# BELARE TEAM HEADS TO COAST TO PICK UP SEA CARGO



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Every year the members of the BELARE team working at the Princess Elisabeth Antarctica (PEA) Station must undertake several traverses to assist with the unloading of materials and supplies arriving by ship and bring them back to the station, which is located more than 200 kilometres inland from the coast.

## What’s different about this season

Compared to previous seasons - when only one cargo ship would drop off supplies for the PEA Station at the Dronning Maud Land Coast in East Antarctica - this year, logistical constraints made it necessary to have two cargo ships to deliver supplies which represent a logistical challenge on its own.

The first ship to arrive was the M.V. Vasily Golovnin (a Russian ice-breaking cargo vessel), which unloaded its cargo on January 5th. The second was the S.A. Agulhas II (a South African ice-breaking scientific and supply ship), which dropped off its load on January 20th.

Each unloading event requires usually one to three traverses to transport the delivered cargo back to the PEA Station. This year, a total of three heavily loaded traverses took place.

## Diverse cargo

A sizable part of the cargo collected this season included wooden construction materials for the new annex of the PEA Station.

Other cargo transported included food, as well as materials for the kitchen, including a new oven and air filters.

The first traverse of the season transported about 85 tonnes of provision, materials and supplies. The second traverse transported around 150 tonnes of construction materials for the new building. The third traverse transported about 80 tonnes and was composed mainly of three containers loaded with construction materials and fuel for the planes and tractors. This represents a total of nearly 315 tonnes of materials and supplies.

## Careful planning

Considering the limited amount of time available during the summer season at PEA, the BELARE team had to plan the traverses weeks in advance in order to schedule them at the right moment for the ship and to not interfere with the many scientific research projects happening during the season. The team must always take into account the time needed to reach the coast as well as the weight and size of the materials to be transported.

The BELARE team usually uses Prinoth tractors and Lehman sledges to transport the supplies and materials from the coast to the PEA Station. This year we had the opportunity to also use a CASE Quadtrack 600 belonging to the Perseus Airfield, allowing us to carry a heavier load at once.

Two drivers are assigned to each tractor and they alternate, allowing one to rest. The tractors can only go 10-12 km/h.

The station’s cook prepares ready-made meals they can easily heat up and eat during their time in the field. The traverse team usually spends the night at the coast.

The team takes advantage of a cargo ship’s arrival to send off waste from the station. The Madrid Protocol to the Antarctica Treaty requires all research stations to properly dispose of its waste by shipping it places where it can be properly recycled or disposed of. Any waste from the PEA Station is sent to South Africa to be handled.

As one traverse usually takes between 22 and 25 hours one way, some materials brought by the vessel can be left at a safe storage area near the coast to be picked up at a later time when it is more convenient to bring it back to the station.

## Taking precautions against risks

Drivers make sure to watch out for crevasses along the route. Although they are monitored year after year and clearly marked along the way, their size can change over time as the ice moves. They can range from a few centimetres to as much as several metres in width.

The capricious weather in Antarctica is also a major hazard to look out for. It’s possible for the weather to quickly turn from a calm and clear day to blizzard conditions - which can severely reduce visibility - in a matter of hours. One potentially dangerous weather phenomenon is the so called “white-out”. It occurs when the wind blows snow particles several meters into the air, creating a situation where it’s not possible to see

more than a few meters in front of you and everything around you becomes white!

As a precaution, all drivers follow the leading Prinoth tractor and maintain a distance of around 100 meters between each tractor and sledge train. All tractors follow exactly the same path clearly marked out on GPS, and communicate via VHF radio with the lead driver to know if there are any hazards ahead and determine how to best handle them. If conditions become too dangerous, the team will temporarily stop the traverse until conditions improve enough to continue safely.

## An incredible adventure

“Overall, a traverse to the coast remains an incredible adventure!” reported IPF Science Liaison Office Henri Robert, who took part in the last traverse of the season. “Besides the need to bring supplies and cargo to the station, going on a traverse allows you to experience the remoteness, the solitude, and the extreme beauty of the Antarctic. Whether it’s drifting snow on the ice on a dark day, or whether the sun is shining, it’s a beautiful spectacle to behold!”

“After a long day of driving, when you finally arrive at the unloading site along the ice shelf’s edge, with a little bit of luck you might spot some seals resting on the remaining fast ice, emperor penguins, or even seabirds such as Antarctic petrels, snow petrels, Wilson’s storm petrels, or the south polar skua,” Henri explained. “Some colleagues were even privileged enough to spot a pack of orcas near the unloading ship earlier in the season!”

“As was probably the case for the early explorers of this continent, every time you go to a new place - maybe you see a different part of the coast, another side of a nunatak, or how the wildlife is so well adapted to their environment and so beautiful - each sight makes you feel privileged to be able to admire the beauty in front of you.”