University College (Guovdageaidnu - Kautokeino, Norway) and holds MA in Bilingual studies from the University of Wales.

Since 2001, Retter has worked on Arctic Environmental issues, first at the Arctic Council Indigenous Peoples' Secretariat (IPS) (Copenhagen, Denmark), and since 2005, in her present position as the Head of the Arctic and Environmental Unit of the Saami Council.

Retter has participated in various Arctic Council Working Group meetings, Senior Arctic Officials meetings and Ministerial meetings with the Arctic Council, as well as in several meetings of the UN Convention on Biological Diversity (CBD). She has attended a number of Arctic science conferences, such as the International Polar Year From Knowledge to Action conference (2012), the International Congress of Arctic Social Sciences (2014) and the Arctic Science Summit Week (2015). Gunn-Britt served as a Member of the Saami Parliament (Norway) for two terms (2005 – 2013).

In her position as the head of the Arctic and Environmental Unit in the Saami Council, Retter has been involved in issues related to indigenous peoples, climate change, biodiversity, language, pollution and management of natural

# ROBERT RICH



Dr. Robert Rich became Executive Director of the Arctic Research Consortium of the U.S. in 2015. Previously he served as Director, Strategy Development for the American Chemical Society (ACS), where he served for 16 years in a variety of roles including career development, research grants, membership, and strategy. He has also worked with the American Association for the Advancement of Science (AAAS) Research Competitiveness Program and the U.S. National Institutes of Health in fundamental research and in the Office of Science Policy.

He is actively involved in the association community and in national and global science conversations, where he hopes to effectively represent the important work of Arctic re-

searchers. He holds a B.S. from M.I.T., a Masters from Harvard, and a Ph.D. from the University of California, Berkeley, all in chemistry. As a researcher, he studied the interactions of small molecules with enzymes and other proteins. Now, he supports the interactions of small (and large) research groups to work together to create substantial results. He lives in Bethesda, MD and works out of the ARCUS DC office (when not in Alaska).















### TARA MAC LEAN SWEENEY



Tara Sweeney is the chair of the Arctic Economic Council. She is also the executive vice president of external affairs for Arctic Slope Regional Corporation (ASRC) and is responsible for all facets of the company's government relations and communications. ASRC is the largest locally-owned and operated business in Alaska, with annual revenues topping \$2.5 billion, with more than 12,000 shareholders and 10,000 employees across Alaska and the Lower 48.

Sweeney has been engaged as an advocate for self-determination for Alaska Natives and enjoys mentoring young Alaska Natives interested in becoming politically active. She has served on numerous business and nonprofit boards, including the Alaska Federation of

Natives, Coast Guard Foundation Board of Trustees, FCC Advisory Committee on Diversity for Communications in a Digital Age and Arctic Power. She has also served as a trustee on the University of Alaska Foundation board. Sweeney was honored in 2008 as a "Top Forty Under 40" business leader by the Alaska Journal of Commerce.

Sweeney grew up in rural Alaska. She graduated from Barrow High School before attending Cornell University, where she graduated with a Bachelor of Science degree in Industrial and Labor Relations.

### **FRAN ULMER**



Fran Ulmer was appointed chair of the U.S. Arctic Research Commission by President Obama in March 2011. He also appointed her to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling in 2010. From 2007 to 2011, Ms. Ulmer was chancellor of the University of Alaska Anchorage (UAA). Before that, she was a Distinguished Visiting Professor of Public Policy and Director of the Institute of Social and Economic Research at UAA. She is a member of the Global Board of the Nature Conservancy and on the Board of the National Parks Conservation Association.

Ulmer served as an elected official for 18 years as the mayor of Juneau, a state representative, and as Lieutenant Governor of Alaska. She previously worked as legal counsel

to the Alaska Legislature, legislative assistant to Governor Jay Hammond, and Director of Policy Development for the state. She was also the first Chair of the Alaska Coastal Policy Council and served for over 10 years on the North Pacific Anadromous Fish Commission. Ulmer earned a J.D. cum laude from the University of Wisconsin Law School, and has been a Fellow at the Institute of Politics at the Kennedy School of Government.















# **JOHN WOOD**



John Wood teaches middle school science at Talbert Middle School in Fountain Valley, California. As a biology student from Chapman University, Wood saw his first polar ice in 1978 when he became a general field assistant at McMurdo Station. In 1979 Wood returned to Antarctica as an assistant lab manager, aiding scientists working in biology, earth, and atmospheric sciences. For the next six years, he acted as facilities manager for all U.S. antarctic bases and in 1989-90 he headed the underwater construction team at McMurdo and Palmer Station.

Over the next 10 years, Wood pursued a career teaching science in southern California. However, in 2008, John was presented with a new opportunity to return to Antarctica

as a PolarTREC teacher. PolarTREC (Teachers and Researchers Exploring and Collaborating) is an ARCUS program in which K-12 teachers spend 3-6 weeks participating in hands-on field research experiences in the polar regions. With PolarTREC, Wood has worked with volcanologist Dr. Phil Kyle (New Mexico Tech), living for five weeks on the edge of the active volcano, Mt. Erebus, running seismic experiments and with Susan Natali (Woods Hole Research Center) working in Healy, AK on experiments investigating possible tundra ecosystem response to climate warming.













