

Canadian sea ice project wins first “Arctic Action” award

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Dr. Michael Wenger



The award winner Dr. Trevor Bell (far left) poses for the photographers together with Lars Kullerud from the University of the Arctic (2nd from left), the award donor Dr. Frederik Paulsen (3rd from left) and Arctic Circle Chairman Olafúr Ragnar Grímsson (far right). Image: Arctic Circle via Flickr

For thousands of years, the inhabitants of the Arctic have travelled on sea ice. This created a deep connection between the Inuit and the icy ground. But climate change is now making moving around on the ice an increasingly dangerous and sometimes impossible undertaking. A Canadian project has now found a way for local residents in Canada’s north to reduce the danger using relatively simple means. At the same time, the project also promotes social and cultural aspects of the Inuit. Now, at this year’s Arctic Circle Assembly, the project has been honoured with the newly awarded “Frederik-Paulsen Arctic Academic Action Award”.

The prize, worth 100,000 Euros, was presented last Friday by the President of the University of the Arctic, Lars Kullerud, to the initiator of “SmartICE”, Dr. Trevor Bell of Memorial University of Newfoundland. The ceremony was also attended by the chairman of the Arctic Circle, Olfúr Ragnar Grímsson and the donor of the award, Dr Frederik Paulsen. The latter also presented Bell with a Swiss watch, saying with a wink that it was not as ephemeral as money or sea ice. Visibly moved, Dr. Bell accepted the award and thanked the committee and those present for the honor. In his speech, he emphasized the importance of this award,

especially for the local population in northern Canada, which is suffering more and more from the rapidly retreating sea ice. Not only because the hunting and fishing grounds were lost as a result, but also the way to get there and to other communities. Travelling on the ice is becoming increasingly dangerous and SmartICE was created to counteract this aspect and at the same time strengthen the Inuit culture and society. Bell received a minute-long standing ovation at the end of his speech.



The “SmartICE” project was initiated by Dr Trevor Bell. Together with Inuit partners, the project aims to make travel on the sea ice safer. On the other hand, the project is also intended to promote the Inuit culture in various ways. Picture: Michael Wenger

The “Frederik Paulsen Arctic Academic Action Award” aims to honour projects that counter the effects of climate change in the Arctic. With the award presented for the first time, the committee has recognized a highly inclusive project in the Canadian Arctic region. Because on the one hand SmartICE offers an important service to the local population, namely the safe crossing of sea ice, free of charge and available to everyone. “SmartICE empowers Inuit communities to monitor their own ice to deal with the unpredictability of sea ice due to climate change,” Dr. Bell explained after receiving the award. On the other hand, the project also promotes the cultural and social identity of the Inuit by placing all essential aspects of the project, from production to communication and training, in their hands. The aim is to strengthen the economic and cultural development of the Inuit communities and at the same time to pass on and integrate local traditional knowledge. Since 2016, the project has already won several national awards for its novel approach.

For the Inuit in northern Canada and elsewhere in the Arctic, travel on sea ice is essential. This is the only way they can reach their hunting and fishing grounds from autumn to spring. But the dwindling sea ice makes driving an enormously dangerous affair. Video: Michael Wenger

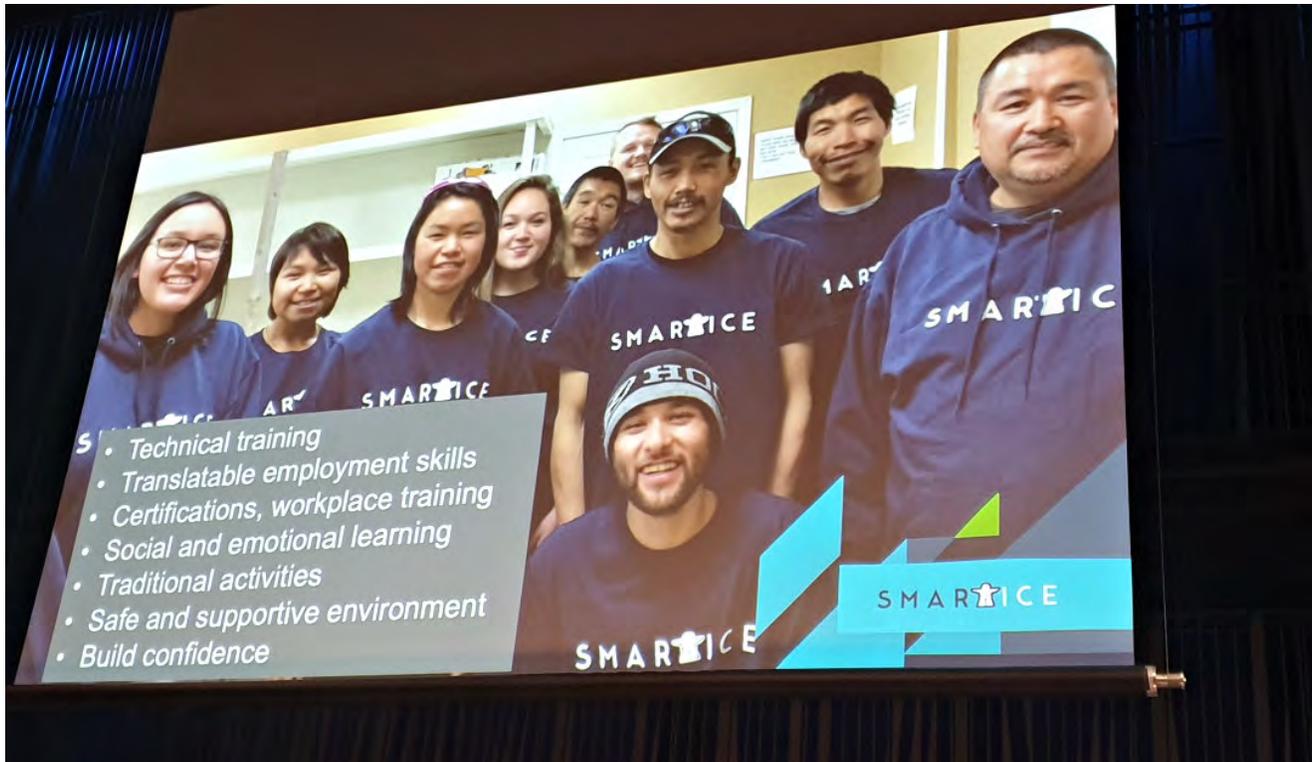
SmartICE itself is a community-based work-integrated social enterprise (WISE). With the help of portable measuring devices and measuring buoys, the sea ice is measured in a total of 24 communities in Nunavut, Nunatsiavut and the Northwest Territories, and the data is made available to residents free of charge. The portable measuring devices (SmartQAMUTIK) are pulled over the sea ice by specially trained and experienced Inuit to measure the ice thickness. At the same time, stationary “SmartBUOYS” also measure ice thickness and various parameters of the underlying sea. This creates clear and safer paths over the icy surface. This is also hugely important, as Rex Holwell, operations manager for the Nunatsiavut region, explains. “In one community alone, 1 in 12 residents have broken through sea ice so far,” he said during a presentation. “This is related to the fact that the sea ice is forming later and becomes thinner. As a result, we can hardly reach our traditional hunting and fishing areas.” The prize money will now be used primarily to promote the technical aspects. Plans include new, even more sensitive sensors and the use of drones to more easily and safely monitor the thinning sea ice.



Where you can safely cross the sea ice was once passed down orally from the older Inuit to the younger generation. SmartICE wants to continue this tradition and provide support to Inuit to bring it into the digital age. This also strengthens Inuktitut and other Inuit languages in northern Canada. Picture: Michael

Wenger

Another aspect of the project is the integration of traditional Inuit knowledge about sea ice. “Inuit have the longest records on sea ice,” says Dr. Bell. In Nunavut alone, 140 terms for sea ice have been documented in Inuktitut. All this knowledge was passed down orally from generation to generation. But until not so long ago, Inuit were forbidden to speak their own languages and live their culture. As a result, a lot of knowledge was almost lost. SmartICE wants to build a bridge here. To this end, for example, maps are produced and digitized with the elders and manuals are published with the expressions for the various sea ice structures such as rifts (Aajuraq) or open water areas (Immatiliqiktuq). This way the younger generations can learn the knowledge and the language.



SmartICE also focuses on local education and training for youth. This is particularly important in regions where it is difficult to obtain education or training locally. This is because it develops the young people’s community and individual skills and builds self-confidence. Picture: Michael Wenger

In addition to operating the measuring equipment, SmartICE also relies on the local production of the measuring buoys and the training of new personnel. To this end, the “Northern Production Center” was founded in the community of Nain, where young people receive technical and social training and further education. In Nunavut, for example, nine young people were trained and 50 elders and community members were integrated into the work last year, despite the pandemic. On the one hand, this promotes the economic development of the communities, as the young people develop various work skills and thus become fit for the world of work. On the other hand, it also strengthens the social and emotional skills and traditional activities of the younger generation. This creates one of the most important skills necessary for living and surviving in a rapidly changing Arctic: confidence in oneself and in knowledge from the past. Because only in this way do the people there have a future.

Dr Michael Wenger, PolarJournal

More about SmartICE and their work: [Link to the website](#)

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